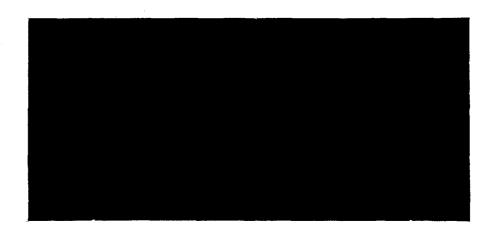
WATER RESEARCH

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and

I W Davies SAC Chromatography Ltd

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AN INVENTORY OF LINEAR TEMPERATURE PROGRAMMED GAS CHROMATOGRAPHIC RETENTION INDICES ON METHYL SILICONE PHASES

Volume 1

2nd Edition

This study was undertaken for and partially funded by the Department of the Environment

The purpose of this work has been to provide the Water Industry with a cheap method of identifying unknown organic compounds in the aquatic environment. Pollution incidents frequently occur in which it is necessary to identify an organic compound accidentally or illegally discharged into the water catchment. Analytical instrumentation normally applied to the identification of organic compounds is relatively expensive and usually beyond the means of Water Utility Laboratories. A relatively cheap technique based on gas chromatographic retention times has been successfully developed.

Gas chromatography is a separation technique the mechanism of which depends upon the differing affinities of the organic compounds in a mixture for the stationary phase of the gas chromatographic column. Thus different components of the mixture are retained on the column for different periods of time. If chromatographic separation conditions can be precisely standardised and the retention time of a component be measured with sufficient accuracy, the data may be used to give a precise identification of the component.

This report contains new relevant retention data collected from the literature during the past year. It has been appended to Tables III and IV of the First Edition and in this version of the second edition the data is broken down into two volumes according to the type of stationary phase, methyl silicone or polyethylene glycol, and presented in full in Tables I and II.

Water authorities and others are encouraged to generate further data on organic compounds of concern for incorporation into the data base. WRc will continue to generate new data on compounds of concern as and when the occasion demands as well as to collate suitable data from the literature.

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#### INTRODUCTION

There is a need in the water industry at local laboratory level for a cheap method of identification of organic compounds. The objective of this work has been to fulfill this need by developing a system by which unknown compounds found in water may be tentatively identified from their gas chromatographic linear temperature programmed retention indices (LTPRIs). Normally retention indices are calculated under isothermal conditions and related to the retention of members of a homologous series of n-alkane standards and quoted in terms of carbon number x 100. Environmental samples usually contain organic compounds with a wide range of boiling points which cannot be eluted from a gas chromatograph at one temperature. In this work therefore the equivalent carbon number or retention index was calculated using a linear temperature programmed gradient. In use, measured LTPRI values are compared with a central computer library containing data of relevant compounds, generated under 'ideal' conditions and identifications can be achieved without having to resort to the use of more expensive equipment eg mass spectrometry. conditions include the adoption of standard chromatography columns which are capable of producing results of the required precision and accuracy in extended use.

#### COLUMN PREPARATION

The standard, fused silica capillary columns were prepared by methods based on those developed by Grob et  $al^{(1,2)}$  for the preparation of columns of borosilicate (eg Pyrex) tubing: some modification is necessary to adapt them to the different requirements of fused Columns have been prepared both from the silica. non-polar (polydimethylsiloxane) phase PS 255 and from the polar (polyethyleneglycol) phases Carbowax 20M and Superox 0.6. In all columns the liquid phase was immobilised by free radical polymerisation. column types have been thoroughly tested using the Grob test mix which contains acidic basic and neutral compounds and were shown to be inert and to display reproducible retention properties, the LTPRIs of Grob test compounds agreeing to within ± 1 unit. From these results it was concluded that the techniques used for the preparation of columns are successful and that it is possible to obtain consistent results from column to column and more importantly, from batch to batch.

The standard columns have been employed to generate retention data on selected organic compounds of concern in connection with pollution of the aquatic environment.

Commercially available columns of the chosen phases (polydimethylsiloxane and polyethylene glycol) have also been examined and all found to conform to the above mentioned requirements of reproducibility of retention properties. Results, at least for non-polar compounds, were consistent in terms of precision and accuracy in comparison with laboratory prepared columns.

#### CHROMATOGRAPHY CONDITIONS

The organic compounds were chromatographed on the polydimethylsiloxane phase using the following conditions:

Chromatograph: Erba Science FV4160

Carrier gas: Hydrogen; head pressure set such that

at ambient temperature (oven door open) the elution time for methane

(column hold-up time) is 120 s.

Injection: Split; injector vent flow rate

> approx. 30 ml/min (split ratio approx 15:1), injector temperature

200°C.

Detection:

Flame ionisation; detector temperature 350°C; detector gas pressures: hydrogen 0.4 kg/cm, air

1.5 kg/cm.

30°C for injection then programmed Oven temperature

immediately to 330°C at 4°C/min and held until no further n-alkanes

eluted.

Data processing: Peaks were acquired and retention

times measured using a Hewlett Packard 3390A reporting integrator fitted with input/output board (option 100) and interfaced with a Digital Equipment Corporation VAX 11/780 computer which was used for both data storage and calculation of LTPRIs using a polynomial curve

fitting technique.

The conditions applied for gas chromatography on the polyethyleneglycol phases were modified as follows:

Carrier gas: Hydrogen; head pressure set such that

at 60°C the elution time for methane

(column hold-up time) is 120 s.

Injection: Split; injector vent flow rate

approximately 30 ml/min (split ratio approx 15:1); injector temperature

200°C.

Detection: Flame ionisation; detector

temperature 250°C; detector gas pressures; hydrogen 0.4 kg/cm<sup>2</sup>, air

 $1.5 \text{ kg/cm}^2$ .

Oven temperature: 60°C for injection then programmed

immediately to 220°C at 4°C and held

for 20 min.

Initially, to ensure that there was no possibility of incorrect identification of the peaks, solutions of each compound at approximately the same concentration (roughly 400 ug/ml for solids, 0.4 ul/ml for liquids) were chromatographed separately on each column type. Following these initial runs solutions of similar concentrations were prepared containing mixtures of compounds which would neither co-elute nor react with each other in solution (which meant essentially that acidic and alkaline compounds were kept separate). These solutions were chromatographed twice and average LTPRIs calculated from these results and those from the solutions of the individual compounds.

In all cases 1.0 ul of pollutant solution was coinjected with 1.8 ul (corresponding to 1 ul plus the volume of the syringe needle) of a solution containing a mixture of n-alkanes (C6-26, C28, C30, C32, C36, C38 and C40) each at a concentration of approximately 40 ng/ul.

The Kovats method of assigning retention indices calculates the logarithmetic retention of a solute interpolated between those of two standard compounds (3). The standard compounds can be comprised of any homologous series of organic compounds. The standards most commonly adopted are the n-alkane series. The logarithmic relationship which prevails under isothermal gas chromatographic operating conditions is replaced under linear temperature programmed elution by a near-linear relationship expressed by the equation of Van Den Dool and Kratz (4).

$$I = 100z + 100 \quad \left[\frac{t_{Rx} - t_{Rz}}{t_{ez+1} - t_{Rz}}\right]$$

where I = linear temperature programmed
 retention index

t<sub>Rx</sub> = retention time of unknown

t<sub>Rz</sub> = retention time of the n-alkane eluting immediately before the

unknown

tRz+1 = number of carbon atoms in the n-alkane eluting immediately before the unknown

However, it has been clearly demonstrated that the linear relationship between retention data for the n-alkane series does not strictly hold true especially at the low molecular weight end of the series (5). Thus other approaches to the fitting of a mathematical function to retention time data have been explored. These have included the application of polynomial fits and various cubic spline techniques (5,6,7,).

The method employed in these studies for calculating linear programmed retention indices is a computerised polynomial routine which uses the Water Research Centre in-house computer - a DEC VAX 11/780. It utilises two Fortran sub-routines which are derived from the DEC VAX NAG library and which are not generally accessible. However the following text provides references which give the information on which the sub-routines are based.

The method employed is due to Forsythe<sup>(8)</sup> and is based upon the generation of a set of polynomials orthogonal with respect to summation over the normalised data set. The extensions due to Clenshaw<sup>(9)</sup> to represent these polynomials as well as the approximating polynomials in their Chebyshev-series forms are incorporated. The modifications suggested by Reimsch and Gentleman<sup>(10)</sup> to the method originally employed by Clenshaw for evaluating the orthogonal polynomials from the Chebysev-series representations are used to give greater numerical stability.

The routine determines the least squares polynominal approximations of degrees 0, 1 .... K to the set of data points (X(R), Y(R)) with weights W(R) (R = 1,2,...M). The value of K + 1 when K is the maximum degree required is specified by the user.

The approximation of degree I has the property that it minimises SIGMA(I), the sum of the squares of the weighted residuals EPS(R) (R = 1, 2, ...M), where

$$EPS(R) = W(R) \times (Y(R) - F(R))$$

and F(R) is the value of the polynomial of degree I at the Rth data point.

Each polynomial is represented in the Chebyshev-series form with normalised argument This argument lies in the range -1 to +1 and is related to the original variable X by the linear transformation

$$X = (2 \times X - XMAX - XMIN)/(XMAX - XMIN).$$

Here XMAX and XMIN are respectively the largest and smallest values of X(R). The polynomial approximation of degree I is represented as

where  $\mathbf{T}_{J}$  (X) is the Chebyshev polynomial of the first kind of degree J with argument (X).

For each value of I (I = 0,1,...K) the routine produces the values of A (I + 1, J + 1) (J = 0,1 ...I), together with the value of the root mean square residual S (I + 1) defined by the square root of SIGMA (I)/(M - I - 1). In the case M = I + 1 the routine sets the value of S (I + 1) to zero.

A further routine evaluates the polynomial:

0.5 x A (1) x 
$$T_0$$
 (X) + A (0) X  $T_1$  (X) + A (3)  
x  $T_2$  (X) + ... + A (NPLUS 1) x  $T_N$  (X)

for any value of X satisfying  $-1 \le X \ge 1$ . Here  $T_J$  (X) denotes the Chebyshev polynomial of the first kind of degree J with argument X. The value of NPLUS1 = N + 1 is prescribed by the user.

While the mathematics of this system of calculation appears complex it is nevertheless simple in operation and provides reliable "best fit" data. Should suitable computer facilities and software not be available, readily acceptable results have been obtained using graphical techniques employing semi-log graph paper (6).

# RETENTION INDICES LISTINGS

The retention indices listings are organised in two tables containing both "pure" data generated under the prescribed conditions at WRc and data collated from the open literature under conditions which closely adhere to the standard. Table 1 gives a truncated version of the library organised in order of increasing retention index. Besides the compound name the only other relevent information provided is the stationary phase employed. Table 2 provides a similar listing but in alphabetical order of compound name and it also contains full information on column origin, stationary phase, column material, column type, column dimensions carrier gas, sample type and bibliographic reference.

Computer based files of LTPRI and associated data have been set up for receiving, searching, and formatting information. Hard copy versions of the data base for more general distribution can be produced to order.

### REFERENCES

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### TABLE 1

SECOND TIER LIBRARY OF LINEAR TEMPERATURE PROGRAMMED RETENTION INDICES TRUNCATED VERSION IN RETENTION INDEX ORDER

RETENTION INDEX		COMPOU
0363	ethanal	
0369	ethanal	
0384		
0420	methane, bromo	
0427		
0429	ethane, chiolo ethene, bromo	
0463	đ	
0464	trile :	
0465	2-methyl	
0466		
0469		
0469	al (acrolein)	
04/1	amine, 1-metnyipropyi (butane, 2-amino) methanol	
0475	probanone (acetone)	
0477	ı,	
0480	_	
0480	propanal	
0480		
0490	10	
0492	۲	
0493	propanol, z-metnyı-z- nronına 3-chloro	
0496	diethyl ether	
0498	furan	
0200	acrylonitrile	
0200	2	
0200		
0501	amine, l,l-dimetnyletnyl	
0201		
0505	inian, z-metnyi sulphida dimethul (methulthiomethane)	
0507	2-methyl	
0509	•	
6020		
0512		
0515	υ	
0516	propanol, 2-	
0518	brome	
0518		
0520	ethene, 1,1-dichloro	
0521	•	
0522	Ω	
0524	methane, dichloro	
0.524	9	
0526	pentan-2,4-dione, 1,1,1,5,5,5-hexafluoro	
0526	- 1	
0527		
0527	σ	
0528	ethane, 1,1,1-trichloro-2,2,2-trilluoro	
0.000	etnane, 1,1,2-trichloro-1,2,2-trilluoro	

PHASE

PHASE

PHASE

SE-30

Me silicone

Me silicone

SE-30

We silicone

SE-30

We lilicone

SE-30

We lilicone

SE-30

We lilicone

SE-30

We silicone

SE-30

Me silicone

STATIONARY PHASE	SE-30 SE-30 SE-30	0V-1	Me silicone	OV-101	Me Silicone SE-30	SE-30	SE-30	Me ailicone	SE-30	SE-30	SE-30 Me ailicone	0V-101	OV-101	OV-101	SE-30	SE-30	SE-30	OV-101	SE-30	SE-30	Me silicone	OV-1	00-101	Me silicone	SE-30	SE-30	SE-30 OV-101	SE-30	SE-30	SE-30	Me silicone	SE-30	0V-101	SE-30	We silicone	0V-1	SE-30	OV-101	SE-30	SE-30	Me alticone
NAME																																									
COMPOUND NAME																										acrylate)															
					thyl			thyl			er	Loro	T contract							er				har 60tor		(methyl		1 eater			allyl (1-propen-3-thiol)				ı	copen-3-thiol)				,	)-I-
	propanol, 1- propen-1-ol, 2-	propen-1-o1, 2. butane, 2,2-dimethyl	methane, nitro	butane, 2,2-dimethyl	propane, 2-chloro-2-me	butane, Z,Z-dimethyl cuclomentadiene: 1.3-	propanol, 2-methyl-2-	ether, chloromethyl methyl	propyne, 3-chloro-1-	propyn~1-o1, 2- proprionitrile	acetic acid, vinyl ester	ethene, trans-1,2-dichloro	amine, bucyi (bucane, cvclopentane	butane, 2,3-dimethyl	cyclopentene	pentene, 3-methyl-1-	propanci, i- ether, methvl-t-butvl	ane, 2-methyl	butane, 2,3-dimethyl	ic acid, vinyl est	cyclopentene propane: 2-bromo	butane, 2,3-dimethyl	ane, 2,3-dimethyl	cyclopentane	chloroformic actu, med pentane. 2-methyl	propenoic acid, methyl ester	cyclopentane	pentane, z-metnyi formic acid. 2-propenyl ester	butanal	hexadiene, 1,5-	mercaptan, allyl (1-p)	buteme, J-cmio.c.i.	pentane, 3-methyl	butanone	mercaptan, n-propyl	propens, crafications : mercaptan, allv1 (1-propen-3-thiol)	pentane, 3-methyl		butanol, 2- hovere 1-	1	propene, trans-1-bromo-1-
RETENTION INDEX	II II		0536 meth			0540 buta			0545 prop				0557 cvcl				0561 prop				0565 eyer					0569 prop		05/0 pent			0575 merc				0580 merc						

RETENTION INDEX

acetic acid, ethyl ester		opyl ether	butene, cis-Z-chioro-Z-	methane, titunioro mercantan, n-bropol	dioxolane, 1,3-	ıd,		ethane, lodo			יגי		, 2-methyl-2	acid, ethyl	propane, 1-chloro-2-metny1	tri		tric	cid, ethyl	1, 2	O)	$\rightarrow$	entene, 3-met	acetic acid, ethyl ester	s-aimecnyı-ı, dro	methane, trichloro	. ~		, 2,2-dimethyl	propane, Z-bromo-Z-metnyl	, e	m	-chlo	trans-1-chl	ntan	0	etrahydro	5	φ.	etrah	,,	pentane, Z,Z-dimetnyi	cyclopencane, methyl	٠,-	ne, chloro-2-	
0593	0594	0594	ഗ	0595	0597	0090	0090	0601	0601	0601	0603	0604	9090	0607	0000	6090	6090	0610	0611	0614	_	0615	0615	0616	0616	0616	0616	0617	0618	0618	6190	0620	0620	0622	0622	$\sim$	$\sim$	0625	0625	$\sim$	N	0626	1290	0627	0627	! •

Page

OV-1
OV-101
Me silicone
SP-2100
Me silicone
Me silicone
SE-30
OV-1
SE-30
OV-101

SE-30 Me silicone SE-30

Me silicone OV-1

OV-1

SP-2100

00-1

OV1-1/SE-54
SE-30
Me silicone
SE-30
OV-101
SE-30

SP-2100 SE-30

0V-1 0V-1 0V-1

SP-2100 SE-30

OV1-1/SE-54

OV-101

SE-30

SP-2100

SP-2100

SE-30

0V-1

OV-101 SE-30

COMPOUND NAME

RETENTION INDEX

STATIONARY

PHASE

SE-30 OV-101 OV-101

OV-101

RETENTION INDEX

STATIONARY PHASE

Me silicone OV-101 SE-30

OV-1 SE-30 SE-30 SE-30 SE-30 SE-30 SE-30 OV-1 OV-1 OV-1 OV-1 SE-30 SE-30

OV-1
SE-30
OV-1
SP-2100
OV-101
Me silicone
SE-30
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SE-30

RETENTION INDEX

STATIONARY PHASE

SP-2100

SE-30 OV-101 OV-101

00-1

0V-1 Me silicone 0V-1 0V-1 SE-30 0V-101

SE-30 SE-30 OV-101 SE-30 OV-1 SE-30 SE-30 SE-30 OV-1 Me silicone SP-2100 SE-30

SE-30

OV-1 OV-1 SE-30 OV-101 SE-30 OV-101 SE-30 SE-30
Me silicone
OV-1
Me silicone
SE-30
OV-1
OV-1

OV-101 SE-30

SE-30 SP-2100

00-1

Me silicone OV-101

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oyclomeans

oyclomeans, 1,1-dimethyl

hexans, 3-methyl

pentadions, 2,3-

heptadiens, 1,6-

hexans, 3-methyl

nitropropans, 2-

propenoic acid, ethyl ester (ethyl acrylate)

ethens, trichloro

propenoic acid, 2-methyl, methyl ester (methyl methacrylate)

methans, bromodichloro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Janercaptan, s-butyl
sulphide, diethyl (3-thiapentane)
pentane, 3-ethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pentanol, 2-
sulphide, diethyl (3-thiapentane)
cyclopentane, cis-1,3-dimethyl
propene, 2,3-dichloro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sulphide, diethyl (3-thiapentane) dioxane, 1,4-
                                                                                                                                                                                                     acetic acid, 2-propynyl ester
methane, tetrachloro
sulphide, methylallyl
                                                                                                                                   acetic acid, 2-propenyl ester
pentane, 2,3-dimethyl
pentane, 2,3-dimethyl
                                                                                                                                                                                                                                                                         hexadiene, cis, trans-2,4-methane, tetrachloro
                                                                               acetonitrile, trichloro
                                                                                                                                                                     cyclohexadiene, 1,3-
pentane, 3,3-dimethyl
pentanone, 2-
                                                                                                                                                                                                                                                                                                                                                                                                                                             propane, 1,2-dichloro
propane, 1,2-dichloro
                                                                   propane, 1,2-dichloro
                                                        methane, tetrachloro
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ethene, trichloro
methane, dibromo
cyclohexene
                                                                                                                                                                                                                                                                ethene, trichloro
                                               hexane, 2-methyl
                                                                                                                           hexane, 3-methyl
                                                                                                                                                                                                                                                 butane, 2-bromo
                                                                                                                                                                                                                                                                                                 pentanone, 2-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pentanol, 2-
                                    cyclohexene
                                                                                                                                                                                                                                                                                                            cyclohexane
                         cyclohexene
                                                                                                      cyclohexane
                                                                                                                 cyclohexane
                                                                                                                                                                                                                                                                                                                                                                                                                                      pentanal
                                                                                                                                                                                                                                          benzene
                                                                                            benzene
                                                                   0667
0668
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OV-1
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SE-30 SE-30

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OV-1 0V-1 00-1

OV-101

0V-1 0V-1 0V-1

Me silicone SE-30

OV-101

SE-30

Me silicone SE-30

OV-101

ov-1

OV-101

SE-30

STATIONARY PHASE

COMPOUND NAME

RETENTION INDEX ethene, trichloro
pentane, 2,2,4-trimethyl
acetic acid, dimethylethyl ester
cyclopentane, trans-1,3-dimethyl
ethene, trichloro

0687 0687 0689 0689

0687

cýclopentane, trans-1,2-dimethy1 methane, bromodichloro

heptene, 1cyclohexene acetonitrile, dichloro dioxane, 1,4mercaptan, n-butyl

propionate, ethyl

Me silicone Me silicone SE-30 OV-101

SE-30

OV1-1/SE-54 OV1-1/SE-54

page

amine, methylpentyl butane, 1-chloro-3-methyl

ethane, 1,2-diflüoro-1,1,2,2-tetrachloro

ethane, 1-bromo-2-chloro ethane, 1-bromo-2-chloro ethane, 1-bromo-2-chloro methane, bromodichloro acetone, 1,1-dichloro

0704

0704 0704

acetic acid, propyl ester

pentadiene, 2,4-dimethyl-1,3-propanoic acid, ethyl ester

butane, 2-chloro propane, 1-iodo

heptane, n-methane, dibromo methane, dibromo

sulphide, methylpropyl butan-2-one, 3,3-dimethyl ethene, trichloro

pyrazine

dioxane, 1,3-mercaptan, n-butyl methane, bromodichloro

06699 06699 06699 066992 066993 066993 066993 06696 06

propane, 2-iodo-2-methyl acetaldehyde, trichloro

epichlorhydrin

Me silicone SE-30 Me silicone OV-1 OV-1 SP-2100

Me silicone

OV-101

Me silicone

SE-30

SE-30

RETENTION

SE-30 Me silicone OV-1 OV-101

OV-1 OV-1 SP-2100

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SE-30 OV-101

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Me silicone OV-101

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Me silicone

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STATIONARY PHASE

SE-30

OV-101

RETENTION INDEX Me silicone OV-101 OV-101 SE-30

ov-101

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OV-1 SE-30 SP-2100

Me silicone

OV-101

STATIONARY PHASE Me silicone OV-1 SE-30 SE-30 SE-30

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0V-1 0V-1

OV-101 Me silicone SE-30

SE-30

0V-1 SP-2100 OV-1 OV-1 SE-30

OV-101

SE-30 SE-30

Me silicone SE-30 OV-101 SP-2100 OV-1

OV-1 SP-2100

OV-101

OV-1 OV-101

Me silicone OV-101

OV-101 OV-101

SE-30

SP-2100

OV-101 SE-30

덛Ⅱ			
COMPOUND NAME		adrylate)	
9 H		(ethyl methacrylate)	
		l ester	ropicrin) thyl
	chloro 2- (toluene) (toluene) (toluene) (toluene) (toluene) hloro hyl omo 2-methyl	-methyl, ethyl (toluene) lloro lloro lloro lloro lloro yl mochloro (toluene) tthyl hloro lloro (toluene)	hexanone, 3- hexanone, 3- methanoe, trichloronitro (chloropicrin) cyclopentane, 1,1,2-trimethy1 heptane, 4-methy1 heptane, 3-ethy1- cyclopentane, 1,1,3,3-tetramethy1 thiophene, 3-methy1 thiophene, 3-methy1 thiophene, 3-dimethy1 benzene, methy1, (toluene) cyclopentene, 1,2-dimethy1- hexane, 3-ethy1-3-methy1 acetonitrile, bromochloro acetic acid, isobuty1 ester dioxolane, 2-ethy1-4-methy1 dioxolane, 2-ethy1-4-methy1 heptane, 2-ethy1-4-methy1 heptane, 2-ethy1-4-methy1 heptane, 2-methy1 heptane, 2-methy1 heptane, 2-2,4,4-tetramethy1 henzene, methy1, (toluene) henzene, methy1, (toluene)
	l,2-tri bromo- sthyl, sthyl, comotri sthyl,	10 .55550 . 5805 . 5%	hexanone, 3- methane, trichloronitro (chl. cyclopentane, 1,1,2-trimethy heptane, 4-methyl. heptane, 3-ethyl-2-methyl cyclopentane, 1,1,3,3-tetram thiophene, 3-methyl. cyclopentene, 1,2,3,1-tetram thiophene, 3-methyl. cyclopentene, 1,2-dimethyl hexane, 3,4-dimethyl pentane, 3-ethyl-3-methyl pentane, 3-ethyl-3-methyl dioxolane, 2-ethyl-4-methyl dioxolane, 2-ethyl-4-methyl dioxolane, 2-ethyl-4-methyl heptane, 2-methyl methane, 2-methyl methane, 2-methyl methane, 2-methyl heptane, 2-methyl methane, 2-methyl methane, 2-methyl heptane, 2-methyl heptane, 2-methyl heptane, 2-methyl heptane, 2,4,4-tetramethyl hencene
		elneme, crains to propenoic acid, benzene, methyll propane, 1,3-dic propane, 1,3-dic propane, 1,3-dic propane, 1,3-dic propane, 1,3-dic percent in the propane, methyl butyric acid, 2-cyclohexene, 1-ropropane, 1,3-dic percene, 1,3-dic percene, 2-methyl hexane, 2-meth) hexane, 2-meth) hexanene, 3-hexanene, 3-hexanene, 3-hexanene, 3-hexanene, 3-hexanene, 3-dimenial propenoie, 3-hexanene, 2-dimenial propenoie, 3-hexanene, 3-hexanene, 3-dimenial propenoie, 3-dimenial propenoie, 3-hexanene, 3-dimenial propenoie, 3-dimenial prope	hexanone, 3- methane, trich cyclopentane, heptane, 4-met methane, 3-mt pentane, 3-mt thiophene, 3-mt cyclopentane, thiophene, 3-mt cyclopentane, hexane, 3-et hexane, 3-et acetonitrile acetic acid, dioxolane, 2-e dioxolane, 2-e dioxolane, 2-e dioxolane, 2-e heptane, 2-met methane, 2-met methane, 2-met methane, 2-met methane, 2-met methane, 2-met
RETENTION INDEX		0756 0757 0757 0757 0758 0758 0758 0758 0761 0761	

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			D ::	ie, 3,4-dichloro-1-	3-me 2-br	্ব ।	ne, 3,4-dimethyl	acid, 2-propenyl	liene,		1-methyl	cyclopentane, cis-l-trans-2,4-trimetny1	1a.1	•	ne, 2,2,4,4-retrametny. ne. 3-methvl	ne, 3-ethyl	cyclohexane, cis-1,3-dimethyl	methane, dibiomochioro	hexane, 1,1-dimethyl	3, tran	aptan, allyl (1-propen-3-thlo1) ang dichlorolodo	lamine, 2-hydroxy (ethanolamine)	butyric acid, ethyl ester	ne, 2,2,5-trimethyl	anoic acid (propronic acid) cheptene	ohexane, trans-1,3-dimethyl	nide, ethylpropyl	pta 1.	2,2	1,2-d	cycloheptatriene, 1,3,5" cycloheysne trans-1 4-dimethvl	2,2,5	dio,	I	ric acid, ethyl ester	٦.,	oheptene	ne, tetrachloro	
	heptane, hexanone,	methane, methane,	methane, acetonitu	butene,	heptane, pentane,	cyclohexane,	hexane,	•	cyclohexadie	cyclohexene,	cyclohexene,	cyclopent	hexanal	hexanal	pentane,	hexane,	cyclohex	methane,	cyclohexane,	cyclohexane,	mercaptan,	ethylami	butyric	hexane,	propanole ac	cyclohexane,	sulphide,	cyclonep ethane.		butane,	cycloheptatr	hexane,	•		butyric	sulphoxide,	$\mathbf{Q}_{\bullet}$	ethene,	
RETENTION INDEX			0768 0769		0769	0770	0770	0770	0771	- [	7	0773	0773	7	0773	0775	0776	07.76	0778	0778	0778			0781		0783	0783	0784	0784	0785	0785	0786	0786	0786	0787	0787	0788	0789	0789

というのでは、一般の対象の対象を表現している。 いっこう いっこう はんかん はんしょう はんない 変数の

COMPOUND NAME

COMPOUND NAME		ester (Sarin)			
	hexane, 2,2,4-trimethyl octene, 1- octene, 1- piperidine acetic acid, butyl ester cyclohexane, trans-1,2-dimethyl	cyclopentanol phosphoritoridic acid, methyl-, 1-methylethyl phosphoritoridic acid, methyl-, 1-methylethyl acetic acid, 1,1-dimethylpropyl ester ethylene, trans-1,2-di-t-butyl acetone, 1,1-dichloro acetone, 1,1-dichloro acetone, 1,1-dichloro hexane, 2-chloro hexane, 2-chloro mercaptan, pentyl mercaptan, pentyl mercaptan, dichloroiodo mercaptan, dichloroiodo	mstuding, uncorrored by the state of the sta	Pyrazine, 2-methyl pyrazine, 2-methyl acetic acid, butyl ester butane, 1-iodo ethane, 1,2-dibromo lactic acid, ethyl ester lactic acid, ethyl ester cyclohexane, cis-1,3-dimethyl ethane, 1,2-dibromo pyrazine, 2-methyl mercaptan, pentyl mercaptan, pentyl valeric acid, methyl ester valeric acid, bromomethyl ester	butane, 1,3-dichloro cyclohexane, cis-1,4-dimethyl morpholine acetic acid, 1,2-dimethylpropyl ester cycloheptadiene, 1,3-ct-1-yne butene, cis-1,3-dichloro-2-furfuradehyde butane, 1-iodo ethene, tetrachloro ethene, tetrachloro hexen-1-ol, trans-3-
RETENTION INDEX	0789 0789 0790 0790 0792 0792	0792 0793 0793 0794 0795 0795 0795	0.195 0.797 0.797 0.798 0.799 0.800 0.800 0.800	0801 0802 0803 0803 0804 0806 0806 0806	0809 0810 0810 0811 0811 0812 0812 0814

STATIONARY PHASE

PHASE

OV-1 SP-2100 OV-1 SE-30

Me silicone
OV-1
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OV-101
SE-30

Me silicone

OV-101

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0V-1

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Me silicone OV-1 Me silicone

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ov-1OV-1

Me silicone OV-101 SE-30

Me silicone OV-101 OV-101 OV-101

Me silicone Me silicone

OV-101 OV-101

SE-30

SP-2100 OV-1

SE-30

COMPOUND NAME			alcohol) ester (propyl methacrylate)
	4-vinyl-1-  romo a (3-methylpyridine) como-3-chloro dibromo  1.  no a cid, methylethyl ester cis, trans, trans-1, 2, 4-trimethyl bromo 1. chloroethyl ethyl 1. dimethyl, (m-xylene) dimethyl, (m-xylene) dimethyl, (m-xylene) dimethyl, (m-xylene)	discis, cis, trans-1,3,5-trimethy1 dibromo dimethy1, (p-xylene) dimethy1, (p-xylene) dimethy1, (p-xylene) dimethy1, (p-xylene) dimethy1, (m-xylene) dimethy1, (m-xylene) synono 1,2,3-trichloro 1,2,3-trichloro 3-methy1buty1 ester 3-methy1buty1 ester dimethy1, (p-xylene) 1,2-propenyl ester dimethy1, (m-xylene) dimethy1, (p-xylene) dimethy1, (p-xylene) dimethy1, (p-xylene)	(furfuryl alcohol)  1, propyl ester (propyl (m-xylene) (m-xylene) (p-xylene) (p-xylene) (p-xylene)
	cyclohexene, 4-vinyl-1- methane, tribromo picoline, beta (3-methylpyridine) propane, 1-bromo-3-chloro propane, 1,2-dibromo benzene, ethyl benzene, chloro hexane, 1-chloro cyclohexane, cis, trans, trans-1,2,cyclohexane, bromo benzene, ethyl ether, 1,2-dichloroethyl ethyl benzene, ethyl benzene, ethyl benzene, 1,3-dimethyl, (m-xylene)	ane of part of	1- tribromo tribromo tribromo tribromo -hydroxymethyl c acid, 2-methyl 1,3-dimethyl, 1,3-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl, 1,4-dimethyl,
RETENTION INDEX	0840 0841 0841 0841 0841 0842 0843 0844 0844 0844 0844 0844 0844 0846 0846		

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ME ==		ter (aldicarb)	
COMPOUND NAME		ester (isopropyl crotonate) lene) lene) lene) lene) lene) ethylthio)propylidene amino ester (aldicarb) ,2,3-trimethyl	lene)  1 ester  lene)  lene)  lene)  lene)  lene)  lene)
	omo (lthio) cenyl ester omo chloro sthyl-2,4-		kthyimethyl kromo kromo chimethyl, (p-xy dimethyl, (p-xy lbenzene) cis, trans, cis-l thylmethyl khyl acid, 2-propeny ethylidene hloro chart, (o-xy dimethyl, (
RETENTION INDEX			

Me silicone

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0V-101 0V-101 0V-101

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SP-2100 SP-2100 OV-1 SP-2100 OV-1 OV-1 SE-30 SE-30 SE-30 SE-30

Me silicone

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Me silicone

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propencic acid, butyl ester (butyl acrylate) propencic acid, butyl ester (butyl acrylate) benzene, 1,2-dimethyl, (o-xylene) benzene, 1,2-dimethyl, (o-xylene) benzene, 1,2-dimethyl, (o-xylene)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pyrazine, 2,5-dimethyl
pyrazine, 2,6-dimethyl
pyrazine, 2,6-dimethyl
pyrazine, 3,6-dimethyl
pyridine, 3-chloro
sulphide, dipropyl
chloroacetic acid, dimethylethyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                sulphide, dipropyl valeric acid, ethyl ester benzene, 1,2-dimethyl, (o-xylene) chloroacetic acid, 2-propynyl ester
                       benzene, 1,2-dimethyl, (o-xylene)
propane, 2,2-dimethyl-1,3-dichloro
styrene, (vinylbenzene)
                                                                                                                                                                                                                                                                                                                 cyclohexane, cis-1-ethyl-3-methyl
                                                                             benzene, 1,2-dimethyl, (o-xylene)
ethane, 1,1,2,2-tetrachloro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pentane, 1-bromo-4-methyl ethane, 1,1,2,2-tetrachloro pentane, 2-bromo-2,4-dimethyl propane, 1,2,3-trichloro propane, 1,2,3-trichloro styrene, (vinylbenzene) cyclohexen-1-ol, 2-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ethane, 11,2,2-tetrachloro
ethane, 1,1,2,2-tetrachloro
ethane, 1,1,2,2-tetrachloro
                                                                                                                                                                                                                                                                                        cyclooctatetraene, 1,3,5,7-
                                                                                                                                                                                                                                                                                                                                                                          methane, bromochloroiodo methane, bromochloroiodo
                                                                                                                                                                                                                                                                                                                                              methane, bromochloroiodo ethene, bromotrichloro
                                                                                                                                                                              methane, bromochloroiodo
                                                                                                                                                              styrene, (vinylbenzeñe)
                                                                                                                                                                                                                                                                                                      styrene, (vinylbenzene)
                                                                                                                                                pyridine, 2,6-dimethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cyclohexane, chloro
                                                                                                                                                                                                                                                                           cyclohexane, chloro
                                                                                                                                                                                         pyrazine, 2-methoxy
pyrazine, 2-methoxy
                                                                                                                                                                                                                                                                                                                                   cyclohexanone
                                                                acrylonitrile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cyclohexanol
                                                                                                                                                                                                                                                                                                                                                                                                        nonene, 1-
                                                                                                                                                                                                                                                                                                                                                                                                                     nonene, 1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nonene, 1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nonene, 1-
                                                                                                         heptanal
                                                                                                                         heptanal
                                                                                                                                       heptanal
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                                                                 0876
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RETENTION

COMPOUND NAME

SE-30 Me silicone Me silicone OV-101 OV-1 SP-2100 Me silicone SE-30 Me silicone OV-101 SP-2100 SE-30 Me silicone SE-30 OV-101 OV-101 Me silicone OV-101 OV-101 Me silicone SE-30 Me silicone SE-30 Me silicone STATIONARY SE-30 SP-2100 SE-30 OV-101 OV-101 OV-101 OV-101 SE-30 0V-1 0V-1

SE-30 OV-1 SP-2100 OV-1 SE-30 OV-1 OV-101 OV-10

COMPOUND NAME			D																						(Z-metnyipropyi metnacryiate)																			
	<pre>butane, meso-2,2-dichloro butanoic acid, 3-methyl, 2-propenyl ester cvclohexane, isopropyl</pre>	1	ter (propyrthyl ester	octane, 2,2-dimethyl	propane, 1,1,2-tetrachloro	cyclohexane, allyl	propane, 1,3-dibromo	cyclohexen-1-one, 2-	cyclooctane	benzene, isopropyl, (cumene)	cyclohexane, cis-1-ethyl-2-methyl	cyclohexane, n-propyl	cyclohexane, n-propy1	octene, 3,7-dimethy1-2	octene, 3,7-dimethyl-3	~	heptanone, 5-methyl-3-	•	pyridine, 2,4-dimethyi	cyclonexylamine, J-mechyr cyclonfadiene, 1.5-	cycloccactor, 1/5	pinene, (+)-gamma-	ò	-bromo-2-methyl	id, 2-methyl, 2-methylpropyl ester	benzaldehyde	ج.	benzene, allyl	١.	_	xane, n-propy	toluene, 2-chloro	cycloctane hexanal, 2-ethvl		hexanal, 2-ethýl	octane, 2,6-dimethyl	toluene, 3-chloro		octane, z,o-dimetny.			benzene, propyl	ā	toluene, 4-chloro
RETENTION INDEX	0915 0915 0915	0916	091 <i>7</i> 0918	0918	0918	0919	0919	0920	0920	0921	0921	0921	0921	0922	0922	0923	0923	0923	0924	0350	0926	0926	0926	0927	0928	0929	0929	0.000	0830	0630	0931	0931	0932	0932	0932	0932	0932	0934	0934	9860	0936	9860	0936	0936

cyclohexanone, "methyl heptane, 4-propyl benzene, 1-ethyl-3-methyl benzene, 1-ethyl-3-methyl benzene, 1-ethyl-3-methyl dichloroacetic acid, 2-propenyl ester heptane, 3-ethyl-2-methyl benzaldehyde

bromoacetic acid, dimethylethyl ester cyclooctadiene, 1,5-

pyrazine, 2-isopropyl

benzaldehyde

oxalic acid, diethyl ester trisulphide, dimethyl trisulphide, dimethyl benzene, 1-ethyl-3-methyl

cyclohexanol,3-methyl benzene, 1-ethyl-3-methyl benzene, 1-ethyl-4-methyl heptanol, 1-

chloroacetic acid, 1-methylpropyl ester amine, di--butyl bromeacetic acid, 2-propenyl ester benzene, 1-ethyl-4-methyl benzene, 1-ethyl-4-methyl benzene, 1-ethyl-4-methyl benzene, propyl benzene, propyl benzene, propyl benzene, 1-ethyl-3-methyl benzene, 1-ethyl-3-methyl benzene, 1-ethyl-3-methyl

0941 0943 0943 0944 0944

benzene, propyl cyclohexadiene, 1-methoxy-1,4-heptane, 3-ethyl-3-methyl indene, octahydro

benzene, propyl hexane, 3,4-diethyl amine, tri-n-propyl

> 0937 0937

INDEX 0937 indene, octahydro pyridine, 2,3-dimethyl

indene, octahydro

0938 0939 0940 0940 0940 0940

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SE-30

OV-101 SE-30 OV-1

SE-30

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SE-30 Me silicone OV-101

SP-2100

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SP-2100

00-1 00-1

> benzene, 1,3,5-trimethy1 benzene, 1-ethy1-3-methy1 benzene, 1-ethy1-4-methy1 benzene, 1,3,5-trimethyl

pyrazine, 2-chloro-3-methyl benzene, 1,3,5-trimethyl

benzene, 1,3,5-trimethyl benzene, 1,3,5-trimethyl

furoic acid, methyl ester

heptane, 1-chloro

benzene, propyl ethane, pentachloro ethane, pentachloro ethane, pentachloro

COMPOUND NAME

STATIONARY

OV-101 OV-101

SP-2100 OV-1

OV-101

0V-1

SE-30

SE-30

COMPOUND NAME	ne.) ne.)	rylate)
OOMP	yl ketone) yl ketone) yl ketone)	(butyl methacrylate)
	(di-t-butyl (di-t-butyl (di-t-butyl) ster	r r (buty)
	<u></u>	pynyl ester butyl ester bro
hyl chyl chyl chyl chyl sthyl 3-methyl	hydrindane, trans- (hexahydroindane) nonane, 4-methyl pentanone, 2,2,4,4-tetramethyl-3-, (di- pentanone, 2,2,4,4-tetramethyl-3-, (di- pentanone, 2,2,4,4-tetramethyl-3-, (di- pyridine, 4-cyano benzene, propyl chloroacetic acid, 2-methylpropyl ester ether, 2,2'-dichlorodiethyl bromoacetic acid, 2-propynyl ester cyanoacetic acid, ethyl ester benzene, 1,3,5-trimethyl pyrazine, 2-ethoxy porazine, 2-ethoxy pyrazine, 2-ethoxy porazine, 3-ethoxy porazine	enylhylhylhylhylhylhylhylhylhylhylhylhylhy
benzene, 1,3,5-trimethyl benzene, 1,3,5-trimethyl benzene, 1,3,5-trimethyl heptanol, 1-3,5-trimethyl octane, 2,3-dimethyl benzene, 1,3,5-trimethyl benzene, 1-sthyl-4-methyl pyrazine, 2-methoxy-3-methyl pyrazine, 2-methoxy-3-methyl pyrazine, 2-methoxy-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	hydrindane, trans- (hexahyd nonane, 4-methyl pentanone, 2,2,4,4-tetramet pentanone, 2,2,4,4-tetramet pentanone, 2,2,4,4-tetramet pentanone, 2,2,4,4-tetramet pyrtdine, 4-cyano benzene, propyl chloroacetic acid, 2-methyl ether, 2,2'-dichlorodiethyl benzene, 1,3,5-trimethyl phenol pyrazine, 2-ethoxy pyrazine, 2-ethoxy pyrazine, 2-ethoxy pyrazine, 2-ethoxy pyrazine, 2-ethoxy dinethyl cyanoacetic acid, ethyl est dichloroacetic acid, ethyl est dichloroacetic acid, ethyl est chrosone, 1,3,5-trimethyl cyanoacetic acid, ethyl est dichloroacetic acid, ethyl est dichloroacetic acid, dimethyl cyanoacetic acid, ethyl est dichloroacetic acid, dimeth	b-methy1 c acid, 2-propeny hyde l-ethyl-2-methyl l-ethyl-2-methyl l-ethyl-2-methyl l-ethyl-2-methyl tribromo acetic acid, 2-pr acetic acid, 2-pr c acid, 2-methyl, l-ethyl-2-methyl, l-ethyl-2-methyl, l-ethyl-2-methyl, l-ethyl-2-methyl, l-ethyl-2-methyl alpha-methyl alpha-methyl l-ethyl-2-methyl l-ethyl pentachloro 2-chloro (-)-beta- cid, 2-furfuryl e cid, 2-furfuryl e cid, 2-furfuryl e cid, 2-furfuryl e
	hydrindane, trans- nonane, 4-methyl pentanone, 2,2,4,4- Pentanone, 2,2,4,4- Peritanone, 2,2,4,4- phridine, 4-cyano benzene, propyl chloroacetic acid, ether, 2,2'-dichlon bromoacetic acid, cyanoacetic acid, benzene, 1,3,5-trin phenol pyrazine, 2-ethoxy pyrazine, 2-ethoxy pyrazine, 2-ethoxy cyanoacetic acid, dichloroacetic acid, edichloroacetic acid, cyanoacetic acid, dichloroacetic acid,	
	hydrindane, nonane, 4-n pentanone, pentanone, pentanone, pentanone, pyridine, denzene, preher, 2,2' bromoacetic cyanoacetic cyanoacetic phenol phenol pyrazine, pyrazine, cyanoacetic cyan	nonane, control pentanoic benzanoic benzene, benzene, benzene, benzene, cotane, dichlorophepten-2 phenol propenoi benzene, propane, gtyrene, nonane, styrene, pinenol, styrene, pinenol, pinenol, pinenol, pinenol, acetic acetic acetic acetic acetic acetic acetic
NETENTION 1NDEX 0953 0953 0953 0954 0954 0954 0954	0 0 9 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0990 0990 0990 0990 0990 0990 0990 099

COMPOUND NAME																																																
				į.	Ţ			•	opropyl														(d	ì							(pentyl acrylate)																l ester	
		l-ethyl-2-methyl		1d, C13-3-hexenyl ester tic anid 3-butenul ester	omo	omo	2-isopropyl	2-methyoxy-5-methyl	ne, trans-1-methyl-4-1sopropyl	Ę.	•	, 3, 4, 4-tetramethyl	IImetny1	de, dimecnyi 1-methul-3-vinul	romo	1-2,4-dimethyl	3-ethyl-2,4-dimethyl	1-2,4-dimethyl		1,2,4-trimethyl	-	c-bucyı 1-one 1-besen	sne, i bromo cis- (hevabudroindane)	innit or Linear	hloro	1,2,4-trimethyl	1,2,4-trimethyl	trimethyl	trimethyl	I-methyl-4-vinyl	I-metnyi-4-vinyi acid, pentyl ester (pe		2-ethyl-5-methyl	2-ethyl-5-methyl	1,3-dichloro	acult eacer			2,3,5-trimethyl	2,5-dimethyl	,3-dichloro	, 3-dichloro	,3-dichloro	I-methyl-Z-vinyl I-methyl-3-vinyl	2.4.6-trimethol	* Income	2-, 3-methylpropyl ester	
	octane, 3-ethvl			acetic acid, ci	cyclohexane, bromo	-		pyrazine, 2-met	g (	n	ot 1			trisuipnide, di	,	١,		pentane, 3-ethy	Ğ			benzene, t-butyl	4 0	`.	adamantane, 1-chloro	benzene, 1,2,4-					penzene, 1-meth propenoic acid,			ι, '	benzene, 1,3-d1	י	octanal		pyrazine, 2,3,5		_			benzene, 1-meth	٠,		acid,	myrcene
RETENTION INDEX	1960	0968	0968	6960	0960	6960	6960	6960	0240	0260	0260	0971	2/60	09/2	0973	0973	0973	0973	0974	0975	09/5	07.60	2780	0976	0977	1160	7160	1160	0977	87.60	0978 0978	0860	0860	0860	1860	0981	0981	0981	0981	0981	0982	0982	2860	2860	0982	0983	0983	0983

STATIONARY
PHASE

SESSON
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COMPOUND NAME				ester r	
	toluene, alpha-chioro (benzyl chloride) benzene, 1,2,4-trimethyl cyclohexane, cis-l-methyl-4-isopropyl furan, 2-propionyl furfural, 5-methyl	myrcene myrcene benzene, 1,2,4-trimethyl benzene, 1,4-dichloro benzene, 1-methyl-4-vinyl menthene, 1- menthene, 1- pyrazine, 2-propyl pyrazine, 2-propyl pyrazine, 2-propyl pyrazine, 2-propyl hydrindene, dis (hexahydroindane)	tribal.		menth 10, ene, p decene, trans-5- dichlorobenzene, 1,4- ethane, hexachloro pyridine, 3,4-dimethyl benzene, 1-methyl-3-isopropyl pentane, 1,5-dichloro pinane, (+)cis- succinic acid, dimethyl ester benzene, 1-methyl-4-isopropyl pentane, 2,4-dibromo
RETENTION INDEX	0983 0984 0984 0984	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			

COMPOUND NAME					
M	benzene, 1,2,3-trimethyl chloroacetic acid, 1-methyl-3-butenyl ester cyclocatane benzene, 1,2,3-trimethyl benzene, 1,2,3-trimethyl benzene, 1,2,3-trimethyl	benzene, 1,2,3-trimethyl benzene, 1-isopropyl-4-vinyl benzene, 1-methyl-3-isopropyl benzene, 1,2-dichloro benzene, 1,4-dichloro benzene, t-butyl ethane, 1,2-diioho heptanoic acid, methyl ester propane, 1,1,2,3-tetrachloro benzene, 1,2,3-taimethyl benzene, 1,2-dichloro benzene, 1,2-dichloro benzene, 1,2-dichloro benzene, 1,2-dichloro benzene, 1,2-dichloro	ध म श्रूष्यम श्रू	indane dichloroacetic acid, 1-methylpropyl ester chane, 1,2-dibromo-1,1-dichloro benzene, 1,3-dichloro benzene, 1-methyl-2-isopropyl benzyl alcohol indene benzoquinone, 2-methyl-1,4- indane limonene limonene	cyclohexane, (1-methylpropyl) cyclohexane, (1-methylpropyl) cyclohexane, (1-methylpropyl) cyproperation (1-methylpropyl) dipentene, 1,4- hexane, 1-iodo menthene, 1- indene, 1- indene, 2-methylthio bromoacetic acid, 2-methylpropyl ester
RETENTION INDEX	1004 1004 1004 1005 1005	1005 1006 1006 1007 1008 1008 1008 1009	001 1001 1001 1001 1001 1001 1001 1001	1014 1015 1016 1017 1017 1018 1018 1018	1019 1019 1019 1019 1019 1020 1020

COMPOUND NAME	1 crotonate) 1-2-					រា											ester		i.	4																	ester		
2 1	butenoic acid, 2-, butyl ester (butyl cyclopenten-1-one, 2-hydroxy-3-methyl.indane propene, 2-methyl-3-phenyl-1-		indene limonene	cycloheptane, chloro cyclohexane, butyl	nonane, 2,6-dimethyl	heptane, 1-bromo trichloroacetic acid, 2-propenyl ester	1-ally1-3-met	butene, 4-phenyl-2-	cyclonexane, buryı cyclohexane, butyl		benzene, 1-ally1-3-methyl	ether,	diisopropyl ether, 2,2'-dichloro		pyrazine, 2-ethoxy-3-methyl		d, 2-methylpropyl		benzene, 1,2-dichloro				cyclopentane, pentyl	cyclopentane, pentyl	cyclopencane, pencyl pyrazine, 2,3-dichloro	benzene, 1,3-diethyl		benzene, 1-ally1-4-methyl	benzene, i-mechyr-y bromo				benzene, 1-methy1-4-propy1		1,5-diamino	2-methyl (o-cresol)	bacetic acid, dimethylethyl	cvclohex-1-ene. 1-bromo-4-methvl	benzene, 1,4-diethyl
RETENTION INDEX	1021 1021 1021 1021	1023	1023 1023	1026 1026	1026	1027	1028	1028	1028	1028	1029	1029	1029	1029	1029	1030	1030	1030	1031	1031	1032	1032	1032	1032	1032	1033	1033	1033	1033	1034	1034	1035	1035	1035	1035	1035	1035	1036	1037

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COMPOUND NAME		ster (paraldehyde) (paraldehyde)	· ·	anuric chloride)
۶	l-methyl-2-bromo butyl , 2-ethyl-3-methoxy , 3-ethyl-2-methoxy 1,3-diethyl 1,3-diethyl 1,4-diethyl 1-methyl-4-propyl 1-methyl-4-propyl 1-none, 3-methyl-2-	coacetic acid, 2-propynyl eputyl butyl  tric acid, 3-butenyl ester  tric acid, 3-butenyl ester  tric acid, 3-butenyl ester  tric acid, 3-butenyl ester  tric acid, 3-butenyl  tric acid, 3-butenyl  tric acid, 3-butenyl  sec-butyl  tric acid, 3-butyl  tric acid, 3-butyl  tric acid, 1, 4-diethyl  butyl  butyl	benzene, 1,4-diethyl benzene, 1-methyl-4-bromo dichloroacetic acid, 3-butenyl ester benzene, 1,2-diethyl benzene, 1,3-dimethyl-5-ethyl benzene, 1,3-dimethyl-5-ethyl benzene, 1,4-diethyl naphthalene, decahydro pyrazine, 2-isobutyl pyrazine, 2-isobutyl benzene, 1,3-dimethyl-5-ethyl benzene, 1,3-dimethyl-5-ethyl pyrazine, 2-chloro-3-ethyl naphthalene, decahydro naphthalene, decahydro naphthalene, decahydro	naphthalene, decahydro benzene, 1-methyl-2-propyl benzene, 1-methyl-2-propyl benzyl alcohol benzene, 1,2-diethyl pyrazine, 2-ethoxy-5-methyl benzene, neopentyl octane, 1-methyl-2-propyl ethylamine, 1-phenyl ethylamine, 1-phenyl limonene triazine, 2,4,6-trichloro-1,3,5- (cyanuric chloride) benzene, 1,2-diethyl
retention Index	1037 1037 1037 1037 1038 1039 1039	1039 1040 1040 1040 1040 1040 1041 1041 104	1042 1042 1043 1043 1043 1043 1044 1044 1044	1045 1046 1046 1047 1047 1048 1049 1050 1050 1051 1051

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COMPOUND NAME		eneamino methyl ester (methomyl)	on, fumazone) er (pentyl methacrylate) ester
	limonene butane, 2,3-dibromo-2,3-dimethyl butane, tetrabromo ethane, hexachloro hexanoic acid, 2-propenyl ester octanol, 1- ethane, hexachloro ethane, hexachloro ethane, hexachloro formic acid, benzyl ester sulphide, dibutyl	butene, 2-phenyl-1- carbamic acid, 1-(methylthio) ethylideneamino methyl indene phenol, 4-methyl (p-cresol) pyrazine, 2,5-dimethyl styrene, 2,6-dimethyl thiophene, 3-methylthio aniline, N.N-dimethyl benzene, 1,3-dimethyl-2-ethyl benzene, 1,4-dimethyl-2-ethyl chloroacetic acid, 3-methylbutyl ester chloroacetic acid, 3-methylbutyl ester propene, 2-(2-methylbutyl) pyrazine, 2-acetyl-3-methyl	aniline, N.N-dimethyl aniline, N.N-dimethyl benzene, 1,3-dimethyl-4-ethyl indene myrcenol, dihydro benzene, 1,4-dimethyl-2-ethyl benzene, 1,4-dimethyl-2-ethyl propane, 3-chloro-1,2-dibromo (nemagon, fu aniline, N.N-dimethyl-4-ethyl benzene, 1,3-dimethyl-4-ethyl benzene, 1,3-dimethyl-4-ethyl benzene, 1,3-dimethyl-4-ethyl benzene, 1-ethyl-3-vinyl benzene, 1-ethyl-3-vinyl benzene, 1-ethyl-3-vinyl benzene, 1-ethyl-3-vinyl benzene, 1-ethyl-3-vinyl benzene, 1-ethyl-3-vinyl benzene, 2-fedimethyl-3-ethyl propenoi a caid, 2-methyl promoacetic acid, 1,1-dimethylpropyl ester cyclopentamine decane, 2-bromo phenol, 2-bromo phenol, 3-methyl (m-cresol) pyrazine, 2,3-diethyl benzene, 1,2-dimethyl-4-ethyl
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1067	fenchone
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1068	
1068	dibromoacetic acid, metnyletnyl ester Jirlomoacetic acid, 11-dimethylpropyl ester
1068	yıpıopyı xvl acrvl
1068	tetramethvl
1068	sulphide, methylphenyl
1069	benzene, 1,2-dimethylpropyl
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1070	benzene, 1,3-dimetnyi-2-etnyi benzene 1-ethul-2 4-dimethul
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1070	cyclohexane, trans-1,4-dichloro
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1011	benzoic acid, methyl ester
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1072	tic acid,
1072	pyrazıne, Z-metnyı-3-propyı
10/3	Denzene, 1,3-dimethyl-3-vinyi bonzene 1 4-dimethyl-2-ethyl
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1075	4
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1076	benzene, 1,3-dimethyl-2-ethyl
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1076	benzene, 1-t-buty1-4-metny1
1076	يد
1076	o-1,2-dibromo-1,2-dichloro
1076	pyrazine, 2-isopropyl-3-methoxy
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1076	styrene, Z,5-dimethyl kromosostic scid 1 2-dimethylpropyl aster
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COMPOUND NAME	лe.				yl ester (Tabun)																			Đ.	i i																			
	1-methyl-3-butenyl ester				acid, dimethyl-, methyl	-methoxy 3-methoxy					ester	ester				ester		3-ethyl	cyl 3-mathulbutul agtar	r Kanar Kun	i			1.2-dimethylpropyl ester	- [ ] - ] - [				F	Уı	-3-ethyl	ı	ethyl			propyl	F-cf.	. 7	3-ethyl	3-ethyl	yl	r	bul ester	
	dichloroacetic acid, lindane, 1-methvl		phenol, 2,6-dimethyl	phenol, 4-methyl (p-ca		pyrazine, 2-18obuty1-3-methoxy	_	cyclohexane, nitro	phenol, 2,0-dimethyl	phenol, 2,6-dimethyl	id, methyl	heptanoic acid, ethyl	styrene, 2,4-dimethyl		indane, 1,1-dimethyl	cid, diethyl			Denzene, I-metnyibutyi butonoic acid 2- 3-m	, , , , , , , , , , , , , , , , , , ,	_		anisole, 3-chioro	acid.		nonanal				benzene, 1-etny1-2-vinyi henzene, 1-methulbutul	1,2-dimethyl	Ċ,			pyrazine, Z-butyl	1	•	•	benzene, 1,2-dimethyl-3-ethyl		benzene, 1-ethyl-2-vinyl	butene, Z-phenyI-Z-	occamor, 3,7-dimecmy1-3	scid,
RETENTION INDEX	1077	1077	1078	1078	1078	1078	1079	1079	1079	1079	1080	1080	1080	1081	1081	1081	1082	1082	1082	1082	1083	1083	1084	1084	1084	1084	1084	1085	1086	1086	1087	1087	1088	1088	1088	1089	1089	1090	1090	1090	1091	1091	1091	1091

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butyric acid, 2-hydroxy, methyl ester
styric acid, 2-hydroxy, methyl ester
styrene, 2,6-dimethyl
butenoic acid, 2-, pentyl ester (pentyl crotonate)
decane, 2,6-dimethyl
decane, 2,6-dimethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anilino. 2,6-dimethyl benzene, 1,3-diethyl-5-methyl benzene, 1,3-diethyl-5-methyl benzene, 1,3-diethyl-5-methyl dibromoacetic acid, 2-propynyl ester cctanoic acid, methyl ester (methyl caprylate) ethanol, 2,2'-thiodi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 naphthalene, 1,2,3,4-tetrahydro (tetralin)
benzene, 1,2,3,4-tetramethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dichloroacetic acid, 3-methylbutyl ester
pyrazine, 2,3-dimethyl-5-isopropyl benzene, 1,3,5-trichloro benzene, 1,3,5-trichloro benzene, 1,3,5-trichloro dibromoacetic acid, 2-propenyl ester benzene, 1-t-butyl-2-methyl propene, 1-(2-methylphenyl)-1-
                                                                                                                                                                                                                                                                                                                                                                               sulphide, bis (2-chloroethy1) (Mustard) benzene, 1,2,3,4-tetramethy1 benzoquinone, 2,6-dimethy1-1,4-
                                                                                                                                                                                                                                                                                                                                                                                                                             bromoacetic acid, 3-methylbutyl ester
ethylamine, 2-phenyl
phenol, 2,5-dimethyl (2,5-xylenol)
                                                                                                                                                                                                                                                                                                                         frichloroacetic acid, 3-butenyl ester
                                                                                                                                                                                                                                                                                                                                                       phenol, 2,4-dimethyl (m-xylenol)
                                                                                                                                                                                                                                                                naphthalene, 2-methyldecahydro
thiophene, 2-ethyl
pyrazine, 2-(ethylpropyl)
pyrazine, 2-butyl-3-methyl
                                                                                                                                                                                                                       propane, 1,1,2,3,3-pentachloro
                                                                                                                                                                                                                                       naphthalene, 2-methyldecahydro
                                                                                                                                                                                                                                                      naphthalene, 2-methyldecahydro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  benzene, 1,2,3,4-tetramethyl
                                                                                                      benžene, 1-isopropyl-3-vinyl
hexanoic acid, 2-ethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Denzene, 1,2,3,4-tetramethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        benzene, 1,2,3,4-tetramethy1
cineole, 1,8-
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pyrazine, 2-(1-methylbutyl)
pyrazine, 2-(1-methylbutyl)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     terpineol (mixed isomers)
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                                                                                                                                                                                                                                                                                                                                                                        indene, 1-methyl
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                                                                                                                                                                                                                                                                                                                                            heptane, 1-iodo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      octane, 1-bromo
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propenoic acid, 2-methyl, hexyl ester (hexyl methacrylate) undecame, 2-methyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                             function of the part of the property of the presence of the phenoic acid, allyl ester phenoic, 3,5-dimethyl prazine, 5-methyl-2-(methylthio) partic acid, methyl ester trichloroacetic acid, 1,2-dimethylpropyl ester
                                                                                                                                                                                                                                               Pyrazine, 2-isopentyl
pyrazine, 2-isopentyl
trichloroacetic acid, 1-methyl-3-butenyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dibromoacetic acid, 1-methylpropyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acetic acid, heptyl ester
benzene, 1-t-butyl-4-ethyl
phenol, 3,4-dimethyl (3,4-xylenol)
                                                                naphonane, 1-chloro
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acetic acid, phenyl, methyl ester
benzoic acid, ethyl ester
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benzene, 1,2,4-trichloro
benzene, 1,2,4-trichloro
                                                                                                                                                                                                                                                                                                                                                            pyrazine, 2-1sobutyl-3-methoxy
                                                                                                                                           benzoic acid, ethyl ester
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benzene, 1,4-diisopropyl
nonanol, 1-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          borneol, 2-methyliso
phenol, 2,4-dichloro
                                                                                                                                                                                                        phenol, 2,4-dichloro naphthalene
                                                                                                                                                                                                                                                                                                                                                                          aniline, 4-chloro
                                                                                                                                                                                                                                                                                                                                                                                                                  menthan-8-ol, p-
                                                                                                                                                                     menthan-1-ol, p-
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phenol, 3-ethyl
                                                                                                                                                                                                                                                                                                                                                                                        nethamphetamine
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                                                                                                                                                                                                                                                                                                                                                                                                    thianaphthene
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phenol, 3-chloro phenol, 4-chloro

benzothiazole

isotetralin naphthalene

pyrazine

naphthalene

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benzothiazole

decanol decanol

naphthalene

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anisole, 2,6-dichloro

amine, tri-n-butyl

methenamine

naphthalene

decanol

naphthalene

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COMPOUND NAME		(trimethyl succinamide)	sthyl ester (methamidophos, Monitor, Tamaron)	Mylbutyl ester  Mylbutyl ester  (pelargonic acid)  (pelargonic acid)  Myl  1-  rovinyl dimethyl ester (DDVP, dichlorvos)
phenol, 4	pyrazine, 2-pentyl pyrazine, 2-pentyl benzene, 1,4-dibromo benzene, 1-chloro-4-nitro benzoic acid, methylethyl ester salicylic acid, methyl ester phenol, 3-chloro pyrazine, 5-sec-butly-2,3-dimethyl aniline, 2-chloro-4-methyl benzene, 1-ethyl-2,3,5-trimethyl	benzene, 1-ethyl-2, 3, 5-trimethyl benzene, 1-ethyl-2, 3, 5-trimethyl butane, 2-methyl-2, 3, 5-trimethyl butane, 2-methyl-2, 3-dicarboxamide (trimethyl succinamide) cyclopentane, phenyl propene, 2-(3-vinylphenyl)-1-pyrazine, 3-butyl-2, 6-dimethyl benzene, 1,3-dibromo cyclobexanone, 4t-butyl benzene, 1-chloro-2-nitro acetic acid, octyl ester octanoic acid, 2-keto, methyl ester ctanoic acid, 2-keto, methyl ester pyrazine, 2,3-dimethyl-5-isobutyl thianaphthene toluidine, 6-chloro-n-	benzene, hexachloro (HCB) butadiene, hexachloro tetrasulphide, dimethyl aniline, 2,6-dichloro phenol, 2,4,6-trimethyl phosphoramidothioic acid, 0,S-dimethyl meth-1-ene, p- terpineol, 1apha- benzene, 1,3,5-triethyl butadiene, hexachloro phenol, 2,6-dichloro menth-8-en-2-ol, p- menth-1-ene, 2,6-dichloro phenol, 2,6-dichloro menth-8-en-2-ol, p- menth-8-en-2-ol, p- menth-8-en-2-ol, p-	ic acid, 3-metin hoxy  i, methyl ester hoxy  ridic acid, medimethyl ester dimethyl ester stylthio-3-metly edimethyl  dimethyl  dimethyl  dimethyl  ridi, 2,2-dichlo
RETENTION INDEX	1192 1192 1193 11193 1194 1195	1195 1195 1196 1196 1196 1197 1199 1200 1200	1202 1202 1202 1204 1204 1205 1206 1206 1206	1208 1210 1210 1211 1211 1211 1215 1215 1216 1216 1220 1220

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dibromoacetic acid, 1,1-dimethylpropyl ester
phosphoric acid, 2,2-dichlorovinyl dimethyl ester (DDVP, dichlorvos)
anisole, 3,5-dichloro
butadiene, hexachloro
adipic acid, dimethyl ester
benzene, 1,2,4-triethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pyrazine, 2-(2-methylpentyl)
dibromoacetic acid, 1-methyl-3-butenyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dibromoacetic acid, 1,2-dimethylpropyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             anisole, 2,4-dichloro
anisole, 2,5-dichloro
pyrazine, 5-butyl-2,3-dimethyl
bromoacetic acid, cis-3-hexenyl ester
dichloroacetic acid, trans-3-hexenyl ester
                                                                                                                                                                                                                                                        naphthalene, 1,2,3,4-tetrahydro (tetralin)
benzoic acid, trimethylsilyl derivative
benzoquinone, 2-methoxy-1,4-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bromoacetic acid, trans-3-hexenyl ester
                                                                                                                        benzoic acid, trimethylsilyl derivative
benzoic acid, ethyl ester
                                                                                                                                                                                                                          pyrazine, 2-ethoxy-5-isopropyl-3-methyl
anisole, 3,5-dichloro
                                                                                                                                                                            trichloroacetic acid, 4-pentenyl ester
                                                                                                                                                                                                                                                                                                            pyrazíne, 2-methyl
benzaldehyde, 4-methoxy (anisaldehyde)
                                                                                                                                                                                                                                                                                                                                                                                                        benzaldehyde, 4-methoxy (anisaldehyde)
                                                                                                                                                                                                                                                                                                                                                                                                                                       benzaldehyde, 4-methoxy (anisaldehyde)
pyrazine, 2-(2-methylpentyl)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acetic acid, linalyl ester
pyrazine, 2-isobutyl-3,5,6-trimethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                benzoic acid, 2-propynyl ester
naphthalene, 2-methyl
toluidine, 2-chloro-p-
                                                                                                                                                                                                                                                                                                                                                                      pyrazine, 2-ethyl-3-methylthio
anisole, 3,5-dichloro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    benzoic acid, 2-propenyl ester
methane, triiodo
                                                                                                                                                                                                                                                                                                                                                       propanoic acid, benzyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  benzoic acid, propyl ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aniline, 2-chloro-4-methyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      toluidine, 6-chloro-o-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   anisole, 2,5-dichloro
                                                                                                                                                                                            butan-2-one, 4-phenyl
octane, 1-iodo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        benzene, n-hexyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        phenol, 2-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  decane, 1-bromo
                                                                                                                                                                                                                                                                                                                                                                                                                          nonane, 1-bromo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              phenol, 4-bromo
                                                                                                                                                                                                                                                                                                                                           mephentermine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      soquinoline
                                                                                                                                                                quinoline
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COMPOUND NAME																																
	-00	decanol, 1- pyrazine, 5-isobutyl-3-methyl-2-methyox pyrazine, 1-chloro anisole, 3,4-dichloro	toluene, -chloro-2-nitro tribromoacetic acid, methylethyl ester	anisore, 2,5-droinethyl phenol, 2,3,5-trimethyl phenol, 4-chloro-3-methyl	benzene, pentamethyl dichloroacetic acid, cis-3-hexenyl ester		phenol, 3-bromo anisole, 2,4-dichloro	<pre>pyrazine, 2-isobutyl-3,5,6-trimethyl acetic acid, 2-hydroxyphenyl, methyl ester</pre>	phenyl, trimethylsilyl d	pyrazine, z-cnioro-3-isobucyi-3-mechyi. phenelezine	benzene, pentamethyl	benzene, pentamethyl benzene, pentamethyl	ene,	naphthalene, i-methyl sulphide, dibentvl	toluene, 4-chloro-2-nitro	ole, 2,4-dichloro	ethane, 1,1,2,2-tetrabromo furfural, 5-(hydroymethyl)	phenol, 3-bromo	anisole, 3,4-dichloro phenol, 2-isopropyl-5-methyl		citrai naphthalene, 2-methvl			pyrazine, z-isopropyl-3-methylthio		benzene, 1,1-diethylpropyl	อ้		anisole, 3,4-dichloro		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	DALL TELLINAL COLUMN CO
	pyra tolu tolu	deca Pyra deca	tolu	anisole phenol, phenol,	benz dich	dibr	phen	pyra	acet	pyra phen	penz	benz	naph	naph	tolu	anis	etha furf	phen	anıs	ch10	citrai	naph	naph	Pyra	phen	penz	undeca	acetic	an13	napn tria	naph	Ž,
RETENTION INDEX	1256 1256 1256	1257 1257 1258 1259	1259	1260 1260 1260	1261 1261	1261 1262 1262	1262	1263	1264	1264 1265	1266	1266	1267	1268	1268	1269	1269 1270	1270	1271	1272	1272	1273	1273	1273	1274	1275	1276	1281	1281	1282	1283	0071

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COMPOUND NAME										•																			er (eptam, EPTC)	ester				1	4									
	naphthalene, 2-methyl pimelic acid, dimethyl ester	cyclohexane, phenyl		benzene, Z,5-dichloronitro nicotine			pyrazine, Z,3-dimetnyi-3-18opentyi henzoic acid. isobutvl ester	e, hex	dibromoacetic acid, 4-pentenyl ester	-	butyric acid, beta-hydroxy, metnyi ester	penzene, 2,4-alchiolonicio tribromoacetic acid. 2-propynyl ester	hyl ester	butanoic acid, benzyl ester	decane, 1-bromo	anisole, 2,4,6-trichloro	phenol, 2,4,5-trichloro	chloroentermine	octane, 1,8-dichloro	adamantane, 2-chloro	formic acid, cinnamyl ester			phenol, 4-hydroxy	quinoline, /-mecnyr	puenor, 3-amino aninolina 6-mathul			lipropylthio, s-ethyl e	trichloroacetic acid, trans-3-hexenyl es	isophedrine	anisole, 2,3,6-trichloro	phenol, 2,4,5-trichloro		trichloroacetic actd, cis-3-neveny: eacet	binhenyl	cyclopentadiene, hexachloro	naphthalene, 1-ethyl	og.	adipic acid, diethyl ester		Denzene, z,3-dichiotonitro		phenol, 2,6-dimethoxy
RETENTION INDEX	1313 1313	1314	1314	1315	1316	1316	1317	1318	1318	1319	1320	1322	1325	1325	1326	1327	1327	1320	1330	1332	1332	1332	1334	1334	1334	1335	1336	1336	1337	1337	1339	1341	1341	1342	1342	1343	1343	1343	1343	1344	1344	1344	1346	1347

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phenol, 3-hydroxy dichlorobenzyl ethyl ether, 2,4-phenol, 3-iodo anisole, 2,3,6-trichloro benzoic acid, 1-methylbutyl ester dichlorobenzyl ethyl ether, 2,4-hexanoic acid, hexyl ester pyrazine, 2-chloro-3-methyl-5-(2-methylbutyl) dichlorobenzyl ethyl ether, 2,4-Derical acid, butyl ester
benzoic acid, 1-methyl-3-butenyl ester
phenol, 2,4,5-trichloro
pyrazine, 3-methyl-2-methoxy-5-(2-methylbutyl)
pyrazine, 5-isopropyl-3-methyl-2-(methylthio)
cinnamic acid, methyl ester pyrazine, 2-(2-methylbutyl)-3,5,6-trimethyl benzoic acid, trans-2-butenyl ester benzoic acid, 2-chloroethyl ester naphthalene, 2-ethyl tribromoacetic acid, 1-methylpropyl ester phėnol, 2,4,5-trichloro benzoic acid, 1,2-dimethylpropyl ester naphthalene, 1-ethyl phenol, 2-methoxy-4-propenyl dichlorobenzyl ethyl ether, 2,4pyrazine, 2,3-dimethyl-5-pentyl benzoic acid, butyl ester naphthalene, 1-chloro naphthalene, 1-chloro naphthalene, 2-chloro pyrazine, 2-ethoxy benzoic acid, ethyl ester quinoline, 4-methyl anisole, 2,3,6-trichloro biphenyl anisole, 2,3,6-trichloro phenol, 2,4,6-trichloro undecañol, 1-aniline, 3,5-dichloro fluoranthene naphthalene, 1-chloro undecane, 1-chloro benzene, n-heptyl diphenyl ether acenaphthene biphenyl biphenyl biphenyl biphenylbiphenyl biphenyl bipheny1 biphenyl eugenol 1368 1369 1369 1370 1370 1371 1371 1367 1368 1368

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CP Sil 5CB OV-1 SE-30

CP Sil 5CB

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OV-101 CP Sil

CP Sil 5CB

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		·	[phosdri [phosdri	
COMPOUND NAME			tetradecene, 1- naphthalene, 2,7-dimethy1 phosphoric acid, (1-methoxycarboxypropen-2-y1) dimethy1 ester (phosdrin, beta) naphthalene, 1,3-dimethy1 phenol, 3,5-dichloro phenol, 2-methoxy-4-propy1 phosphoric acid, (1-methoxycarboxypropen-2-y1) dimethy1 ester (phosdrin, alpha) toluene, 2,6-dinitro butenoic acid, 3-{(dimethoxyphosphiny1)oxy]-2- (mevinphos) pyrazine, 2-(1-methylpropy1)	
COMP		min)	tetradecene, 1- naphthalene, 2,7-dimethyl phosphoric acid, (1-methoxycarboxypropen-2-yl) dimethyl es naphthalene, 1,3-dimethyl phosphoric, 3,5-dichlorvy-4-propyl phosphoric acid, (1-methoxycarboxypropen-2-yl) dimethyl es toluene, 2,6-dinitro butenoic acid, 3-{ (imethoxyphosphinyl) oxyl-2- (mevinphos) pyrazine, 2-(1-methylpropyl) acetic acid, decyl ester	rivative
	ntyl)	- (geosmin) - (geosmin) ester	open-2- open-2- yl)oxy]	ilyl de
	phosphoric acid, tripropyl ester biphenyl  pyrazine, 2-propyl diphenyl ether diphenyl ether naphthalene, 1-chloro aniline, 3,4-dichloro naphthalene, 2,6-dimethyl naphthalene, 2,3-dimethyl-5-(2-methylpentyl) pyrazine, 2,3-dimethyl-5-(2-methylpentyl) aphthalene, 1,6-thyl ester dodecano; 2,6,10-trimethyl naphthalene, 1-ethyl propane, 1,1,1,2,3,3,3-heptachloro cyclohexene, 1-phenyl	decalol, trans-1,10-dimethyl-trans-9- (ge decalol, trans-1,10-dimethyl-trans-9- (ge pytrane and line, 3,4-dichloro naphthalene, 2,6-dimethyl tribromoacetic acid, 2-methylpropyl ester naphthalene, 2,6-dimethyl dodecanal dodecanal dodecanal 2,7-dimethyl	sarboxypr sarboxypr phosphin	phenol, 4-iodo propanoic acid, 3-phenyl, trimethylsilyl derivative quinoline, 2,6-dimethyl quinoline, 2,7-dimethyl acetic acid, decyl ester azulene, 5-methyl acidchexylamine naphthalene, 1,3-dimethyl tetradecane azonlene, 1-methyl azonlene, 1,3-dimethyl naphthalene, 1,6-dimethyl naphthalene, 1,6-dimethyl naphthalene, 2-vinyl propanoic acid, 3-phenyl, trimethylsilyl derivative
	phosphoric acid, tripropyl ester biphenyl dyrazine, 2-propyl diphenyl ether naphthalene, 1-chloro aniline, 3,4-dichloro naphthalene, 2,6-dimethyl naphthalene, 2,3-dimethyl hodecanoic acid, ethyl ester dodecane, 2,5,10-trimethyl naphthalene, 1-ethyl propani, 1,1,1,2,3,3,3-heptachloro naphthalene, 1,2-3-dimethyl	dimethyl dimethyl ethyl ethyl	tetradecene, 1- naphthalene, 2,7-dimethyl phosphoric acid, (1-methoxyc naphthalene, 1,3-dimethyl phenol, 2,5-dichloro phenol, 2-methoxy-4-propyl phosphoric acid, (1-methoxyc toluene, 2,6-dinitro butenoic acid, 3-{(dimethoxyc pyrazine, 2-(1-methylptopyl) acetic acid, decyl ester	anyl, tr nyl nyl ster sthyl sthyl
	phosphoric acid, tripropyl biphenyl 2-propyl diphenyl ether diphenyl ether appthalene, 1-chloro aniline, 3,4-dichloro appthalene, 2,6-dimethyl naphthalene, 2,6-dimethyl pyrazine, 2,3-dimethyl accancic acid, ethyl ester dodecane, 2,6,10-trimethyl naphthalene, 1-chyl propane, 1,1,2,3,3,3-hepl maphthalene, 2,3-dimethyl arghthalene, 1,1,2,3,3,3-hepl arghthalene, 1-phenyl	decalol, trans-1,10-dimetidecalol, trans-1,10-dimetipyrene, 3,4-dichloro naphthalene, 2,6-dimethyl tribromoacetic acid, 2-me naphthalene, 2,6-dimethyl dodecanal dodecanal dodecanal dodecanal achebralene, 2,7-dimethyl naphthalene, 2,7-dimethyl achebralene, 2,7-dimethyl achebralene, 2,7-dimethyl achebralene, 2,7-dimethyl achebralene, 2,7-dimethyl	tetradecene, 1- naphthalene, 2,7-dimethyl phosphoric acid, (1-methox naphthalene, 1,3-dimethyl phenol, 3,5-dichloro phenol, 2-methoxy-4-propyl phosphoric acid, (1-methox toluane, 2,6-dimitro butenoic acid, 3-{(dimethox pyrazine, 2-(1-methylpropy) pyrazine, 2-(1-methylpropy)	phenol, 4-iodo propanoic acid, 3-phenyl, quinoline, 2,6-dimethyl quinoline, 2,7-dimethyl acetic acid, decyl ester azulene, 5-methyl dicyclohexylamine argyclohexylamine arghthalene, 1,3-dimethyl acenaphthylene aculene, 1-methyl acenaphthylene naphthalene, 1,6-dimethyl naphthalene, 1,6-dimethyl naphthalene, 1,6-dimethyl propanoic acid, 3-phenyl,
	biphenyl biphenyl pyrazine, 2-pr. diphenyl ether diphenyl ether naphthalene, 1. aniline, 3,4-d. naphthalene, 2,2-d. pyrazine, 2,3-decanoic acid, dodecane, 2,6, naphthalene, 1,1,1 naphthalene, 1,7,1 naphthalene, 1,7,1 naphthalene, 1,7,1 naphthalene, 1,7,1 naphthalene, 1,7,2 orgolohexene, 1,7,1	decalol, tran decalol, tran Pyrene, 3,4- naphthalene, tribromoaceti naphthalene, biphenyl dodecanal dodecanal dodecanal	alene, oric ac alene, 3,5-d , 2-met, oric ac acid,	phenol, 4-iodo, propanoic acid, 3 quinoline, 2,6-di, quinoline, 2,7-di acetic acid, decy azulene, 5-methyl aicyclohexylamine naphthalene, 1,3-azulene, 1,3-naphthalene, 1,6-naphthalene, 1,6-naphthalene, 2-vi propanoic acid, 3
75. II	phosphorbiphenyl by razine diphenyl diphenyl diphenyl naphthallaniline, naphthallapyrazine decanoic dodecano propane, naphthal propane, naphthal cyclohex	decalol, decalol, pyrene aniline, naphthale tribromoa naphthale biphenyl dodecanal dodecanal	tetradecene, naphthalene, phosphoric a naphthalene, phenol, 2-me phosphoric a toluene, 2,6 butenoic aci pyrazine, 2,6 acetic acid,	phenol, 4-i propanoic a quinoline, quinoline, acetic acid azulene, 5: dicyclohexy naphthalene tetradecane azulene, 1: acenaphthyl naphthalene naphthalene naphthalene naphthalene naphthalene
RETENTION INDEX	1372 1374 1374 1376 1376 1377 1377 1379 1379 1379 1380	1384 1385 1385 1387 1387 1389 1389 1389	1389 1390 1391 1391 1392 1394 1394 1394	1398 1399 1399 1400 1400 1400 1402 1402 1402 1403

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COMPOUND NAME		l ester (orthene, acephate) (tillam)	(mevinphos)	
	anisole, 2,3,5-trichloro benzene, pentyl dibromoacetic acid, cis-3-hexenyl ester naphthalene, brome isomer phthalic acid, dimethyl ester benzeic acid, methyl ester, 4-hydroxy phenol, 2,4-dinitro anisole, 2,4,5-trichloro tribromoacetic acid, 1-methyl-3-butenyl ester anisole, 2,4,5-trichloro anisole, 2,4,5-trichloro anisole, 2,4,5-trichloro anisole, 2,4,5-trichloro	and an all and a startistic of	Denzoquinone, 2,0-d1 (methoxymethyl)-1,4- Denzoquinone, 2,6-di (methoxymethyl)-1,4- cinnamic acid, ethyl ester anisole, 3,4,5-trichloro naphthalene, 1,8-dimethyl phthalic acid, dimethyl ester butenoic acid, dimethyl ester benzoic acid, 3-[(dimethoxyphosphinyl)oxy]-2- benzoic acid, 3-[dimethyl ester benzoic acid, dimethyl ester phthalic acid, 2,2-dichloroethyl ester phthalic acid, 2,2-dichloroethyl ester benzoic acid, pentyl ester benzoic acid, pentyl ester benzoic acid, pentyl ester clofibrate	pyrazine, 2-chloro-3-methyl-5-(2-methylpentyl) anisole, 3,4,5-trichloro phthalic acid, dimethyl ester tribromoacetic acid, 1-methylbutyl ester dibenzofuran acetic acid, 4-hydroxyphenyl, methyl ester dodecanol, 1- naphthalene, 1-n-propyl methane, diphenyl anisole, butylated hydroxy isomer ecgonine, methyl ester naphthalene, chloromethyl tetradecane, 2-methyl
retention Index	P	0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		

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tridecane, 2,6,10-trimethyl dichlorobenzyl propyl ether, 2,4- dichlorobenzyl propyl ether, 2,4- anisole, 2,3,4-trichloro biphenyl, methyl dichlorobenzyl propyl ether, 2,4- naphthalene, 2-n-propyl pyrazine, 2-methyl-3-phenoxy dichlorobenzyl propyl ether, 2,4-	I de VI este este est		
1463 1464 1465 1465 1465 1465 1465 1465	14669 14669 14669 14699 1471 1471 1471 1480 1488	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

STATIONARY PHASE

COMPOUND NAME	derivative derivative derivative	
	cinnanic acid, trimethylailyl derivativa cinnanic acid, trimethylailyl derivativa cinnanic acid, methyl caster anisole, 2,3,4,6-tetrachloro banzoic acid, methyl sester, 4-hydroxy, acetic acid, 2-methoxyphenyl, trimethylailyl derivative haronic acid, 2-methoxyphenyl, trimethylailyl derivative haronic acid, 2-methoxyphenyl, trimethylailyl derivative banzene, pentachloro banzene, pentachloro maleic acid, dinhyly sester hapkhalane, 2-butyl benzene, pentachloro maleic acid, dinhyly sester hapkhalane, 1,37-trimethyl acetic acid, 4-methoxyphenyl, trimethylailyl derivative banzocatic acid, 4-methoxyphenyl, trimethylailyl derivative acetic acid, 4-methoxyphenyl, trimethylailyl derivative acetic acid, 4-methoxyphenyl, trimethylailyl derivative maphhalane, 2,3,6-tetrachloro acetic acid, 4-methoxyphenyl, trimethylailyl derivative acetic acid, 4-methoxyphenyl, trimethylailyl derivative mephensain mephensain anisole, 2,3,6-tetrachloro acetic acid, 4-methoxyphenyl, trimethylailyl derivative acetic acid, 4-methoxyphenyl, trimethylailyl derivative acetic acid, 4-methoxyphenyl, trimethylailyl seter propanor acid, dimethyl seter naphthalane, 2,3,6-trimethyl anisole, 2,3,6-trimethyl seter naphthalane, 2,3,6-trimethyl seter acenaphthalane, 2,3,6-trimethyl seter acinnanic acid, amethyl seter chano, pentabrono dodecanora acid, acid, methyl seter cinnanic acid, amethyl seter anisole, 2,3,5-tetracholoro benzicle acid, 4-dimethylanino benzicle acid, 4-dimethylanino benzicle acid, 4-dimethylanino benzicle acid, 3-5-deteracholor anisole, 2,3,5-tetracholoro acibanic acid, 3-deteracholor anisole, 2,3,5-tetracholoro acibanic acid, 3-deteracholor anisole, 2,3,5-tetracholoro acibanic acid, 3-deteracholoro acibanic acid, 3-deteracholoro acide, 3-deteracholoro acide, 3-deteracholoro acide, 3-deteracholoro acide, 3-deteracholoro acide, 3-deteracholoro acide, 4-deteracholoro acide, 4-deter	naphthalene, 2,3,5-trimethyl fluorene
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aniline, 4-chloro-2-nitro carbanic acid, N.N-hexamethylene, benzoic acid, dipropyl ester decane, 1,10-dichloro fluozene phthalic acid, diethyl ester butane, meso-1,2,3,4-tetrabromo clofibrate phthalic acid, diethyl ester phthalic acid, diethyl ester phthalic acid, diethyl ester phthalic acid, diethyl ester phthalic acid, cis-3-hexenyl ester phralic acid, cis-3-hexenyl ester prazine, 3-methyl-5-(2-methylbuty tributyrin (glyceryl tributyrate) dodecane, n-nonyl naphthalene, 1-bromo benzoic acid, 2-hydroxyphenyl, trim azobenzene benzoic acid, 3-hydroxy, trimethyl tetradecane, 2,6,10-trimethyl acetic acid, 2-hydroxyphenyl, trim phthalic acid, diethyl ester cettic acid, 2-hydroxyphenyl, trim phthalic acid, diethyl ester phthalic acid, d-nitro, 2-propenyl phrazine, 2-pentyl phrazine, 2-pentyl phenol, 4-acetyl acobcanoic acid, diethyl ester phthalic acid, diethyl ester	535	salicylic acid, pentyl ester
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phthalic acic buttane, meso- clofibrate, meso- clofibrate acid benzoic acid, phthalic acic benzoic acid, pyrazine, 3-n tributyrin (g dodecane, 1-benzoic acid, acobenzene benzoic acid, phthalic acid phthalic acid phthalic acid benzoic acid, control benzoic acid, benzoic acid, benzoic acid, benzoic acid, control benzoic acid, benzoic acid, control benzoic acid, dichlorobenzy phthalic acid benzoic acid, dichlorobenzy phthalic acid, benzanie, caid, aniline, N-ph pyrazine, 2-ph penzoic acid, phenol, 4-aced acid acid acid acid acid acid acid aci	47	fluorene
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naphthalene, tetradecane, acetic acid, acobnzene benzoic acid, phthalic acid benzoic acid, fluorene phthalic acid benzoquinone, dichlorobenzy naphthalene, phthalic acid benzoic acid, dichlorobenzy naphthalene, phthalic acid benzoic acid, dichlorobenzy phthalic acid benzoic acid, dichlorobenzy phthalic acid benzoic acid, phthalic acid benzoic acid, dichlorobenzy phthaline, N-ph pyrazine, N-ph pyrazine, 2-ph pyrazine, 2-ph pyrazine, 2-dy phenol, 4-ace dodecanoic acid, phenol, 4-ace dodecanoic acid, phenol, 4-ace popane, octa phthalic acid phenol, 4-ace propane, octa	55	benzene, n-nonyl
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trisulphide, bis(2-chloroethy1) dichlorobenzy1 buty1 ether, 2,4-naphthalene, 2-n-buty1 phthalic acid, diethy1 ester benzoic acid, hexy1 ester dichlorobenzy1 buty1 ester dichlorobenzy1 buty1 ester dichlorobenzy1 buty1 ester, 2,4-tetradecane, 3,7,11-trimethy1 benzoic acid, propy1 ester, 4-hydidichlorobenzy1 buty1 ester, 2,4-phthalic acid, diethy1 ester, phthalic acid, diethy1 ester naphthalene, 1-nitro aniline, N-pheny1 pyrazine, 2-penty1 perazine, 2-penty1 benzoic acid, 4-nitro, 2-propeny1 phenol, 4-acety1 dodecanoic acid, ethy1 ester naphthalene, 1-nitro fluorene propane, octachloro phthalic acid, diethy1 ester naphthalic acid, diethy1 ester	7.9	dichiorobenzyl butyl ether, 2,4-
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naphthalene, 2-n-butyl phthalic acid, diethyl ester bench cacid, hexyl ester dichlorobenzyl butyl ether, 2,4-tetradecane, 3,7,11-trimethyl benzoic acid, propyl ester, 4-hydidichlorobenzyl butyl ester, 4-hydidichlorobenzyl butyl ester, 2,4-phthalic acid, diethyl ester benzamide, N,N-diethyl methyl ison naphthalene, 1-nitro aniline, N-phenyl pyrazine, 2-pentyl pyrazine, 2-pentyl benzoic acid, 4-nitro, 2-propenyl phenol, 4-acetyl dodecanoic acid, ethyl ester naphthalene, 1-nitro fluorene propane, octachloro phthalic acid, diethyl ester naphthalic acid, diethyl ester naphthalic acid, diethyl ester naphthalic acid, diethyl ester naphthalic acid, diethyl ester	63	dichlorobenzyl butyl ether, 2,4-
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nempthales, "," disciplation and the property of aniline, N-phenyl pyrazine, 2-pentyl benzoic acid, 4-nitro, 2-propenyl phenol, 4-acetyl dodecanoic acid, ethyl ester naphthalene, 1-nitro fluorene propane, octachloro phthalic acid, diethyl ester retanalic acid, diethyl ester pottanalic acid, diethyl ester pertanalic acid, diethyl ester retanalic acid, diethyl ester retanalic acid, diethyl ester		province N N-diothul mothul isomer
aniline, 1-nicro aniline, 2-pentyl pyrazine, 2-pentyl pyrazine, 2-pentyl benzoic acid, 4-nitro, 2-propenyl phenol, 4-acetyl dodecanoic acid, ethyl ester naphthalene, 1-nitro fluorene propane, octachloro phthalic acid, diethyl ester	4 6	Y METHY
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benzolc acid, 4-nitro, 2-propenyl phenol, 4-acetyl dodecanoic acid, ethyl ester naphthalene, 1-nitro fluorene propane, octachloro phthalic acid, diethyl ester retrant 3-diel 2 4-trimethyl	75	,
	577	2-propenyl
	78	
	79	ethyl
	79	naphthalene, 1-nitro
	30	fluorene
	580	propane, octachloro
	: =	philipacid diathyl pater
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TENTION COMPOUND NAME LINDEX	pentane-1,3-diol, 2,2,4-trimethyl pentane-1,3-diol, 2,2,4-trimethyl	583 fraces 5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.		Denzoic acid, 4-nitro, 2-propynyl ester				hydrazine, 1,2-diphenyl	phenol, 3,4,3-tildingly naphthalene, 2-methyl-1-nitro				acetic acid, c	96 hydrazine, 1,2-diphenyi 96 hydrazine, 1,2-diphenyl		97 acetic acid, 3-hydroxyphenyl, trimethylsilyl defivative os acetic acid. 3-hydroxyphenyl, trimethylsilyl derivative					pyrazine, 2-ethylthio-3-methyl-5-(2-methybutyl)			606 pyrazine, 2-phenylthio 608 acetanilide, 2-chloro-N-isopropyl (propachlor)	allobarbitone	610 benzophenone 610 indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H- (chlordane)	610 naphthalene, 2-nitro 611 sasid 4-tert-octv1-2-methyloydlohexyl ester	benzophenone	614 phosphoric acid, tributyl ester 616 phosphoric acid, tributyl ester			620 ether, dibenzyl 620 pyrazine, 5-isopropyl-3-methyl-2-phenoxy		623 ethane, 1,2-bis[(2-chloroethyl)thio] (Sesquimustard)
RETENTION INDEX	158	158	158	158	156	158	158	126	156	155	155	156	155	15.0	155	155	155	15.0	120	1600	16(	16(	16(	160	16(	16]	16	161	16.	16]	162	16:	100	16.

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phenanthrene, 9,10-dihydro

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SE-30

OV-101

OV-1 DB-1

ov-101 OV-101

phosphoric acid, (E)-1-methyl-2-(methylcarbamoyl)vinyl, dimethyl ester (azodrin, monocrotophos) methanimidamide, N'-(4-chloro-2-methylphenyl)-N,N-dimethyl (fundal, chlordimeform) toluidine, alpha, alpha, alpha-trifluoro-2, 6-dinitro-N, N-dipropyl-p- (trifluralin) puenol, c,v-tamecuoxy---th-byt.

cathonilic acid, m-chloro, isopropyl ester (chlorpropham)

acetic acid, 4-hydroxyphenyl, trimethylsilyl derivative

benzoic acid, 4-nitro, 1-methylpropyl ester

phosphorothioic acid, 8-2-ethylthioethyl OO-dimethyl ester (demeton-S-methyl)

acetic acid, 4-hydroxyphenyl, trimethylsilyl derivative

acetic acid, m-chloro, isopropyl ester (chlorpropham)

phosphorodithioic acid, o-ethyl s,s-dipropyl ester (mocap, ethopropham)

tribromoacetic acid, cis-3-hexenyl ester

propanoic acid, 3(4-methoxyphenyl), trimethylsilyl derivative

naphthalic acid, diisopropyl ester

phosphoric acid, diisopropyl ester

phosphoric acid, 1,2-dibromo-2,2-dichloroethyl dimethyl ester (dibrom, naled) Figure 4, 6,8-trimethyl carbamic acid, 8-trimethyl N-cyclohexyl-N-ethylthio ester (roneet, cycloate) isophthalic acid, diethyl ester isophthalic acid, diethyl ester pyrazine, 3-methyl 5-(2-methyl) -2-(methylthio) terephthalic acid, diethyl ester pentadecane, 2,6,10-trimethyl pyruvic acid, 2-hydroxyphenyl lactone, trimethylsilyl derivative priazine, 2-ethylthio propanoic acid, 3(4-methoxyphenyl), trimethylsilyl derivative pyrazine, acid, diethyl ester benzoquinone, 2,5-di(1,1-dimethylpropyl)-1,4-benzoquinone, 2,5-di(1,1-dimethylpropyl)-1,4-benzoquinone, 2,5-di(1,1-dimethylpropyl)-1,4-cyclohexane, alpha-hexachloro (alpha-BHC) anisole, 2,3,4,5-tetrachloro sebacic acid, dimethyl ester benzoic acid, 4-nitro, 2-methylpropyl ester tribromoacetic acid, trans-3-hexenyl ester phenol, 2,6-dimethoxy-4-propyl cyclohexane, alpha-hexachloro (alpha-BHC) cyclohexane, hexachloro (BHC) oyrazine, 3-methyl-2-(phenylthio) dichlorobenzyl pentyl ether, 2,4terephthalic acid, diethyl ester adipic acid, dibutyl ester adipic acid, diisobutyl ester pentadecane, 3,7,11-trimethyl anisole, 2,3,4,5-tetrachloro citric acid, triethyl ester 4-bromophenyl phenyl benzoic acid, heptyl ester tridecane, 1-bromo naphthal, 2-nitro biphenyl, 2-nitro benzene, n-decyl pristane, normescaline ether, 658 658 658 659 1623

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Me silicone

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anthracene, 9,10-dihydro benzene, hexachloro (HCB

tetradecane, 1-chloro tetradecane, 1-chloro

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phenanthrene, 1,2,3,4,5,6,7,8-octahydro

pyrazine, 2-hexyl

cyclohexane, beta-hexachloro (beta-BHC)

dichlorobenzyl pentyl ether, 2,4-

663 1662

cyclohexane, beta-hexachloro (beta-BHC)

tetradecane, 1-chloro

phenacetin

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SE-30

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ov-1

cyclohexane, gamma-ĥexachloro (gamma-BHC, lindane) sulphide, diheptyl

benzidine benzidine

cinnamic acid, benzyl ester

benzene, hexachloro (HCB)

dibenzofuran, 2-chloro

benzene, hexaethyl

salicylic acid, hexyl ester carbamic acid, 2-chloroallyldiethyldithio (CDEC)

anisole, pentachloro benzoic acid, 3,5-dinitro, methyl ester cinnamic acid, 3-hydroxy, methyl ester cyclohexane, alpha-hexachloro (alpha-BHC)

anisole, pentachloro

paracetamol

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COMPOUND NAME	

benzoic acid, 4-nitro, 1-methylbutyl ester triazine-2,4-diamine, 2-chloro-N-ethyl-N'-(1-methylethyl)-1,3,5- (atrazine) phosphorodithioic acid, 00-dimethyl S-[2-(methylamino)-2-oxoethyl] ester (dimethoate) benzo(b)naphtho(2,1-d)-thiophene cyclohexane, gamma-hexachloro (gamma-BHG, lindane)
acetic acid, 2,5-dihydroxyphenyl lactone, trimethylsilyl derivative
citric acid, acetyltriethyl ester
dodecanoic acid, (lauric acid)
phosphorodithioic acid, (OO-dimethyl S-[2-(methylamino)-2-oxoethyl] ester (dimethoate) phosphorodithioic acid, 00-dimethyl S-[2-(methylamino)-2-oxoethyl] ester (dimethoate) decane, 1,10-dibromo triazine-2,4-diamine, 6-chloro-N,N'-bis(1-methylethyl)-1,3,5- (propazine) benzoic acid, 4-nitro, 2-chloroethyl ester phosphonodithioic acid, o-ethyl s-phenyl ethyl ester (dyfonate, fonofos) acetic acid, methyl ester, 2,4,5-trichlorophenoxy (2,4,5-T methyl ester) amine, tri-n-hexyl Interpretable of the control of the phosphoric acid, tris(2-chloroethyl) ester propanoic acid, 2-(4-chloro-2-methylphenoxy) (mecoprop) benzoic acid, 2,3-dihydroxy, trimethylsilyl derivative cyclohexane, gamma-hexachloro (gamma-BHC, lindane) sebacic acid, diethyl ester cyclohexane, beta-hexachloro (beta-BHC) methyl parathion oxygen analog benzene, n-butyl, sulphonamide acenaphthylene-1-carbonitrile hexadecane, 2,6,10-trimethyl benzoic acid, benzyl ester dibenz (b, f) (1, 4) oxazepine phenol, pentachloro phenol, pentachloro pentobarbitone normeperidine phenanthrene phenanthrene amobarbitone anthracene anthracene caffeine 1749 1750 1750 1750 1751 1751 1752 1752 1753 1753 749

Me silicone Me silicone DB-1 DB-1 OV1-1/SE-54 Me silicone SE-30 Me silicone SE-30 Me silicone DB-1 Me silicone OV-1/SE-30 Me silicone OV1-1/SE-54 DB-1 OV-1/SE-30 Me silicone Me silicone Me silicone STATIONARY OV-1/SE-30 OV-1/SE-30 PHASE OV-1 SE-30 SE-30 SE-30 SE-30 SE-30 SE-30 00-1 DB-1 0V-1 OV-1 OV-1 0V-1 DB-1 0V-1 00-1 OV-1

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benzoic acid, 4-hydroxy-3-methoxy, trimethylsilyl derivative propanoic acid, 3-(4-hydroxyphenyl), trimethylsilyl derivative cinnamic acid, 2-methoxy, trimethylsilyl derivative

phenol, pentachloro

propanoic acid, 3-(4-hydroxyphenyl), trimethylsilyl derivative

hexadecane, 3,7,11-trimethyl

ryptamine

cedrenyl acetate

anthracene

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carbazole

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STENTION	COMPOUND NAME
1785	benzoic acid, 2,5-dihydroxy, trimethylsilyl derivative
1785	benzoic acid, 3,5-dinitro, methylethyl ester
1786	biphenyl, 3-nitro
1786	phenanthrene
1707	sacobaintennitrile. 2.4.5.6-tetrachloro-1,3- (chlorothalonil, Bravo)
1788	Janine, N-acetylphenyl, trimethylsilyl derivative
1789	acridine
1790	
1791	benzoic acid, 4-nitro, 4-pentenyl ester
1791	phenanthrene
1794	mandelic acid, 4-hydroxy, trimethylallyl derivetive
1795	lactic acid, beta-(4-methoxyphenyl), trimethylallyl derivative-9 (desmetryne)
1795	
1796	Ginnamic actd, 4-methoxy, trimenity1siyt uctivative
1.67.1	cyclohokszne, gamma-hexacuto. (gamma-hex., rindin.). 1
1799	Lactic actu, Deca (1 memory).
1800	Accentains acid. 2-hvdroxv, trimethylsilyl derivative
1800	octadecane
1800	phenol, 2-sec-buty1-4,6-dinitro (premerge)
1800	
1800	Pyrimidinedione, 3-chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)- (terbacil)
1802	hippuric acic, trimethyleilyl derivative
1802	phenol, 2-sec-butyl-4,6-dinitro (dinoseb)
1803	benzoic acid, 4-nitro, pentyl ester
1803	cinnamic acid, 4-methoxy, trimethyleillyl derivative
1804	benzoic acid, 4-hydroxy-3-ethoxy, trimetny181111 defryactive
1805	acetic acid, isobutyl ester, 2,4-dichiolophenoxy (2,4-b isobutyl ester)
1806	benzphetamine
1806	
1806	pyrazine, 5-18opropy1-3-metny1-2-(pneny1cuio)
1007	CalDacors 
1808	pyrazine, Juneili-J (* meliji-Ducji) = pomoli himbonyl 3-nitro
1810	
1811	phytane
1812	acetic acid, 3,4,5-trimethoxyphenyl, trimethylsilyl derivative
1812	phytane 
1014	
1816	
1816	carbamic acid, 2-dimethylamino -5,6-dimethylpyrimidin-4-yl dimethyl ester (pirimicarb)
1816	propionanilide, 3',4'-dichloro (propanil)
1817	cyclohexane, delta-hexachloro (delta-BHC)
1818	biphenyl, 2,4',5-trichloro (PCB 31)
1818	Diphenyl, 2/4/4 "Circlioto (FCD 20) Extract and A.L.A.chloro-2-methulphenoxy) (MCPR)
1823	2.4-dihydroxy, trimethylsilyl
1823	ethoheptazine
1825	
1826	benzoic acid, 4-nitro, 2,2-dichloroethyl ester
1826	phthalic acid, dilaboutyl ester
> 2 > 1	

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biphenyl, 2,2',3,5'-tetrachloro (PCB 44)
phosphorothioic acid, 0,2-diethylamino-6-methylpyrimidin-4-yl 0,0-dimethyl ester (pirimiphos-methyl)
phosphorodithioic acid, 00-dimethyl S-1,2-dicarbethoxyethyl ester (malathion) triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-1,3,5-, (terbutryne) phosphorothioic acid, OO-diethyl O-4-nitrophenyl ester (parathion) urea, 1,1-dimethyl-3-(perhydro-4,7-methanoinden-5-yl) (norucon, norea, Herban) phosphoramidothioic acid, o-2,4-dichlorophenyl o-methyl isopropyl ester (zytron) phosphorothioic acid, O-diethyl O-4-nitrophenyl ester (parathion) phosphorothioic acid, pentyl propyl ester naphthalene, 1,2,3,4,10,10-hexachloro-1,4,4,5,8,8-hexahydro-exo-1,4-endo-5,8-dimethano (aldrin) fentrothion lactic acid, beta-(4-hydroxyphenyl), trimethylsilyl derivative naphthalene, 1,2,3,4,10,10-hexachloro-1,4,4,5,8,8-hexahydro-exo-1,4-endo-5,8-dimethano (aldrin) triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-1,3,5-, (terbutryne) phosphorodithioic acid, OO-dimethyl S-1,2-dicarbethoxyethyl ester (malathion) indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H- (chlordane) phenyramidol phthalic acid, dibutyl ester indention of 3, 3a, 4, 7, 7a-hexahydro-4, 7-methano-1H- (chlordane) phthalic acid, dibutyl ester phosphorodithioic acid, 00-dimethyl S-1,2-dicarbethoxyethyl ester (malathion) phosphorodithioic acid, 00-dimethyl S-1,2-dicarbethoxyethyl ester (malathion) phosphorodithioic acid, 00-dimethyl S-1,2-dicarbethoxyethyl ester (malathion) phosphorothioic acid, 00-dimethyl 0-4-nitrophenyl ester (parathion-methyl) phosphorothioic acid, 00-diethyl 0-4-nitrophenyl ester (parathion) acetic acid, butyl ester, 2,4-dichlorophenoxy (2,4-D butyl ester) urea, 3-(3,4-dichlorophenyl)-1-methyoxy-1-methyl (linuron) cinnamic acid, 4-hydroxy, trimethylsilyl derivative phthalic acid, dibutyl ester phthalic acid, diisobutyl ester benzoic acid, 3,5-dinitro, 3-butenyl ester carbamic acid, 3-4-chlorobenzyl diethylthio ester (benthiocarb) lactic acid, beta-(4-hydroxyphenyl), trimethylsilyl derivative carbamic acid, 4-methylthio-3,5-xylyl methyl ester (mesurol) benzoic acid, 4-nitro, hexyl ester hexadecanoic acid, methyl ester (methyl palmitate) hexadecanoic acid, methyl ester (methyl palmitate) acetic acid, 3-indolyl, trimethylsilyl derivative oyrazine, 2-methyl-5-(2-methylbutyl)-3-octyl ethane, 1,1'-oxybis[2-((2-chloroethyl)thio)] adipic acid, di (ethoxyethyl) ester phthalic acid, dibutyl ester phthalic acid, dibutyl ester phthalic acid, dibutyl ester benzothiazole, 2-mercapto parathion oxygen analog naphthalene, 2-phenyl picloram (methylated) phenyltoloxamine anthraquinone fenitrothion orphenadrine 1910 1911 1911 1911 1913 1915 1915 1916 1919 1919 1920 1922 1923 1924 1924 1927 1929 1930 1931 1933 1935 937 938 938 939 940 9061 937 906

Me silicone OV-1 Me silicone

OV-1/SE-30 CP Sil 5CB

SE-30

OV-1 SE-30

SE-30

DB-1

OV-101 OV-1/SE-30

0V-1

Me silicone

SE-30 SE-30

00-1

07-1

OV-1/SE-30

Me silicone

CP Sil 5CB

SE-30

DB-1 DB-1

STATIONARY

PHASE

OV-1 Me silicone Me silicone

SE-30

0V-1 0V-1

Me silicone DB-1

Me silicone OV-1 OV-1

Me silicone

OV-101

OV-101

55 page

anthrone

de silicone

OV-1/SE-30

07-1

SE-30

ov-101

DB-1

OV-1/SE-30 OV-1/SE-30

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STATIONARY PHASE

RETENTION INDEX	COMPOUND NAME
1945	c acid,
1945	hexadecanoic acid, (palmitic acid)
1946	dodecane, 1,12-dibrome (aldrin)
1946	naphthalene, 1,2,5,4,10,10,0000010-1,4,7,0,0,000000000000000000000000000000
1946	propanola acid, -ainydroxypinniyi, -inmerniyisiri-acii
	tringlennamine
	r naphthalene, 1,2,3,4,10,10-hexachloro-1,4,4,5,8,8-hexahydro-exo-1,4-endo-5,8-dimethano (aldrin)
	phenanthrene, 9-chloro
	phthalic acid, butyl isodecyl ester
1950	pyruvic acid, 2-methoxyphenyl, trimethylsilyl derivative
1951	triazine, 2-chloro-4-(1-cyano-1-methylethylamino)-6-ethylamino-1,3,5~ (cyanazine, Bladex, Fortrol)
1952	methapyrilene
1953	benzoic acid, 3,5-dinitro, 1,2-dimethylpropyl ester
1953	phosphorothioic acid, CO-diethyl O-4-nitrophenyl ester (parathion-ernyl)
1954	pyruvic acid, 2-methoxyphenyl, trimethylally delivative. I -mathano-1H- (1-hvdroxveh)ordena)
1955	T-nyaroxy"3a, 1, 1, 1a tectanyaro 1, 1 mocmano 1
1955	phthalic acid, cintyl ester
1957	benzolg acid, 3,3-ainitto, butyr ester
1661	phenographics
7000	Bubracine oxygen enaire kantakin and 3 A-dinite
0001	· First and
1930	inspiratoring dimethyl setor 2 % 6-tetrarhloro (OCPA)
1960	
1961	phosphorocranic actd, vo-matering of a martiplicity actor. Performance of a martiplicity of a martipli
7967	Denzole acid, 3,3 denitud, i menit - acidit - ac
1967	pyrazine, z-metnyi-o-(z-metnyi-o-(z-metnyi-o-o-yi-
7967	Theory is a superior of the su
5057	
1964	
1962	benzoic acia, decyi ester
1965	diphenylamine, Z-nicro
000	prosportunities and to contain the containing to contain the containing the conta
1967 1969	phthalic acid, alburgh tester   but hitel 20th procedured mather derinformate Ruslane)
1200	
1001	dibersolutum, bantto
1,000	Dexacecate, 1-Drotto 1:3-1
1968	Indeed, 1,4,7,0,7,0,0 neprenince of 1,7,7,0 committee 1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0.00	dictionalist control of a control of the control of
1971	benzoic acid, 3,5-dinitro, 1-methylbutyl ester
1971	bicyclohexyl, 4-phenyl
1971	phosphorothioic acid, O-(4-bromo-2,5-dichlorophenyl) OO-dimethyl ester, (bromophos)
1971	propancic acid, beta-(3-indoly1), trimethylsily1 derivative
1972	
1972	dichlorobenzyl octyl ether, 2,4-
1972	isobut
1973	amine, tri-n-heptyl
1973	cyclobarbitone
1973	hexadeanolo acid, (paimitic acid)
19/0	dichiocomisty octyl cines, 4,4 aichiocomisty octyl chartachloro-2.3-enoxy-3a.4.7.7a-tetrahydro-4.7-methano-1H- (heptachlor epoxide)
1976	ne de la companya de
1978	phosphoretrinic acid, O-(4-bromo-2,5-dichlorophenyl) OO-dimethyl ester, (bromophos)

0V-1

0V-1

We silicone

VV-1

SE-30

OV-1

SE-30

OV-1

SE-30

SE-30

SE-30

OV-1/SE-30

SE-30

OV-101

Me silicone

SE-30

SE-30

OV-1/SE-54

DB-1

Me silicone

SE-30

SE-30

OV-1

SE-30

OV-1

SE-30

SE-30

OV-1

SE-30

OV-1

SE-30

SE-30

OV-1

Ne silicone

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OV-1

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OV-1

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SE-30

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OV-1

Ne silicone

OV-1

SE-30

SE-30

SE-30

SE-30

OV-1

Ne silicone

OV-1

SE-30

OV-1

OV-1

SE-30

OV-1

<b>ETENTION</b>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

STATIONARY PHASE	GE-30	00 - 30 00 - 30	Me door	01-1	OV-1	0,1-101	CP Sil 5CB	•		SE-30	Me silicone	OV-101	CP Sil 5CB	OV-1	0V-1	Me silicone	000-100	OV-1	Me ailicone	SE-30	Me silicone	0V-1	OV-1		CP Sil 5CB	1 - AO	1: AO	OV-1	0V-1	OV-1		(e) OV-1	ester (supracide) DB-1 SE-30	SE-30			06-130	CP Sil 5CR		OV-1/SE-30	00-1	Me silicone	OV-101	SE-30	00-1	Me silicone	SE-30	000-1313 000
			noic acid, ethyl este	œ,	phthalic acid, dimethoxyethyl ester		hexadecanoic acid, ethyl ester	chlorodane, oky	chlorpyrifos	pyrene	octadecane, 2,6,10,14 retrametny.	phenanturene, J. outmenturent 	pyrazine, z meriyi v (z meriyi projet) v v 1. kinkarine, z meriyi v (PCB 70)		indene. 1, 2, 4, 5, 6, 7, 8, 8-octachloro-2, 3, 3a, 4, 7, 7a-hexahydro-4, 7-methano-1H- (chlordane)	phosphorothioic acid, OO-diethyl O-4-nitrophenyl ester (parathion)	cinnamic acid, 3,5-dimethoxy, trimethylsilyl derivative	benzophenone, 2-amino-5-chloro	carboxylic acid, 3-indolyl, trimethylsilyl derivative	phenobarbitone phenoparbituh derivative	acid, 5,4-dimediony, diimediyibiryi	t election	natudu janindole-1.3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-1H- (captan)	pyruvic acid, 3-hydroxyphenyl, trimethylsilyl derivative	biphenyl, 2,2',3,5',6-pentachloro (PCB 95)	hydracrylic acid, beta-(3-hydroxy-4-methoxyphenyl), trimethylsilyl derivative	norharman	naphthalene, 1,2,3,4,10,10-mexacilicor1,4,4,5,0,0 instally to one 1,1 close 1,5 close	alanine, N-accety-4-metroxypheny, trimecrity still certweets  ***Listanto***	triazine-z-amine, 4,6-dichloro-N-(2-chlorophenyl)-1,3,5- (anilazine)		indane, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methano-1H- (heptachlor epoxide)	o,o-dimethyi	Denzola acid, 3,7-dinitro, 2-cniologoculy asset hanvia acid, 3,7-dinitro, 2-methylbutyl ester	(heptachlor	indane, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methano-1H- (heptachlor epoxide)	isoindole-1,3(2H)-dione, 2-[(trichloromethyl)thio]-1H- (folpet)	benzoic acid, 4-nitro, heptyl ester	cniordane, gamma" ;soindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethy1)thio]-1H- (captan)	nonadecane, 2, 6, 10, 14-tetramethyl	pyrnvic acid, 2,5-dihydroxyphenyl lactone, trimethylsilyl derivative		acid, dibutyl	isophhalic acid, dibutyl ester	, beta-(4-hydroxy-3-methoxyphenyl), trimethylsilyl derivative		<pre>influoranthene influoranthene influoranthene</pre>	
RETENTION INDEX		1978	1979	1980	1980	1980	1981	1982	1982	1983	1984	1984	1983	1989	1989	1989	1994	1995	1995	1995	8881	2000	2000	2000	2003	2004	2002	2008	2009	2010	2010	2012	2012	2014	2015	2015	2015	2016	2018	2020	2021	2023	2025	2025	2027	2027	2030	2030

NION	100
RETEN	TAYAL

TENTION	
TNDEX	COMPOUND NAME

STATIONARY

pyruvic acid, 4-hydroxyphenyl, trimethylsilyl derivative pyruvic acid, 4-hydroxyphenyl, trimethylsilyl derivative indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H- (chlordane) pyrazine, 3-methyl-5-(2-methylpentyl)-2-(phenylthio) terephthalic acid, dibutyl ester indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H- (chlordane) indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H- (chlordane) biphenyl, 2,2'4,5,5'-pentachloro (PCB 101)
biphenyl, 2,2'4,5,5'-pentachloro (PCB 101)
biphenyl, 2,2'4,5,5'-chloro-1-(2,4-dichlorophenyl)vinyl diethyl ester (chlorfenvinphos)
propanoic acid, 2-chloro-1-(2,4-dichlorophenyl), trimethylsilyl derivative
benzoic acid, 3,5-dinitro, 4-pentenyl ester
cinnamic acid, 3-hydroxy-4-methoxy, trimethylsilyl derivative (endosniphan) 5 glutamine, phenylacetyl, trimethylsilyl derivative ethene, 1,1-dichloro-2-(2-chlorophenyl)-2-(4-chlorophenyl) (o,p'-DDE) ethene, 1,1-dichloro-2-(2-chlorophenyl)-2-(4-chlorophenyl) (o,p'-DDE) glutamic acid, phenylacetyl, trimethylsilyl derivative norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulphite, phosphorothioic acid, OO-diethyl O-4-nitrophenyl ester (parathion) hippuric acid, 2-hydroxy, trimethylsilyl derivative dithiocarbonate, s,s-(6-methylquinoxaline-2,3-diyl) (morestan) terephthalic acid, dibutyl ester disyston sulfone chlordane, alpha-oxazole, 2,5-diphenyl (PPO) pyruvic acid, 4-hydroxyphenyl, trimethylsilyl derivative cinnamic acid, cinnamyl ester dichlorobenzyl nonyl ether, 2,4-glutamic acid, phenylacetyl, trimethylsilyl derivative benzoic acid, 3,5-dinitro, pentyl ester terephthalic acid, dibutyl ester benzophenone, 2-amino-5-chloro benzophenone, 2-amino-5-chloro benzoic acid, undecyl ester biphenyl, 2,2-dinitro triphenylamine benzacenaphthylene nonachlor, trans brompheniramine carbinoxamine procaine 2039

SE-30 SE-30 CP Sil 5CB Me silicone OV-1 SE-30 Me silicone Me silicone OV-1 SE-30 SE-30 CP Sil 5CB Me silicone CP Sil 5CB silicone Me silicone Me silicone Me silicone Sil 5CB Sil 5CB Sil 5CB OV-1/SE-30 CP Sil 5CB PHASE Sil OV-101 ov-101 SE-30 DB-1 DB-1 00-1 00-1 0V-1 00-1 ov-1 ov-1 OV-1 0V-1 0V-1

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indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H- (chlordane) dichlorobenzyl nonyl ether, 2,4-

isoindole-1,3(2H)-dione, 2-[(trichloromethyl)thio]-1H- (folpet)
cinnamic acid, 4-hydroxy-3-methoxy, trimethylsilyl derivative
dichlorobenzyl nonyl ether, 2,4-

nonadecane, 2,6,10,14-tetramethyl

heptadecane, 1-bromo diphenylpyralamine

2072 2073 2073 2073 2076

ethene, 1,1-dichloro-2-(2-chlorophenyl)-2-(4-chlorophenyl) (o,p'-DDE)

dichlorobenzyl nonyl ether, 2,4-

5CB

STATIONARY PHASE	OV-1/SE-30 OV-1	SE-30 SE-30	OV-1 OV-1	Me silicone	DB-1 OV-1	0V-1	0V-1 0V-1	0V-1	0V~1 0V-1	DB-1	30	CP Sil 5CB	Sil		SE-30	SE-30 Me ailione	SE-30	0V-1	Me silicone	SE-30 Me ailicope	ov-1	ov-1	DB-1 cr-30	SE-30 OV-1/SE-30	SE-30	OV-101	SE-30	Ne stricone OV-1/SE-30	ov-1	SE-30	OV-1/SE-30 SE-30	CP Sil 5CB		Me silicone		OV-1	CP Sil 5CB	6	SE-30 Me silicone	
COMPOUND NAME  COMPOUND NAME	diphenylamine, 2-amino-5-chloro hippuric acid, 4-methoxy, trimethyle	cinnamic acid,	_			acetic acid, methyl ester, 2,2-bis(4-chlorophenyl)	barbituric acid, 5-ethyl-5-(4-methylphenyl) karadigasthishin 3-oyida 6 7 8 9 10 10-hexachlorol.5.5a.6.9.9a-hexabydro-6.9-methano-2.4.3- (endosulfan	benzodioxathiepin 3-oxide, 6,7,8,9,10,10-hexachlorol,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-	norbornene-2,3-dimethanol,	thiodan 1			8 biphenyl, 2,2',3,4,3' -pentachioro (FCB 0); 8 naphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4:5,8-dimethano (dieldrin)	sulphide, dinonyl	phosphorodithioic acid, S-((	6 cinnamic acid, phenylethyl ester				8 octadecanoic acid, metnyl ester, (metnyl stearate)	nemercosame naphthalene, 1,2,3,4,10,10-h		propionamide, (RS)-N, N-dieth	tluorene, Z-nii	benzoic acid, 3,5-dinitro, 2,	pyrazine, 2-phe	pipradrol		lactic acid, beta-(3-indoly1		naphthalene, 1,2,3,4,10,10-nexachioro'', '''epoxy'', ''',''','','',''',''',''',''',''','	ethene, 1,1-dichloro-2,2-bis	octadecanoic acid, methyl ester, (methyl stearate)	phosphoric acid, 2-chloro-1- henzophenone, 2-methylamino-	butenedioc acid, disextyl ester, cis- (disextyl maleate)	indene, 1,2,4,5,6,7,8,8-octa	octadecanoic acid, metnyi es ethane, 2-(2-chlorophenyl)-2	9 carbamic acid, 4-chlorobut-2-ynyl 3-chlorophenyl ester (barban)	cinnamic acid, 3,4,3-timed fluorene, 2-nitro	
RETENTION INDEX	2078	2080	2080	2084	2084	208	208	2086	2086	2087	2088	2088	2088	2091	2092	2096	7602	2097	2098	2098	2100	2100	2100	210	2104	2104	210	2107	2107	2109	211	211	211	211	211	211	211	2119	212	

STATIONARY PHASE	OV-1 OV-101 SE-30	SE-30 CP Sil 5CB OV-101	OV-101 SE-30 SE-30	SE-30 SE-30	OV-1/SE-30 DB-1 OV-1/SE-30	0V-1 0V-1	OV-1 SE-30 OV-1	OV-1 SE-30	OV-1 OV-1/SE-30	0V-1 0V-1	OV-1/SE-30 OV-1	OV-1 SE-30	DB-1 SE-30	OV-1	0V-1	SE-30 SE-30	CP Sil 5CB	OV-1/SE-30	SE-30 OV-1	Me silicone	0V-1	SE-30 OV-1	OV-1 SE-30	SE-30 DB-1 OV-1	DB-1	SE-30
		(endrin)								(dieldrin)	(dieldrin)															
COMPOUND NAME	hippuric acid, 3-hydroxy, trimethylsilyl derivative phthalic acid, dipentyl ester benzoic acid, 4-nitro, octyl ester	2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4:5,8-dimethano dipentyl ester			cinnamic acid, phenylethyl ester	phthalic acid, alpunyly escapt tyrosine, N-acetyl, trimethylailyl derivative ethane, 1,1-dichloro-2-(2-chlorophenyl)-2-(4-chlorophenyl) (o,p'-TDE)	ethene, 1,1-dichloro-2,2-bis(4-chlorophenyl) (p,p'-DDE) pyruvic acid, 3,4-dimethoxphenyl, trimethylsilyl derivative	phthaild adid, diethoxyethy, ester. sebachic adid, dibenzyl ester gingic adid, dibenzyl ester	,	nexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4:5,8-dimethano		phthalic acid, dipentyl esterning.	nonagecale, 2,0,10,11,10 pencancon; ethion monoxon ethion monoxon and a second ethion ethion ethion ethion monoxon and a second ethion	hlorophenyl) (p, p'-DDE)	ethane, 1,1-dichloro-2-(2-chloropheny1)-2-(4-chloropheny1) {0,p'-TDE} ethane, 2-(2-chloropheny1)-2-(4-chloropheny1)-1,1-dichloro (2,4'DDD)	ine	biphen, 1, 2,2',3,5',5',6-hexachloro (PCB 151)		benzoic acid, 3,5-dinitro, 2,2,2-trichloroethyl ester cinnamic acid. 3,4-dihvdroxyphenyl, trimethylsilyl derivative		er, cis~y~ (ecnyi orec	phosphorothicic acid, 0-2,5-dichloro-4-iodophenyl O,O-dimethyl ester (iodofenphos)	ethene, 1,1-dichloro-2,2-bis(4-chloropheny1) (p,p'-DDE) benzoic acid, 3,5-dinitro, trans-3-hexenyl ester	cid, 3,5-dinitro, -2(38)-one, 5-tert	'nroe o	cocaine amitripyline
retention Index	2120 2120 2120 2121	2121 2121 2121	2122	2123 2124 2125	2125	212 <i>1</i> 2129 2130	2130	2135	2137	2139	2140	2140	2142	2143 2145	2146	2146	2147	2148	2149	2149	2149	2150	2151	2158	2159	2161 2162

NO	
RETENTION	INDEX

RETENTION INDEX	COMPOUND NAME	STATIONARY PHASE
TACANT		
2162	3,5-dinitro, hex	SE-30 OV-1
2163	Lyl ester, 2,4-dlcnlorophenoxy (2,4-b iso-octyl	Me silicone
2165	anthraces, y-nitro	0V-1
2165		SE-30
2167	thoxyphenyl, trime	0V-1
2168	٠.,	OV - 1
2169	levorphanol	CD 311 5CB
2170	biphenyl, 2,2',3,4',5',6 hexachloro (FCB 149)	-30
2170	naphthalene, 1,2,3,4,10,10-nexachloro-o,7-epoxy-1,4,4a,5,0,7,0,0a occanylate one 1,2,3,4,10,10-mexachloro-o,7-epoxy-1,4,4a,5,0,7,0,0a occanylate one 1,2,3,4,10,10-mexachloro-o,7-epoxy-1,4,4a,5,0,7-epoxy-1,4,4a,5,6,7-epoxy-1,4,4a,5,6,7-epoxy-1,4,4a,5,6,7-epoxy-1,4,4a,5,7-epox	Me silicone
2170	octedecanoid acid (stearic acid)	CP Sil 5CB
2171	dichlorobenzyl decyl ether, 2,4-	gili
21/1	naphCatene, 1,0-cmiltic	SE-30
2112	though anish dodary aster	SE-30
2173		DB-1
2174	rorripyline	SE-30
2174	ohexyl ester	
2175	9,10,10-hex	
2175	ethane, 1,1-dichloro-2,2-bis(4-ethylphenyl) (ethylan)	7-10
2175	ethane, 1,1-dichloro-2,2-bis(4-ethylphenyl) (perthane)	0.0 ~ T
2175	octadecanoic acid, ethyl ester	21-30
2175	octadecenoic acid, ethyl ester, cis-9- (ethyl oleate)	CF-30
2175	procainamide	מקין המי
2176	dichlorobenzyl decyl ether, 2,4-	•
2177	benzo(a) fluorene	
2177	chloroprocaine	OV-1/SE-30
21/0	11NOJULI aciu	Me silicone
21.18	pichaluniani, 7,10 armin. 2,4-	CP Sil 5CB
2119	ì	Me silicone
2180		OV-101
2160	j e	
2183	benizationath or an ann an ann an ann ann ann ann ann a	
2183	dichlorobenzyl decyl ether, 2,4-	
2183	naphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4:5,8-dimethano (endrin)	OV-1/SE-30
2184	ethane, 2,2-bis(4-chlorophenyl)-1,1-dichloro (4,4 DD)	117
2185	naphthalene, I-ammino-4-nitro	DR-1
218/	***************************************	Me silicone
9187	torder through 11	DB-1
2188	curroran in control 2-sec-buty1-4,6-dinitropheny1 3-methy1 ester (morocide)	DB-1
2190		SE-30
2191	benzephenone, 2-amino-5,2'-dichloro (lorazepam benzophenone)	Me silicone
2193	zolamine	SE-30
2194	doxepin	SE-30
2194	methadone	Me silicone
2195	benZo(b)fluorene	OV-1
21.95	methannie, phenytavecyı, timecmyısıry voliver. Methannie, presidenti	Me silicone
2197	tetracaine	SE-30
2200	desipramine	SE-30
2200	docosane	Me silicone
2200	ethane, 1,1-dichloro-2,2-bis(4-chiorophenyi) (p,p'-rus)	T_ ^O

STATIONARY PHASE

	diphosphorodithioic acid, 0,0,0',0'-tetraethyl S,S'-methylene ester (ethion)	imidan oxygen analog	promazine	atropine saharir acid. diethoxvethvl ester	Service with the servic	tribenzylamine	bipheny1, 2,2,3,4,4,5,-hexachioro (FCB 130)	dienioropensyl underyl eriel, 2,1. phosphorodithioic acid, s-4-chlorophenylthiomethyl o,o-diethyl ester (trithion)	dichlorobenzyl undecyl ether, 2,4-	adipic acid, disyclopasyl eather	dichlorobenzyl undecyl etner, 2,4- benztropine	dichlorobenzyl undecyl ether, 2,4-	phthalic acid, butyl benzyl ester	anthracene, 9,10-dicarbonitrile	octadecane, 1-jodo	phthalic acid, butyl benzyl ester	eicosane, 1-chloro	ethane, 1,1,1-trichlore-2,2-bis(4-chlorophenyl) (p.P'-DDI)		dutphine, credy, phenylacetyl, trimethylsilyl derivative	maprotiline	ethane, 1,1,1-trichloro-2,2-bls(4-chlorophenyl) (p.pbur)		phinalic acid, dihexyl ester	binaphthyl, 1,1'-	levallorphan	phthalic acid, dihexyl ester is thinky 3-dishlammanul) seter	phosphoric acid, cirs(t,5-arcmiotopropr); cover	ptrpoxycanic phralic acid, dihexyl ester	hydroxyamitriptyline	butane, 2-nitro-1,1-bis(4-chlorophany1 Bulan) butane, 2-nitro-1,1-bis(4-chlorophany1 butan) 0 0-diathul satar (resthankanothion)	phosphorodithical acid, S-[4-chioropheny])uniolmetnyi] o'o-usetnyi ester (carbophenousen) shttsiin said hentul aster ester	phinally acts, here's pends of the property of the phinal octanoate)	piperidolate	phthalic acid, butyl octyl ester	glutamic acid, 4-methoxyphenylacetyl, trimethylsilyi delivative hinhanni 2.27.3.37.4.47-hexachloro (PCB 128)	ordenie Codeline	dihydrocodeine	+	acid, nonyl propyl ester	4-budroxv-3-methoxv, trimetholsilvl	acid, butyl benzyl ester	
INDEX				2269				2277			2284			2288					2294	9622	2296		2300	2305	2306	2306	2306	2307	2308	2309	2310	2310	2310	2316	2317	2319	2323	2323	2325	2325	2352	2327	. 1

Me silicone
SE-30
DB-1
SE-30
Me silicone
SE-30
Me silicone
OV-1
CP Sil 5CB
CV-1
CP SI

RETENTION INDEX	COMPOUND NAME
2330	ethane, 1,1,1-trichloro-2,2-bis(4-chlorophenyl) (p,p'-DDT)
2333	1 ester
2343	phthalic acid, decyl ethyl ester
2345	benzo (ghi) filoranthene
2348	norpropoxypuene adibic acid, dioctyl ester
2353	lorazepam
2358	guthion oxygen analog
2363	acid, triphenyl ester
2363	phosphoric acid, tris(butoxyetnyi) ester
2364	ecthylmorphine ecthylmorphine   1
2366	
2370	northing acid, 3,5-dinitro, octyl ester
2370	norpropoxyphene
2372	anthracene, 9-methyl
2375	F 1 1 - 1
2375	phosphorodithioic acid, o,o-dimetnyl s-phrhailmidometnyl ester (imidan)
2376	codeine
2376	diazepam diazepam
23/6	alazepann alazepann
8/67	acmer' ''
23/3	ILUIGZEGGMI, N. Gebarry Alisia orid Ail?-ethylhexyl) ester
1986	2, 3, 3, 5, 5, 6, 6, -
2381	
2383	Adinic acid, dioctyl ester
2383	diazepam diazepam
2385	penzyl dodecyl ether,
2389	ether,
2389	methyl undecyl
2390	benzophenone, 2-amino-5-nitro (nitrazepam benzophenone)
2391	
2393	dichlorobenzyl dodecyl ether, 2,4-
2395	
2397	adipic acid, diphenyl ester
2400	pyrazine, 2-phenylthio
2400	
2400	tryptophan, N-acetyl, trimethylsilyl derivative
2404	phthalic acia, meptyl mexyl ester
2403	obrigora
2400	
2405	CEIDDENYI-ENE ***********************************
2410	actic acid, 4-chlore-2-methylmenovy (MCPA)
0177	ecetic acid, *-citolo & metalythemony (with a facetic acid, *-citolo & metalythemony) (methorythem)
2410	ecumbe, 1.1.1.Truituro.4.4.Data mechanya, (mechanya) mechanya, mec
2414	annihalic acid, dihexyl ester
2415	phthalic acid, butvl nonl ester
2416	from the list of the pertyl ester
2417	ethane, 1,1,1-trichloro-2,2-bis(4-methoxyphenyl) (methoxychlor)
2417	isophthalic acid, dihexyl ester
2417	isophthalic acid, dihexyl ester
2419	

STATIONARY
PHASE

SE-30
SE-30
SE-30
Me silicone
SE-30
Me silicone
SE-30
OV-1
SE-30
DB-1
SE-30
DB-1
SE-30
OV-1
SE-30
OV-1
CP Sil 5CB
SE-30
OV-1
SE-30
OV-1
OV-101
OV-101
OV-101
OV-101
OV-101
SE-30

<pre>isophthalic acid, butyl octyl ester isophthalic acid, nonyl propyl ester isophthalic acid, nonyl propyl ester i</pre>
ethane, 1,1,1-trichloro-2,2-bis(4-methoxypheneethoxyphe
butacaine
codeine biphenyl, 2,2',3,4,4',5,5'-heptachloro (PCB 180)
isophthalic acid, decyl ethyl ester
diazepam
, n-desmethyl
diphenyl sulphone, 2,4,4,7,5-certacuror (correction)  phosphorodithioic acid, 0,0-dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl]
acid, 3-indolyl, trimethylsilyl der
glyceryl dibenzoate isomer benzoic acid. 4-nitro, undecyl ester
adipic acid, diisooctyl ester
cyclobuta[cd]pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-dodecachlorooctahydro-1,3,4-metheno-1H-
a, triocty, est
cntorpromazina oxycodone
clohexyl e
terephthalic acid, decyl ethyl ester
hydantoin, 5-(4-metnyiphenyi)-5 phenyi isophthalic acid, methyl undecyl ester
terephthalic acid, nonyl propyl ester
chlorprothixene terephthalic acid, dihexyl ester
diazepam
phthalic acid, dicyclohexyl ester benzene, 1.2,4-trichloro-5-[(4-chlorophenyl)sulphonyl] (tedion)
oxymorphone
phosphorodithioic acid, s-3,4-dihydro-4-oxo-1,2,3-benzotilazin-3-yimetnyi o,o-dimetnyi estei (gutmitu) phosphoric acid, tri(2-ethylhexvl) ester
alic acid, dihexyl ester
phosphorodithioic acid, 0,0-dimethyl S-[(4-
terephthalic acid, butyl octyl ester
terephthalic acid, heptyl pentyl ester ester
terephthalic acid, dinexyl elect.
cycloburalculpentarene, '''''''''''''''''''''''''''''''''''
biphenyl, 2,2',3,3',4,4',5-heptachloro (PCB
phthalic acid, dicyclohexyl ester
Desiration of the second secon
ethene, tetraphenyl
cinnamoylcocaine chthalic acid di(2-ethylhexyl) ester
torak oxygen analog
dichlorobenzyl tridecyl ether, 2,4-
rerephrhaile acid, metmyi mmeeyi esesi adibic acid, dinonyl ester

androsterone
phosphorodithioic acid, s-6-chloro-2,3-dihydro-2-oxo-1,3-benzoxazol-3-ylmethyl o,o-diethyl ester (phosalone) dichlorobenzyl tridecyl ether, 2,4-
methotrimeprazine
benzophenone, 2-amino-2'-chloro-5-nitro (clonazepam benzophenone)
phthalic acid, diheptyl ester dichlorobenzul tridecul ether. 2.4-
dichlorobenzyl tridecyl ether, 2,4-
phosphonothioic acid, o-4-bromo-2,5-dichlorophenyl o-methyl phenyl ester (phosvel)
phthalic acid, diheptyl ester
phthalic acid, hexyl octyl ester
nepazine
phthalic acid, diheptyl ester hinhenyl 2.2/3.3/4/.5.5/6-octachloro (PCB 201)
pithalic acid, di(2-ethylhexyl) ester
norpropoxypheneamide
thylhexyl)
phthalic acid, di(2-ethylhexyl) ester
phthalic acid, di (2-ethylhexyl) ester
phthalic acid, di(2-ethylhexyl) ester
and Adjandent of A
benzophenome, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenome)
pntnalic acid, dilgoocly, egler chlorpromazine
acetylcodeine
adipic acid, dioctyl ester
Denzophenone, Z-amino-3-cnioro-Z-riuoro (Ilurazepam penzophenone)
benzoic acid, 4-nitro, dodecyl ester
phthalic acid, diphenyl ester
phosphorodithioic acid, s-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl o,o-diethyl ester (ethyl guthion)
phosphorogichioic acid, 0,0-diechyl 3-1(4-0x0-1,2,3-bengotriazin-3(44)-71/mechyl) escer (azinphos-echyl) phosphorodithioic acid, 8-2-chloro-1-phthalimidoethyl 0,0-diethyl ester (torak)
biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195)
aunosapine annosapine phosphorodithioic acid. O.O-diethVl S-[(4-oxo-1.2.3-benzotriazin-3(4H)-v])methVll ester (azinnhos-ethVl)

OV-1/SE-30
SE-30
CP Sil 5CB
SE-30
Me silicone
OV-101
CP Sil 5CB
OV-101
SE-30
SE-30
OV-1
CP Sil 5CB
OV-1
CP Sil 5CB
OV-1
CP Sil 5CB
OV-1
CP Sil 5CB
OV-1

COMPOUND NAME

RETENTION INDEX

2488 2488

STATIONARY PHASE

0V-1 Me silicone 0V-1 SE-30 SE-30 OV-1

trimethoprim benrophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) phthalic acid, dioctyl ester actylocdeine actylocdeine actylocdeine actylocdeine adjoic acid, dioctyl ester phosphoroditrioci acid, anitro, dedecyl ester phosphoroditrioic acid, anitro, dedecyl ester phosphoroditrioic acid, alignenyl ester phosphoroditrio acid, alignenyl ester	2511	phthalic acid, diisodecyl ester	1- AO
phenzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) phthalic acid, disloctyl ester phthalic acid, disloctyl ester phthalic acid, disloctyl ester chlorpcomarine acetylocdeine acetylocdeine acetylocdeine acetylocdeine acetylocdeine acetylocdeine phralic acid, discotyl ester benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxepine acid, dioctyl ester benzophenone, 2-amino-5-chloro-1'-2',3-benzotriazin-3'-yl o,o-diethyl guthion) phralic acid, dioctyl ester phensphorodithioic acid, 0.0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (ethyl guthion) phosphorodithioic acid, 0.0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, 0.0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) biphenyl, 2,2',3',4',5',6-octachloro (PCB 195) phosphorodithioic acid, 0.0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzolc acid, 3,5-dinitro, decyl ester dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ester phensphorodithalic acid, diheptyl ester isophthalic acid, diheptyl ester	2514	trimethoprim	SE-30
phthalic acid, cyclohasyltridecyl ester phthalic acid, dioctyl ester phthalic acid, discoctyl ester phthalic acid, discoctyl ester phthalic acid, discoctyl ester chlorpromazine acetylcodesine adipic acid, discoctyl ester benzophenon, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxophenon, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxophenonic acid, 4-nitro, doddyl ester phosphorodithioic acid, a-3,4-dihydro-1-phthalimidoethyl o-o-diethyl ester (ethyl guthion) phosphorodithioic acid, 0,0-diethyl 2-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl) phosphorodithioic acid, 2-2-chloro-1-phthalimidoethyl o-o-diethyl ester (azinphos-ethyl) phosphorodithioic acid, 3-2-chloro-1-phthalimidoethyl o-o-diethyl seter amoralia acid, 3-5-dinitro, decyl ester dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl ethacosane phthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2517	Denzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone)	Me silicone
phthalic acid, dioctyl ester phthalic acid, diisoctyl ester chlorpromazine acetylcodaine adipic acid, diisoctyl ester benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxepine benzoic acid, 4-nitro, dodecyl ester phthalic acid, 4-nitro, dodecyl ester phthalic acid, 4-nitro, dodecyl ester phthalic acid, 4-nitro, dodecyl ester phosphorodithioic acid, 0-d-diethyl 5-[(4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, 0-d-diethyl 5-[(4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl] ester (torak) phosphorodithioic acid, 0-d-diethyl S-[(4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, 0-d-diethyl S-[(4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, 3-f-dinitro, decyl ester dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ester phthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2518	phthalic acid, cyclohexyltridecyl ester	OV-1
phthalic acid, diisooctyl ester chlorpromazine acetylodesine adipic acid, dioctyl ester adipic acid, dioctyl ester adipic acid, dioctyl ester benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxepine benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxepine benzophenone, 2-amino-5-chloro-1,2,3-benzotriazin-3-yl o,o-diethyl guthion) loxepine benzofic acid, 4-nitiro, dodecyl ester phosphorodithioic acid, s-3-4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl o,o-diethyl guthion) phosphorodithioic acid, s-2-chloro-1-phthalimidoethyl o,o-diethyl sater (torak) biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195) amorapine phosphorodithioic acid, 3,5-dinitro, decyl ester dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl flurazepam, hydroxy-ethyl flurazepam, hydroxy-ethyl ester isophthalic acid, diheptyl ester	2519	phthalic acid, dioctyl ester	ov-1
chlorpromazine adipic acid, dioctyl ester  adipic acid, dioctyl ester  benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone)  loxepine  benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone)  loxepine  benzophenone, 2-amino-5-chloro-1-pithalimidoethyl  phyhalic acid, 4-nitro, dodecyl ester  phosphorodithioic acid, 0,0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl ester (ethyl guthion)  phosphorodithioic acid, 0,0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl)  phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl]  phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl]  phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl]  diacetylmorphine  dichlorobenzyl tetradecyl ether, 2,4-  dichlorobenzyl tetradecyl ether, 2,4-  dichlorobenzyl tetradecyl ether, 2,4-  dichlorobenzyl tetradecyl ether, 2,4-  flurazepam, hydroxy-ethyl  phxalic acid, decyl pentyl ester  isophthalic acid, diheptyl ester  isophthalic acid, diheptyl ester	2525	phthalic acid, diisooctyl ester	OV-1/SE-30
acetylcodeine adetylcodeine adetylcodeine adaptic acid, dioctyl ester benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxepine loxepine loxepine benzoic acid, 4-nitro, dedecyl ester phosphorodithicic acid, 4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl o,o-diethyl ester (ethyl guthion) phosphorodithicic acid, n-2-chloro-1-phthalimidocethyl o,o-diethyl ester (azinphos-ethyl) phosphorodithicic acid, n-2-chloro-1-phthalimidocethyl o,o-diethyl ester (torak) biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195) amoxapine phosphorodithicic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester dicacetylmorphine dicacetylmorphine dicacetylmorphine dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl acid, diheptyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2526	chlorpromazine	Me silicone
adipic acid, dioctyl ester benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) loxephenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone) benzoic acid, 4-nitro, dodecyl ester phosphorodithioic acid, 3-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl ester (ethyl guthion) phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3/4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, 9-2-chloro-1-phthalimidoethyl o,0-diethyl seter (torak) phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorophine dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ester, 2,4- dichlorobenzyl tetradecyl ester flurazepam yldcoxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester	2530	acetylcodeine	Me silicone
benzophenone, 2-amino-5-chlorco-2'-fluoro (flurazepam benzophenone) loxepine benzorio acid, 4-nitro, dodecyl ester phthalic acid, diphenyl ester phthalic acid, diphenyl ester phosphorodithioic acid, a-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl o,o-diethyl ester (ethyl guthion) phosphorodithioic acid, a-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak) phosphorodithioic acid, a-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak) biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195) amoxapined phosphorodithioic acid, 0,O-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester diachorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester	2540	adipic acid, dioctyl ester	0V-1
loxepine benzoic acid, 4-nitro, dodecyl ester benzoic acid, diphenyl ester phrasin acid, diphenyl ester phrasin acid, diphenyl ester phrasin acid, diphenyl ester phosphorodithioic acid, a-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl ester (ethyl guthion) phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, a-2-chloro-1-phthalimidoethyl o,0-diethyl seter (torak) phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) amoxapine phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) diacetylmorphine dichlorobenzyl tetradecyl ether, 2,4-dichlorobenzyl acid, diheptyl ester sisphthalic acid, diheptyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2542	benzophenone, 2-amino-5-chloro-2'-fluoro (flurazepam benzophenone)	Me silicone
benzoic acid, 4-nitro, dodecyl ester phthalic acid, 4-nitro, dodecyl ester phthalic acid, diphenyl ester phthalic acid, diphenyl ester phosphorodithioic acid, 0.0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (ethyl guthion) phosphorodithioic acid, 0.0-diethyl 8-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, s-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak) biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195) amoxapine phosphorodithioic acid, 0.0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2542	loxepine	SE-30
phthalic acid, diphenyl ester phthalic acid, diphenyl ester phosphorodithioic acid, a-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl o,o-diethyl guthion) phosphorodithioic acid, a-3,4-dihydro-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, a-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak) biphenyl, 2,2',3,3',4,4',5,6-octachloro (PGB 195) amoxapine phosphorodithioic acid, O,O-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester diacetylmorphine dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2550	benzoic acid, 4-nitro, dodecyl ester	SE-30
phosphorodithioic acid, a-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl o,o-diethyl ester (ethyl guthion) phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, a-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak) biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195) amoxapine phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester diacetylmorphine diacetylmorphine diacetylmorphine acid, 2,4-dichlorobenzyl tetradecyl ether, 2,4-flurazepam, hydroxy-ethyl ester fluracepam, hydroxy-ethyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2550	phthalic acid, diphenyl ester	OV-1
phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) phosphorodithioic acid, s-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak) bippenyl, 2,2',3,3',4,4',5,6-octachloro (PGB 195) amoxapine phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester diacetylmoxphine diacetylmoxphine dichlorobenzyl tetradecyl ether, 2,4-dichlorobenzyl tetradecyl ether, 2,4-dichlorobenzyl tetradecyl ether, 2,4-dichlorobenzyl tetradecyl ether, 2,4-filurazopam, hydroxy-ethyl her, 2,4-filurazopam, hydroxy-ethyl ester flurazopam, hydroxy-ethyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2551	phosphorodithioic acid, 8-3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-y1 o,o-diethyl ester (ethyl guthion)	DB-1
phosphorodithioic acid, s-2-chloro-1-phthalimidoethyl o,o-diethyl ester (torak)  biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195)  amoxapine phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl)  benzoic acid, 3,5-dinitro, decyl ester diacetylmorphine dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- phosphorodine, hydroxy-ethyl flurazepam, hydroxy-ethyl phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2553	phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl)	ov-1
biphenyl, 2,2',3,3',4,4',5,6-octachloro (PCB 195) amoxapine phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzolc acid, 3,5-dinitro, decyl ester diacetylworphine diacetylworphine dichlorobenzyl tetradecyl ether, 2,4- isuphthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2570	phosphorodithioic acid, 8-2-chloro-1-phthallmidoethyl o,o-diethyl ester (torak)	DB-1
amoxapine phosphorodithioic acid, O,O-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester diacetylworphine dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2573	bipheny1, 2,2',3,3',4,4',5,6-octachloro (PCB 195)	CP Sil 5CB
phosphorodithioic acid, 0,0-diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl) benzoic acid, 3,5-dinitro, decyl ester diacetylumorphine diacetylumorphine diacetylumorphine diacetylumorphine dichlorobenzyl tetradecyl ether, 2,4-dichlorobenzyl tetradecyl ether, 2,4-dichlorobenzyl tetradecyl ether, 2,4-fluazepane, hydroxy-ethyl ester 2,4-fluazepane, hydroxy-ethyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2575	amoxapine	SE-30
benzoic acid, 3,5-dinitro, decyl ester diacetylmorphine dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosana hydroxy-ethyl sythalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2579	phosphorodithioic acid, O, O. diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (azinphos-ethyl)	Me silicone
diacetylworphine diachorphine dichlorobenzyl tetradecyl ether, 2,4- fluracepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2581	benzoic acid, 3,5-dinitro, decyl ester	SE-30
dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2581	diacetylmorphine	SE-30
dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- fluazepam, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2588	dichlorobenzyl tetradecyl ether, 2,4-	
dichlorobenzyl tetradecyl ether, 2,4- dichlorobenzyl tetradecyl ether, 2,4- flurazepan, hydroxy-ethyl hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	2594	dichlorobenzyl tetradecyl ether, 2,4-	
dichlorobenzyl tetradecyl ether, 2,4- flurazepam, hydroxy-ethyl hexacosana by the ster phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	5 6 0 0	dichlorobenzyl tetradecyl ether, 2,4-	
flurazepam, hydroxy-ethyl hexacosana phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	5600	dichlorobenzyl tetradecyl ether, 2,4-	
hexacosane phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	5600	flurazepam, hydroxy-ethyl	SE-30
phthalic acid, decyl pentyl ester isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	5 6 0 0	hехасовапе	Me silicone
isophthalic acid, diheptyl ester isophthalic acid, diheptyl ester	5602	phthalic acid, decyl pentyl ester	SE-30
isophthalic acid, diheptyl ester	2092	isophthalic acid, diheptyl ester	OV-101
	5092	isophthalic acid, diheptyl ester	OV-101

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TENTION	COMPOUND NAME	STATIONARY PHASE
2608	isophthalic acid, diheptyl ester	SE-30
2608		SE-30 OV-1
2612	benzodiazepin-2-one, 7-chloro-1-(cyclopropylmethyl)-1,3-dihydro-5-phenyl-2H-1,4- (prazepan)	OV-1/SE-30
2612	mestranol	OV-1/SE-30
2613	brombardam 	Me Silicone
2619	permentin cis dinitrobancenesulphonamide, 4-(dipropylamino)-3,5- (oryzalin)	1.1.
2620	testosterone	/SE
2625	2',3,3',4,4'5,5'-octachloro (PCB 194)	CP Sil 5CB
2634	cyclopropanecarboxylic acid, 3-(2,2-dichloroviny1)-2,2-dimethy1-, (3-phenoxypheny1)methyl ester (permethrin)	30
2637	permethrin, trans	CP Sil 5CB
2639	dlamorphine	Me Silicone
2641 2649	rillulopelitaine nobitablic acid. dinonvl ester	OV-1
2654	sthyl 0-(3-chloro-4-methyl-2-oxo-2H-1-benzopyran-7-yl) ester	0V-1
2657	cyclopropanecarboxylic acid, 3-(2,2-dichloroviny1)-2,2-dimethy1-, (3-phenoxypheny1)methyl ester (permethrin)	00-1
2659		OV-1/SE-30
2661	terephthalic acid, disply, ester	OV ~ 1 0.1
5007	-	SE-30
6/07	Calcinicaline dimethyl	OV-1
2681	Notice of the control	SE-30
2682	this acid dioctyl ester	OV-101
2685	phthalic acid, dioctyl ester	SE-30
2686	benzoic acid, 3,5-dinitro, undecyl ester	SE-30
2687	phthalic acid, heptyl nonyl ester	SE-30
2690	,	-
2694		CP Sil 5CB
2695		0V-1
0607	rerposenty 4 unitro-p- dishlocopent annual ather 2 1-	25-30 25 23 F25
9700	17 (TOTTO	110
2700	aspacia acid, dibutoxyethyl ester	
2704	Φ	CP Sil 5CB
2705	ntyldecyl ether,	Sil
2719	;	OV-1/SE-30
2730	_	ov-1
2735	phinalic acid, dicyclonepryl ester	SE-30
2741	niciaepam filoracepam	Me Silicone
2741	quinine	SE-30
2742	azepoxide	SE-30
2745	sodecyl	0V-1
2745	id, octyldecyl	00-1
2745		SE-30
2750	nitrazepam	OV-1/SE-30
2759		SE-30
78/7	sebacic acid, dioctyl ester	
2788	Illizaepan Intraepand 3.5-dinitro, dodecul ester	Me silicone
2792	di (2-ethylhexyl) este	SE-30 OV-1
2793		OV-1/SE-30
2800	clonazepam	Me silicone
	:	

STATIONARY PHASE

	dichlorobenzyl hexadecyl ether, 2,4- dichlorobenzyl hexadecyl ether, 2,4- dichlorobenzyl hexadecyl ether, 2,4- hexachlorophane	vanicanie, 8-methoxyl dichlorobenzyl hexadecyl ether, 2,4- perylene quinine papaverine hydroxyzine	cyclomethycaine phthalic acid, di (butoxyethyl) ester cholestane, Salpha- cholestane, Salpha- phthalic acid, dioctyl ester phthalic acid, decyl octyl ester phthalic acid, dinonyl ester haloperidol amoxapine, 7-hydroxy adipic acid, didecyl ester amoxapine, 8-hydroxy amoxapine, 8-hydroxy	prochlorperazine adipic acid, didecyl ester cestriol meclizine cholesterol strychnine strychnine cholesterol strychnine cholesterol cholesterol cholesterol cholesterol cholesterol cholesterol cholesterol sitoaterol cholesterol cholesterol cholesterol cholesterol sitoaterol cholesterol cholesterol cholesterol cholesterol cholesterol cholesterol cholesterol cholesterol cholesterol	cholesterol, 7-aenydro cholestanone sitosterol campesterol campesterol ergostanol lophenone campesterol campesterol campesterol sergost-8(14)-en-3beta-ol ophenol
NO	ੀ ਨੂੰ ਦੌ ਦੌ ਦ	តិ ដឹក្តី ជី ទី ទី ទី		ិថិថិទីថិជីជីជីជីជីទីទីទីទីទីទីទីទីទីទីទីទីទីទីទ	
RETENTION INDEX	2800 2800 2805 2807	2810 2810 2813 2814 2818 2832 2832	2841 2850 2855 2865 2866 2876 2876 2987 2900 2900	2922 2940 2940 3064 3064 3063 3064 3086 3115 3115 3115	3145 3145 3166 3193 3210 3210 3215 3215 3215 3215 3215

CP Sil 5CB
CP Sil 5CB
CP Sil 5CB
CV Sil 5CB

STATIONARY PHASE

00V-1 00

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## TABLE 2

SECOND TIER LIBRARY OF LINEAR TEMPERATURE
PROGRAMMED RETENTION INDICES
FULL VERSION IN ALPHABETICAL ORDER OF COMPOUND NAME

LIT REF	8 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	28 8 8 8	56	3 8 38	40	49	49	46	12	12	10	12 10	12	53	53	21	21	20	46	19	21 20	12
SAMPLE TYPE	standard essential oil standard n standard	standard n standard n standard n standard	standard	standard standard	n standard	standard	standard	poog u	n standard	n øtandard	n standard	n standard n standard	n standard	n standard	n standard	standard	standard	n standard	n food	standard	standard n standard	n standard
LEN CARRIER (m) GAS	100 helium 50 helium 12 50 nitrogen	12 50 hydrogen 50 hydrogen 50 nitrogen		12 2	50 nitrogen	15 helium	15 helium	80 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen 25 nitrogen	25	2 nitrogen	2 nitrogen	1.5 argon	1.5 argon	2.4 nitrogen	80 nitrogen		1.5 argon 2.4 nitrogen	25 nitrogen
(mm)	0.5 0.30 0.20 0.20	0.20 0.32 0.32 0.20	0.20	0.20	0.2	0.25	0.25	0.28	0.30	0.30	0:30	0.30	0.30	κŋ	5	4.00	4.00	5.50	0.28		4.00	0.30
COLUMN TYPE	wall-coated open tubular bonded phase bonded phase wall-coated open tubular	bonded phase bonded phase bonded phase wall-coated open tubular	bonded phase	bonded phase 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular		bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	10% w/w	10% w/w on Diatoport S (80-100mesh)	1 derivative 13% w/w on Chromosorb W AW	wall-coated open tubular	25% w/w on Celite	10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular
COLUMN MATERIAL	glass quartz glass quartz glass quartz glass	quartz glass quartz glass quartz glass quartz glass	quartz glass	quartz glass	trichloro Me silicone quartz glass Me silicone quartz glass Me silicone quartz glass	quartz glass	opyi (propachioi) quartz glass	glass	quartz glass	quartz glass	/l ester quartz glass	ester quartz glass quartz glass	ester quartz glass	nenoxy (2,4,5-T) quartz glass	oxy (2,4-b) quartz glass		trimet	nyl, trimethylsilyl	•	er	mecnyratry.	ester quartz glass
N STATIONARY N PHASE	SE-30 OV-1 Me silicone SE-30	Me silicone OV-1 OV-1 SE-30	acenaphthylene-1-carbonitrile 1750 HP Me silicone q	Me silicone diethylacetal SE-30	trichloro Me silicone	-cnioro-2', 0' -du DB-1	Z-cnioro-n-isopropyi (propa DB-1 quartz gla	OV-101 glass	1,1-dimethylpropy SE-30	1, 2-dimecnyipropyi ester SE-30 quartz	-methyl-3-but SE-30	-methylbutyl SE-30 SE-30	-methylpropyl es	2,4,5-trichlorophenoxy (2,4,5-SE-30 quartz glass	2,4-dichlorophenoxy (2,4-D) SE-30 quartz gla 9 5.dibudroxumbenul lastone	0V-1	<ol> <li>5-dihydroxyphenyl, OV-1</li> </ol>	2,5-dimethoxyphenyl, SE-30	2-furfuryl ester OV-101	2-hydroxyphenyl, SE-30		2-methylpropyl es SE-30
COLUMN	thene Hall HP	thylene HP SAC SAC	thylene HP	HP shyde,	ehyde,							acid, 1 SGE SGE			acid, 2 PEC		acid, 2					acid, 2 SGE
LTP INDEX	acenaphthene 1357 1423 Hall 1424 HP 1522	acenaphthylene 1402 HP 1412 SAC 1412 SAC 1491	acenaphthylene-1 1750 HP	1759 HP acetaldehyde, 0717	acetaldehyde, 0699	acetanilide, 1882	acetan111de, 1608					acetic ( 0828			acetic 1766		acetic 1845	acetic 1677				acetic 0749

LIT	1	10 18	10	20	21	21 20	21	10	21	21 20	21	20	19	12	53	78	21	19	20	21	21	10	-	19	40
LEN CARRIER SAMPLE TYPE  (m) GAS SAMPLE TYPE	0 4 helium standard	0 25 nitrogen standard 3.6 standard	0 25 nitrogen standard	0 2.4 nitrogen standard	0 1,5 argon standard	0 1.5 argon standard 0 2.4 nitrogen standard	1.5	0 25 nitrogen standard	0 1.5 argon standard	0 1.5 argon standard 0 2.4 nitrogen standard	0 1.5 argon standard 0 1 5 argon standard	2.4 nitrogen		0 25 nitrogen standard	8 6	50 hydrogen	0 1.5 argon standard	standard	2.4 nitrogen	.00 1.5 argon standard	0 1.5 argon standard 0 2.4 nitroden standard	25	0 4 helium standard	standard	50 nitrogen standard
OI (mm)	3.00	0.30	0.30	5.50	4.00	4.00	4.00	0.30	4.00	5.50	4.00	5.50		0.30	200	0.32	4.00		5.50	4.	4.00	0.30	3.00		0.2
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular 10%w/w on Celite 560 AW(60-80mesh)	wall-coated open tubular	trimethylsilyl derivative 13% w/w on Chromosorb W AW		yl derivative 10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	1yl derivative 10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular	trimethylsilyl derivative 10% w/w on Diatoport S (80-100mesh)	derivative 10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	10% w/w on Diatoport S (80-100mesh)	w/w on Chromosorb W	25%w/w on Celite	wall-coated open tubular		bonded phase	trimethylsilyl derlyative 10% w/w on Diatoport S (80-100mesh)	25%w/w on Celite	3	10% w/w on Diatoport S (80-100mesh)	derivative 10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	ated	ester 3% w/w on Chromosorb W HP (80-100mesh)	25%w/w on Celite	wall-coated open tubular
COLUMN MATERIAL	glass	quartz glass aluminium	quartz qlass		tri	nyl, trimethylsilyl	lyl), trimethylsilyl	glē	<u>,</u>	trimethylsilyl d	chylsilyl derivative	trimethylsilyl d		9	iphenoxy (MCFA) quartz glass	gla gla	Ţ,		trimethylsilyl d		trimethylsilyl d	quartz glass	lohexyl		r quartz glass
MN STATIONARY	naphthyl OV-1	2-propenyl ester SE-30 SE-30	2-propynyl ester SE-30	3,4,5-trimethoxyphenyl, SE-30	3,4-dihydroxyphenyl,	3,4-dimethoxyphenyl OV-1	3-(5-hydroxyindolyl) OV-1	3-butenyl ester SE-30	3-hydroxy-4-methoxypheny OV-1	3-hydroxyphenyl, OV-1 SE-30	3-indolyl, trimethyl	3-methoxyphenyl,	3-methylbutyl ester SE-30		4-chloro-2-methylphenoxy SE-30 quartz	ov-1 ov-1	4-hydroxy-3-methoxypheny OV-1	4-hydroxyphenyl, SE-30	4-hydroxyphenyl, SE-30	0V-1	4-methoxyphenyl, OV-1 cr-30	4-pentenyl ester SE-30	4-tert-octyl-2-methylcyc OV-1 glass	benzyl ester SE-30	bromomethyl ester Me silicone
COLUMN	acid,	acid, SGE	acid,	acid,	acid,	acid,	acid,	acid, SGE	acid,	acid,	acid,	acid,	acid,	SGE	acid, PEC	SAC	acid,	acid,	acid,		acid,	acid, SGE	acid,	acid,	acid,
LTP INDEX		acetic a 0656 0670					acetic a 2206		acetic a			1934 acetic a				2410 2410	acetic a	acetic a	acetic 6 1628		acetic and 1513		acetic (	acetic a	acetic ( 0809

LIT REF	38 10 32 19	1 28 44	40	19	10	19	40	12	11	11	46	ოო	ო	40	19	H	10	7	28	455	45	32	-	18	32	-
SAMPLE TYPE	standard standard standard standard	standard standard tap water	standard	standard	standard	standard standard	standard	standard	standard standard	standard	food	standard essential oil	standard	standard	standard	standard	standard	prantage	standard	standard standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	2 25 nitrogen 100 helium	4 helium 50 hydrogen 25 helium	50 nitrogen		25 nitrogen	25 nitrogen	50 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen			50 helium	50 nitrogen		25 nitrogen	25 nitrogen		50 hydrogen	50 50	50	100 helium	4 helium	3.6	100 helium	4 helium
TO (mm)		3.00	0.2		0.30	0.30	0.2	0.30	0.30	0.30			0.30	0.2		0.30	0.30		0.32			0.5	00.6	es.	0.5 1	3.00
COLUMN TYPE	15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular wall-coated open tubular 25% w/w on Celite	<pre>(2,4-D butyl ester) 3% w/w on Chromosorb W HP (80-100mesh) 3 bonded phase</pre>	wall-coated open tubular	25%w/w on Celite	wall-coated open tubular	25%w/w on Celite wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 25%w/w on Celite	wall-coated open tubular	-coated open tubular		bonded phase	wall-coated open tubular	25%w/w on Celite	wall-coated open tubular 0	wall-coated open tubular	(2,4-D iso-octyl ester)	bonded phase			<pre>wall-coated open tubular (2,4-D isobutyl ester)</pre>	3% w/w on Chromosorb W HP (80-100mesh) 3	10%w/w on Celite 560 AW(60-80mesh)	-coated open tubular	(2,4,5-1 isopiopyi eater) /w on Chromosorb W HP (80-100mesh)
COLUMN MATERIAL	z glass	ichlorophenoxy lass uartz glass	ər quartz glass		er quartz glass	quartz glass	ester quartz glass	guartz glass	quartz glass	quartz glass			quartz glass	quartz glass		quartz glass	quartz glass	υ	quartz glass	gla <i>ss</i> glass	glass	glass 2,4-dichlorophenoxy	glass	aluminium	glass wall	glass
UMN STATIONARY SIN PHASE	utyl ester SE-30 SE-30 SE-30 SE-30 SE-30	butyl ester, 2,4- OV-1 OV-1 Me silicone	₽.~	Η .			l es ne		dodecyl ester SE-30 SE-30	SE-30 SE-30	01		OV-1	9	heptyl ester SE-30	SE-30	SE-30 SE-30	ester,	ester	0V-101 0V-101	-	SE-30 isobutyl ester, 2	OV-1	SE-30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
COLUMN	!	acid, SAC HP	acid,	acıd,	acid, SGE	acid, SGE	acid,	acid, SGE	acid, SGE	SGE		Hall Hall	Hall	ים יי	acid,	SGE	SGE	acid,	SAC			acid,	ים. טונטפ	, ,	actu,	acra'
LIP	acetic 0792 0793 0799 0802	acetic 1840 1841 1927	acetic 0749	acetic 1422	acetic 0969	acetic 1395 1400	acetic 0833			0593 0593	0090	0607 0611	0616		acetic 1096	1166			2163		0750		1805			1825

LIT REF	-	13	11	H		<del></del> 1	28	-1	12	11.	11	;	10 19	19	i i	21 20	00	10	19	9	7	40	11	ď	38	,,,	) IŲ	m	m	m	m	n e	m	38
SAMPLE TYPE	standard	standard	standard	standard		standard	standard	standard	standard	standard	standard	•	standard standard	standard		standard standard		standard	standard	standard	5	standard	standard	atandard	standard	essential oil		standard	standard		essential oil	standard	essential oil	standard
LEN CARRIER (m) GAS	8	6.1 nitrogen	25 nitrogen	4 helium		4 helium	50 hydrogen		25 nitrogen	25 nitrogen	25 nitrogen		Z5 nitrogen			1.5 argon 2.4 nitrogen	•	25 nitrogen		25 nitrogen		50 nitrogen	25 nitrogen		7	50 helium		50 helium	50 helium		50 helium		50 helium	2
CI (mm)	3.00	3.20	0.30	3.00		3.00	0.32	9	0.30	0.30	0.30	,	0.30			5.50	•	0.30		0.30	) }	0.5	0.30		2.0	0.30		0.30	0.30	0.30	0.30	0.30	0.30	2.0
COLUMN TYPE	oxy (2,4-D isopropyl ester)  3% w/w on Chromosorb W HP (80-100mesh)	10%w/w on Chromosorb W BMDS(60-80mesh)	wall-coated open tubular	- ~	(2,4,5-T methyl ester)	3% w/w on Chromosorb W HP (80-100mesh) (2,4-D methyl ester)	phase	L4	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	•	wall-coated open tubular 25%w/w on Celite	25%w/w on Celite		10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	15% w/w on Gaa-Chrom O (100-120 meah)	"," coated open tubula	25%w/w on Celite	wall-coated open tubular	i i	wall-coated open tubular	wall-coated open tubular	10%w/w on Celite 560 AW(60-80mesh)		bonded phase	wall-coated open tubular	bonded phase	bonded phase		bonded phase		bonded phase	15% w/w on Gas-Chrom Q (100-120 mesh)
COLUMN MATERIAL		stainless steel	quartz glass	2,2-bis(4-chlorophenyl) qlass	4,5-trichlorophenoxy	glass 2,4-dichlorophenoxy	quartz glass	grass	quartz glass	quartz glass	quartz qlass	,	quartz glass	ester	silyl derivative			quartz glass		ester quartz qlass	'n	quartz glass	quartz glass	aluminium		quartz qlass	י	quartz glass	quartz glass	91	quartz glass	2,5		
MN STATIONARY	sopropyl ester, OV-1	អ		methyl ester, 2,2. OV-1	ster, 2,	-1 ester,	·	OV-1 methylethyl ester	SE-30 c		er	ter	-30 -30	phenyl, methyl est SE-30	phenyl, trimethylsilyl	OV-1 SE-30	propyl ester			trans-3-hexenyl e: SE-30	methyl e	ilicone	undecyl ester SE-30	vinyl ester SE-30	SE-30	-trichloro OV-1	SP-2100	OV-1			OV-1		0V-1 C	SE-30
	11		acid, SGE	acid,	acid,	acid.		acid,			acid,		SGE	acid,	acid,		acid,	SGE		acid, SGR	_		acid, see	acid,		, 1,1,1. Hall	Supelco	Hall	Hall	Hall	Hall	Hall	Hall	trite
LTP INDEX	11			acetic 2085		1740		1605 acetic	0639				0892 0898	acetic 1155		1264 1281	acetic	0695		acet1c 0			acetic 1490	acetic a	0564	acetone, 0815	0815	0815	0705 Hall	0707	0708	0794	0794	acetonitrile 0464

LIT	мммм	40	๛๛๛๓	мммм	40	47	56	38	60 40	40	п н4	H 47	-		ঘ	-	-	4
SAMPLE TYPE	standard essential oil standard standard		standard standard essential oil standard	standard standard essential oil standard	standard	standard	standard	standard air	standard standard		standard standard standard	standard standard	standard	standard standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 helium 50 helium 50 helium 50 helium		50 helium 50 helium 50 helium 50 helium	50 helium 50 helium 50 helium 50 helium	50 nitrogen	25 helium	12	2 50 helium	50 nitrogen 50 nitrogen	50 nitrogen	4 helium 4 helium	4 helium	4 helium	4 helium 4 helium		4 helium	4 helium	
ID (mm)	0.30 0.30 0.30	0.2	0.30	0.30 0.30 0.30 0.30	0.2	0.20	0.20	2.0	0.22	0.2	3.00	3.00	3.00	3.00		3.00	3.00	
COLUMN TYPE	bonded phase bonded phase bonded phase bonded phase	0	bonded phase bonded phase bonded phase bonded phase	bonded phase bonded phase bonded phase bonded phase	<pre>wall-coated open tubular derivative 10% w/w on Diatoport S (80-100mesh)</pre>		bonded phase	15% $w/w$ on Gas-Chrom Q (100-120 mesh) bonded phase	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh) 3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh) 3% w/w on Chromosorb W HP (80-100mesh)		3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	
COLUMN MATERIAL	quartz glass quartz glass quartz glass quartz glass		quartz glass quartz glass quartz glass quartz glass	quartz glass quartz glass quartz glass quartz glass	quartz glass , trimethylsilyl	quartz glass	quartz glass	quartz glass	quartz glass quartz glass	quartz glass ester	glass ester glass glass	glass glass	ar glass	glass glass	glass	glass	glass	glass
N STATIONARY N PHASE	bromochloro OV-1 OV-1 OV-1	chloro Me silicone dibromo	0V-1 0V-1 0V-1	dichloro 0V-1 0V-1 0V-1	trichloro Me silicone q 4-methoxyphenyl, OV-1	Me silicone	Me silicone	SE-30 OV-1	ne, 1-chloro OgawaLtd OV-101 Me silicone	2-chloro Me silicone di(2-ethvlhexvl)	v	. 00	nexyl este 1		dietnyi ester CV-1/SE-30	dilgoburyi ester OV-1		
COLUMN						deine HP	HP :	trile Hall	ne, i- OgawaL	~					acid, d			acia, a
LTP INDEX	acetonitrile, 0758 Hall 0765 Hall 0768 Hall 0769 Hall	acetonitrile 0662 acetonitrile	0857 0860 0861 0861	acetonit 0692 0693 0693 0695	acetonitrile 0668 aceturic aci 2082	acetylcodeine 2530 HP	acridine 1789	acrylonitrii 0500 0876 Hall	adamantane, 0977 Ogav 1286	adamantane, 1332								adipic a 2444

LIT	19	7	44	Ħ	Ħ	ī	21	21	47	23	23	42	42	42	42	42	42	42	42	42	42	42	42	42	42
SAMPLE TYPE	standard standard	standard	tap water standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	4 helium	4 helium	25 helium 4 helium 4 helium	4 helium	4 helium	4 helium	1.5 argon	1.5 argon	25 helium	15 helium	15 helium	1 argon	l argon	1 argon	l argon	1 argon	l argon	l argon	1 argon	1 argon	1 argon	l argon	1 argon	1 argon	1 argon
OI (mm)	3.00	3.00	3.00 3.00	3.00	3.00	3.00	4.00	4.00	0.20	0.25	0.25	8	N	8	7	7	8	8	8	Ø	8	8	2	~	61
COLUMN TYPE	25%w/w on Celite 3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh) 3% w/w on Chromosorb W HP (80-100mesh)	<pre>1 derivative 10% w/w on Diatoport S (80-100mesh)</pre>	$^{\rm ve}$ 10% w/w on Diatoport S (80-100mesh)		wall-coated open tubular	wall-coated open tubular	Chromosorb W HP (silanised 80-100 mesh)	Chromosorb W HP (silanised 80-100 mesh)	Chromosorb W HP (silanised 80-100 mesh)	Chromosorb W HP (silanised 80-100 mesh)													
RY COLUMN MATERIAL	r glass	glass	ne glass glass	r glass	r glass		trime	trimethylsilyl derivative 1	ne quartz glass	quartz glass	quartz glass		(butane, 2-amino) )l pyrex glass	pyrex glass	pyrex glass	3-amino) pyrex glass	pyrex glass	pyrex glass	pyrex glass	pyrex glass	pyrex glass	pyrex glass	pyrex glass	pyrex glass	pyrex glass
LIP COLUMN STATIONARY INDEX ORIGIN PHASE	acid, dimethyl SE-3 OV-1	acid, dinonyl	acid, dioctyl ester HP Me silico OV-1 OV-1	acid, diphenyl este	acid, dipropyl es	0	N-acetyl-4-metho	etylphenyl, OV-1	allobarbitone 1609 HP Me silicone	alphaprodine 1777 Jaw Sci. SE-30	)	I, I-dimecnyleti	1-metnyipropyi 0V-10	_	3-methylbutyl	allyl (propene, OV-101	Ducyi (Ducane,				amine, diethyl OV-101	of the control of the		methylpenty: OV-101	

LIT REF ====	42	49	49	49	49	49	49	49	4	23	47	23	23	23	23	4	п	23	28	28	28	28	67	28	28	28 28
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	ı standard	ı standard	ı standard	standard	ı standard	ı standard	ı standard ı standard
LEN CARRIER (m) GAS	1 argon	15 helium		15 helium	25 helium	15 helium	15 helium	15 helium	15 helium		4 helium	15 helium	50 hydrogen	50 hydrogen	50 hydrogen	50 hydrogen	15 helium	50 hydrogen	50 hydrogen	50 hydrogen 50 hydrogen						
I OII (mm)	8	0.25	0.25	0.25	0.25	0.25	0.25	0,25		0.25	0.20	0.25	0.25	0.25	0.25		3.00	0.25	0.32	0.32	0.32	0.32	0.25	0.32	0.32	0.32
COLUMN TYPE	Chromosorb W HP (silanised 80-100 mesh)	bonded phase		wall-coated open tubular		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		$3\ensuremath{^\circ}$ w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	bonded phase	bonded phase	bonded phase	bonded phase	, bonded phase	bonded phase	bonded phase	bonded phase bonded phase						
COLUMN MATERIAL	rex	quartz glass	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	glass	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass		quartz glass	quartz glass	quartz glass quartz glass						
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	propyl (pro							amine, tri-n-propyl 0937 DB-1	on OV-1/SE-30	amitripyline 2162 J&W Sci. SE-30	amobarbitone 1727 HP Me silicone	amoxapine 2575 J&W Sci. SE-30	amoxapine, 7-hydroxy 2900 J&W Sci. SE-30	amoxapine, 8-hydroxy 2907 J&W Sci. SE-30	amphetamine 1111 J&W Sci. SE-30	rone OV-1/SE-30	OV-1	anileriaine 2839 J&W Sci. SE-30		aniline, 2,4-dichloro 1287 SAC OV-1				ໝ	LO .	

LIT	28 49	28	28	28	28	49	Q,	0,0	ט ע	49	}	78	38	ŭ	200	20	1	0 0	200		28	50	20	nc	28	20	20	20	50	ט נ	50	ć	8 J	4.3	50	20	20	20	20
) LEN CARRIER SAMPLE TYPE	12 50 hydrogen standard 15 15 helium standard	12 50 hydrogen standard	12 50 hydrogen standard	32 50 hydrogen standard	32 50 hydrogen standard	25 15 helium standard		50 helium	20 50 helium standard 20 50 helium standard	25 15 helium standard	matter or	.32 50 hydrogen standard	) 2 standard	1 : 1	.30 25 nitrogen standard	25 nitrogen		30 25 nitrogen standard	25 nitrogen		50 hydrogen	25 nitrogen	30 25 nitrogen	30 Z3 nitrogen standard		25 nitrogen	25 nitrogen		30 25 nitroden standard	25 nitroden	25 nitrogen		32 ou nydrogen standard 30 25 nitroden standard	50 helium	25 nitrogen	25		25	25
ID (mm)	0.32	0.32	0.32	0.32	0.32	0.25	0.	0.20	0.20	c	;	0	2.0	•		0		0.30			0.32	0	•	: >	0	0.30	•	0	C	00.0	0	•	0.32	0.30	0	0	0	0	0
COLUMN TYPE	bonded phase bonded phase	bonded phase	bonded phase	bonded phase	0	opyl (planavin) bonded phase	wall-coated open tubular	open	wall-coated open tubular	(benefin)	bonded pilase	bonded phase	15% w/w on Gas-Chrom Q (100-120 mesh)		wall-coated open tubular	open	1	open	wall-coated open tubular wall-coated open tubular	; L	bonded phase	oben	oben	wall-coated open tubular	bonded phase	wall-coated open tubular	-coated open	wall-coated open tubular	wall-coated onen tubular	1000	open	-	bonded phase	1	wall-coated open tubular	-coated	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass quartz glass	quartz glass	quartz glass			6-dinitro-N,N-dipropyl quartz glass b			quartz glass	6-dinitro-4-trifluoromethyl	quartz glass	quartz glass		٠	9.	soda glass soda glass	'n	9.	soda glass	,	quartz qlass	~	9	soda glass	martz dlass	_		soda glass	0	2 2	soda glass	,	quartz glass	goda grass quartz glass	_	ğı	goda qlass	q,	91
STATIONARY PHASE	chloro OV-1 DB-1	chloro OV-1	co ov-1	co OV-1		4-methyl suphonyl-2,6 DB-1	nethyl	ov-1	0V-1	hy1-2,	DB-1	_ov-1	SE-30	5-tetrachloro	SE-30	SE-30	6-tetrachloro	SE-30	SE-30	255-30 -triabloro	OV-1	SE-30	SE-30	SE-30	0-recrachioro	SE-30	SE-30	SE-30	5-trichloro	001 20	SE-30	6-trichloro	0V-1	OV-101	SE-30	SE-30	chloro SE-30	SE-30	SE-30
COLUMN	ß	, 3,5-dichloro SAC OV-1	, 3-chloro SAC	Ø	Ø		, N, N-dimethyl				N-phens	SAC		2,3,4,	SGE	S CE	2,3,4,	SGE	SGE	0.6E	SAC	SGE	SGE		, 2, 3, 5, 6 0, 6, 7, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,	3.00 E.00	SGE		2,3,	SGE	3 S S	2,3,	SAC	300	SGE	SGE	2, 3-d1 SGE	SGE	SGE
LTP INDEX	aniline, 1377 1387	aniline, 1352	aniline, 1158	aniline, 1161	aniline, 1538	aniline, 2366	aniline,	1062	1062	aniline,	1672 aniline	1575	anisole 0916	anisole,	1620	1644	anisole,	1500	1520	1530	1465	1469	1484	1494	anisole,	1497	1516	1529	anisole,	1418	1433	anisole,	1341	1344	1359	1370	anisole,	1299	1306

LIT REF	50 50 28	28 50 50	500 500 500 500 500	50 50 50 50	50 50 50 50	50 50 50 50 50	50 50 50 50 50 50	28 28 50 50 50
SAMPLE TYPE	standard standard standard standard	standard standard standard standard	standard standard standard standard standard	standard standard tap water standard	standard standard standard standard	standard standard standard standard standard standard	standard standard standard standard standard	standard standard standard standard standard
LEN CARRIER (m) GAS	25 nitrogen s 25 nitrogen s 25 nitrogen s 50 hydrogen s	50 hydrogen 25 nitrogen 25 nitrogen 25 nitrogen	25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen	25 nitrogen 25 nitrogen 50 helium 25 nitrogen	25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen	25 nitrogen	25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen 25 nitrogen	4 helium 50 hydrogen 25 nitrogen 25 nitrogen 25 nitrogen
ID (mm)	0.30 0.30 0.30 0.32	0.32 0.30 0.30 0.30	0.30 0.30 0.30 0.30 0.30 0.30	0.30 0.30 0.30	0.30 0.30 0.30 0.30 0.30	0.30 0.30 0.30 0.30 0.30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(80-100mesh) 3.00 0.32 0.30 0.30
COLUMN TYPE	wall-coated open tubular wall-coated open tubular wall-coated open tubular bonded phase	bonded phase wall-coated open tubular wall-coated open tubular wall-coated open tubular	wall-coated open tubular	-coated -coated -coated	wall-coated open tubular	open open open open open	wall-coated open tubular	hromosorb W HP  open tubular  open tubular
COLUMN MATERIAL	soda glass soda glass soda glass quartz glass	quartz glass soda glass soda glass soda glass	soda glass soda glass soda glass soda glass soda glass	glas glas tz gl	soda glass soda glass soda glass soda glass	glas glas glas glas glas	91 a g 1 a g	soda glass isomer glass quartz glass soda glass soda glass
AN STATIONARY IN PHASE	4,5-trichloro SE-30 SE-30 SE-30 OV-1	6-trichloro OV-1 SE-30 SE-30 SE-30	-dichloro SE-30 SE-30 SE-30 -dichloro SE-30 SE-30	C. f-dichloro GE SE-30 GE SE-30 OV-101 GE SE-30	dr.	4-dichloro SE-30 SE-30 SE-30 SE-30 SE-30 SE-30 SE-30 SE-30	oro	GE SE-30 butylated hydroxy ov-1 pentachloro AC OV-1 GE SE-30 GE SE-30 GE SE-30
LITP COLUMN INDEX ORIGIN	anisole, 2,4,9 1415 SGE 1429 SGE 1436 SGE 1494 SAC	SAC SGE SGE SGE	anisole, 2, 4-c 1253 SGE 1269 SGE anisole, 2,5-c 1244 SGE 1246 SGE	 ภัญญ ญ	SGE SGE SGE SGE SGE 9, 3, 4,	SGE	് വരു വരു <sub>വരു</sub>	1093 SGE anisole, buty 1d89 SAC 1690 SGE 1724 SGE 1741 SGE

LIT	e e e	26	28.0	6	თ	n 0	0	56	7	∞ ⊣	56	56	56	56	44	44	56	Z,	)	19	19	44 56	56	23	19	,=4	33
SAMPLE TYPE	l oil	standard standard	standard standard	standard	standard		standard	standard	standard	standard standard	standard	standard	standard	standard		tap water	standard	standard		øtandard øtandard	standard	tap water standard	standard	standard standard	standard	standard	standard
LEN CARRIER (m) GAS			50 hydrogen		24 helium		nafortin oc	12	4 helium	50 nitrogen 4 helium	12	12	12	12	25 helium	25 helium	12	12	l H	4 helium		25 helium 12	12	15 helium 25 helium		4 helium	50
(mm)	3.00	0.20	0.20	0.30	0.30		0.2.0	0.20	3.00	0.20	0.20	0.20	0.20	0.20			0.20	0.20	) 	3.00		0.20	0.20	0.25		3.00	0.23
	(80-100mesh)								(80-100mesh)	(80-100mesh)										(80-100mesh)						(80-100mesh)	
COLUMN TYPE	Δı	open	wall-coated open tubular bonded phase	wall-coated open tubular	wall-coated open tubular		waii-coated open tuburar	bonded phase	3% w/w on Chromosorb W HP	wall-coated open tubular 3% w/w on Chromosorb W HP	bonded phase	bonded phase	bonded phase	bonded phase			bonded phase	bonded phase	4	25%w/w on Celite 3% w/w on Chromosorb W HP	25%w/w on Celite	bonded phase	bonded phase	wall-coated open tubular	25%w/w on Celite	3% w/w on Chromosorb W HP	wall-coated open tubular
COLUMN MATERIAL	ם ם	ממ	quartz glass quartz glass	n	glass	ο ;	quartz grass	quartz glass	le glas <i>s</i>	quartz glass glass	quartz glass		quartz glass	quartz glass			quartz glass	quartz qlass		glass	ממנטד	quartz glass	quartz glass	quartz glass quartz glass		glass	glass
N STATIONARY N PHASE	0V-1 0V-1 0V-1	SE-30 Me silicone	0V-1 0V-1	0V-1	0V-1	• •	26-30 2-methyl	Me silicone	9,10-dicarbonitrile OV-1 g	9, 10-dinyaro SE-30 OV-1	9,10-dimethyl Me silicone	9-methyl Me silicone	Me silicone	y-nitro Me silicone	hydroxy Me silicone	Me silicone	Me silicone	9-carboxaldehyde Me silicone	acid, methyl ester		sE-30	Me silicone Me silicone	Me silicone	i. SE-30 Me silicone	SE-30	OV-1	0V-1
LTP COLUMN INDEX ORIGIN	H H H	1713 1747 HP	1750 1752 SAC		1758	cene,	1668 spthragene 2-m			anthracene, 9,1 1622 1662		anthracene, 9-m 1929 HP			sene, HP	1856 HP Me silice	2107 HP	anthracene-9-ca 2183 HP	nilic		2088	anthraquinone 1937 HP 1976 HP	anthrone 1945 HP	OKW SC HP	7	1556	1296 1296

SAMPLE TYPE	Ę,	rd.	rd	rd	Į.	rd	Į.	ğ	ial oil	rd L	rd	rd	rd	•	מ	rd	rd S	1	rd	7	Į.	rd	ter	rd	rd	rd :	ביין גיי		rd	rd	rd	rd in	<u> </u>	rd	rd	rd	Ţ	\$ 1
<i>8</i> 3 ∥	standard	standard	standard	standard	standard	standard	standard	standard	essential	standard		standard	standard	1	standard	standard	standard		standard	ot on de	grandard	standard	tap water	standard	standard	standard	standard	standard	standard	standard	standard	standard				standard	atandard	
CARRIER GAS	_				4 helium	helium		) hydrogen		) helium		2	4 helium	,	•	_	0.0		5 helium	holium	4 nellum	3 helium					) helium			l helium		5 belium				o nyarogen O helium	5 հայլստ	
(m)	3 50	3 50	3 50	3 50		5 15	20 12	32 50		30 50				c	٤.۶		27 50		25 15			25 108		_			20 20			(1)		50 25				30 50	0.25 15	
OI (mm)	0.23	0.23	0.23	0.2	3.00	0.25	0.20	0.32	0.30	0.30		2.0	3.00		2.0	0.27	0.27	:	0.25		3.00	0.25		0.5	0.20	0.20	0.40		. 0	3.18	0.27	0.50			0.30	0.30	Ċ	5
ы II	ù	tı.	ú	u	HP (80-100mesh)	<b>U</b>				•		(100-120 mesh)	HP (80-100mesh)	000	Chromosorb W BMDS (80-100 mesh)					100m001 00 dn		SH	: 4	ħ	H	H	La 1	4 5	4 14	ah)		H	អ	Gas-Chrom Q (100-120 mesh)				
IN TYPE	ubula	tubular	ubula	tubular	rb W	ubula				4	a inca	O mo:			HMDS			, q	}	1	N Q I	tubular	tubular	tubular	tubular	tubular	tubular	tubular	tubular	(100-200 mesh)	tubular	tubular	tubular	com Q			Bravo)	Ġ
COLUMN	open tubular	open t	open tubular	open t	Chromosorb W	open tubular				4	o medo	as-Chr	on Chromosorb W		sorb v			A. Kerbl	5		on Chromosorb W HP	open t		-				open		(100-2	oben t	oben	open t	as-Chi	_		nil,	_
	wall-coated	wall-coated	wall-coated	wall-coated	3% w/w on Ch	wall-coated	bonded phase	bonded phase	bonded phase	bonded phase	Waii-coaled open tubuian bonded phase	15% w/w on Gas-Chrom Q	W/W		ő			(nronamide.	Ċ	10 11 11 11	× ×	wall-coated	wall-coated		-coated		-coated	wall-coated		lcoport	wall-coated	wall-coated	bonded phase wall-coated	15% w/w on G		bonded phase bonded phase	(chlorothalonil,	
11 ك	M	wa	W	W	38	Wê	ğ	ğ	ğ	ă i	žď	H	38	,	er er			([waaa	74	ř	÷	Ä	×	W	W	W	ž	א ספר בי				ž ,	Ď, ž	ä	Ă.	ă,ă	, -	i .
OLUMN MATERIAL				;	thylphenyl) ass	glass	glass	glass:	glass	glass	qlass					(e)		-h11-2-111	dlass	) G				glass	z glass	г дјазв	z glass	grass	borosilicate gl	O.	glass		z glass z glass			z glass z glass	tetrachloro-1,3	1 1 1 7
COLUM	glass	glass	glass	glass	methyl glass	quartz	quartz	quartz	quartz	quartz	glass quartz		qlass		glass	ildenyde) qlass	glass	glass	quartz	isomer	glass	חומש	glass	glass	quart	quart	quart	quart	boroa	stain	soda glass	glass	quartz		quartz	quartz	, 6-tetr	
STATIONARY PHASE		4,6,8-trimethyl OV-1	0V-1	0V-1	5-ethyl-5-(4-me OV-1 gl	SE-30	ailicone	ethyl OV-1	ov-1		ov-101 ov-1		4-dimethylamino OV-1	troxy-3-methor	SE-30 gl	4-methoxy (anisa OV-101	OV-101 glass	7-101	Chioro-N-(1,1 DB-1	methyl	ov-1	01-101	0		ov-1				SE-30 OV-1	SE-30		0	OV - 1 SE - 30		OV-1	ov-1 ov-1	trile, 2,4,5,6-tetra	
	hy1	3-trin				ci. SE	/lene Me	dimethyl OV-1	б	ნ :	ර් ර්	S	4-din	4-hydroxy	SI	4-met	б	ָר ה	o-dici	N, N-diethyl	б				б	б	5	5 5	3 6	8	ō	S	5 6	ខេ	5	55	dicarbonitrile,	3
COLUMN	1-methy			6	cic acid,	zine J&W Sci	naphthy HP	sAC	shyde Hall	Hall	Hall		ehyde,	shyde,		shyde,						a dro	Sunelco	1				ç	7 t	H	PEC		Hall		Hall	SAC Hall		
LTP INDEX	azulene, 1401	azulene, 1638	azulene, 1400	azulene, 1410	barbituri 2085	benactyzine 2235 J&W	benzacenaphthylene 2055 HP M	benzacridine, 2676 SAC	benzaldehyde 0929 Hall	0929	0947	0961	benzaldehyde,	benzaldehyde,	1447	benzaldehyde, 1236	1238	1240	benzamide, 1760	benzamide,	1571	benzene	0642	0645	0646	0646	0646	0649	0650	0654	0655	0655	0658	0664	1990	0669	benzene	1011

LIT	7	നഹന	14	14	2	m	יטורי	,	14	7 0	n kn	m	14	("	m	5	,	N 6	יט נר	14	m	80	32	28		4.	n	n m		78	) et	o LO	38	4	4. V	2	14	ო	5 23
SAMPLE TYPE		standard tap water essential oil	standard	standard	standard		essential oil tap water		standard	standard	tan water	essential oil	standard	esaportial oil		tap water	•	standard	scandard tan water	standard	essential oil	-	standard	standard		standard	tap water			standard pegential ail		tap water	standard	7	scandard	standard	standard	standard	tap water standard
LEN CARRIER (m) GAS	108	50 helium 50 helium		25	108	20		1	25 helium	100	3		25 helium	50 helium	20		,	0 108 helium			20	20	100 hellum	2 50 hydrogen		) 25 helium	KO holium	20	i	50 hydrogen	20		2	14 helding		108 helium	25 helium	50 helium	108 helium
ID (mm)	0.25	0.30	0.5	0.50	0.25	0.3	9.0	ì	0.50	9.0	5	0.30	0.50	0.30	0:30		(	0.23	5.	0.50	0.30	0.20	0.0	0.32		0.50	0.0	0.30	,	0.32	0.30		2.0	20		0.25	0.50	0.30	0.25
COLUMN TYPE		bonded phase wall-coated open tubular bonded phase	wall-coated open tubular		wall-coated open tubular	bonded phase	bonded phase wall-coated open tubular		oben	Wall-Coared open cubular	wall-coated open tubular		wall-coated open tubular	honded phase	bonded phase	wall-coated open tubular		wall-coated open tubular	wall-coated open tubular	oben	bonded phase	oben	Wall-Coated open tubular	bonded phase		wall-coated open tubular	Wall-Coated open tubular	bonded phase		bonded phase bonded phase		wall-coated open tubular		phonyl] (tedion)		wall-coated open tubular	wall-coated open tubular	bonded phase	Wall-coated open tubular Wall-coated open tubular
COLUMN MATERIAL		tz glass 18 tz glass		1 60		<u>6</u>	tz giasa	ı	<b>0</b> 1	7	ta yrass	tz glass		+7 (1)	, 5			1	1.2 y1.433	ı va	tz glass		<b>o</b>	tz glass		<b>5</b> 0 -		9.4	•		4 4	1		orophenyl)sul	,	<b>0</b> 1	ø	tz glass	ec
COI	glass	quartz glass quartz	glass	qlass	glass	quartz	quartz	i i n	glass	grass	קנפור קומור ה	quartz	glass	, tre 100	quartz	glass	,	glass	quartz	qlass	quartz	quartz	grass	quartz		glass	grass	quartz		quartz	quartz	glass		4-chlore	1	glass	glass	quartz	glass glass
STATIONARY PHASE	eth O	SP-2100 OV-1 OV-1	4-tetramethyl SE-30	SE-30	OV-101	ov-1	OV-1 SP-2100	'n	SE-30	OV-101	SP-2100		SE-30	2,3-trichloro	OV-1	SP-2100	1, 2, 3-trimethyl	00-101	SP-2100	SE-30	ov-1	SE-30	SE-30	,5-tetrachioro OV-1	,5-tetramethyl	SE-30		0V-1	-trichloro	01/2-1	ov-1	SP-2100	SE-30	1, 2, 4-trichloro-5-[(4-chlorophenyl) sulphonyl] DR-1 DR-1 honder	1,2,4-triethyl	OV-101	1,2,4-trimetnyi SE-30	ov-1	SP-2100 OV-101
COLUMN		i,i-ur Hall Supelco Hall	1,2,3,		Quadrex	Hall	Hail	3	,	Quadrex	gunelgo	Hall		1,	Hall	Supelco		Quadrex	Supelco		Hall		•	1, 2, 4 SAC	1,2,4		Superco	Hall	1,2,4	SAC	Hall	Supelco				OI.		Hall	Supelco Quadrex
LTP	benzene, 1275	Denzene, 1148   1148   1148	benzene,	1126	1133	1137	1137	benzene,	1098	1103	1106			benzene,		1189	benzene,	1004	1005	1005	1005	1009	1011	benzene, 1301	benzene,		1103		penzene,	1150	1154	1154	1186	benzene,	benzene,	1223	penzene, 0975	1160	0977 0977

0 E	.30 .20	18 3 00	32 30	5	.50 .20	2000 2000 2000 2000 2000	5 1	.50 .25 1 .30 .50	50	50 25 1 30 30	.50	20
G (II)	000	3.18	000	0	000	0000000	0.5	0.50 0.25 0.30 0.50	0	0.50 0.25 0.30 0.30	0.50	0.20
		(80-100mesh)										
UMN TYPE	tubular tubular	-200 mesh) sorb W HP	tubular	tubular	tubular tubular tubular	tubular tubular tubular tubular tubular	tubular tubular	tubular tubular tubular tubular	tubular	tubular tubular tubular	tubular tubular	tubular tubular
COLUMN	e   open   open	(100 hromo	e e copen e	open	uedo obeu	uedo e e e e e e	open	open open open	open	open open e	open	open
	bonded phase wall-coated wall-coated	pelcopor w/w on	bonded phase bonded phase wall-coated bonded phase	11-coated	11-coated 11-coated 11-coated	wall-coated bonded phase bonded phase wall-coated wall-coated wall-coated wall-coated wall-coated wall-coated wall-coated wall-coated	wall-coated wall-coated	wall-coated wall-coated wall-coated bonded phase wall-coated	11-coated	wall-coated wall-coated bonded phase wall-coated bonded phase	ll-coated	wall-coated o
	W W W	3% 3%	d w d	wall	wall wall	wall- bonde wall- wall- wall- wall-	wall wall	wall wall bond	wall	wall- wall- bonde wall-	wall wall	wall wall

quartz glass quartz glass quartz glass

glass

OV-1 SE-30 Me silicone SE-30 SE-30

quartz glass

glass

quartz glass

glass qlass

1,2-dimethyl-4-ethyl

penzene,

SE-30

SE-30

benzene, 1,2-dimethyl-3-vinyl

SE-30

1431 1097

OV-1

Supelco Hall

Quadrex

benzene, 1082 1087 1090 Si

glass glass glass

OV-101 SP-2100

glass

1,2-dimethy1-3-ethyl

SE-30

quartz glass

OV-101 OV-1 SP-2100

quartz

1,2-dimethyl-4-vinyl

benzene,

1100

00-1

Supelco

Quadrex

1066 1068 1070 1070 1070

Hall

SE-30

, 1,2-dimethylpropyl Quadrex OV-101

penzene,

1069

glass

oil

helium helium helium

tap water standard essential standard standard standard standard

helium helium helium helium

50 50 108 50 50 50 50 25 25 25 25 25

tap water standard

standard

nitrogen

nelium nelium

oi1

tap water essential standard

helium helium nelium helium

50 25

standard standard

helium helium

25 108

7

standard

25 108

20

standard standard

helium

oil

tap water essential

standard

standard standard

helium helium

25 108 50

standard

2 8

നനന

essential oil

helium helium

50

tap water standard

14 8 32

standard standard standard

nitrogen helium

25 50 00

helium

oi1

hydrogen helium

50

standard essential tap water standard tap water standard

helium helium helium

50 25 100

LIT REF

SAMPLE TYPE

CARRIER GAS

LEN (m)

COLUMN MATERIAL

STATIONARY

PHASE

COLUMN

quartz glass quartz glass

1,2,4-trimethyl (cont)

benzene,

SE-30 SE-30

oil

essential standard

helium nitrogen : helium :

50 50

standard

standard standard

helium helium

3.1

stainless steel

SE-30

, 1,2-dibromo HP SE-3

benzene,

0985

0984

1216 1221

0.7

1,2-dichloro

enzene,

glass

quartz glass quartz glass

quartz glass

glass glass

Me silicone

SE-30

1031

glass

OV-1 SP-2100 OV-1

Supelco Hall

1007 1009 1009 1009

Hall

quartz glass

benzene, 1,2-diethyl 1043 SE-30 1047 SE-30 1052 SE-30

glass glass

(o-xylene)

quartz glass glass quartz glass

quartz

Quadrex

0874
0874
0875
0875
0876
0879
0879

Supelco Hall Hall

0871 0871

penzene,

0871

glass

glass glass

quartz quartz

quartz glass

1,3,5-trichloro Supelco SP-2100

benzene,

Supelco

 $\frac{1113}{1113}$ 

SE-30

1,2-diviny1

benzene,

1102

LIT	14 2	14	14	ດຕ	n m	σ,	თσ	0 01	σι	32	,	88 11	ď	o m	m	Ŋ	32	1.4	. 2	S	ന	ထင္	32	R	ო	က	14	7	cr	υ	ო	<b>~1</b>	35	77	8	14	ഹ	ოო	
SAMPLE TYPE	standard standard	standard	standard	tap water stondord	essential oil	standard	standard	standard	standard	standard	5415	standard standard	70 30 70 60 60 60	easential oil		tap water	standard	בות מונית	standard	н	essential oil	standard	grandard	tap water	essential oil	standard	standard	standard	ם הייה הייה	tap water	essential oil	standard	standard tan water	standard	standard	standard		essential oil standard	
LEN CARRIER ) (m) GAS	0 25 helium 5 108 helium	0 25 helium	0 25 helium	o KO helium	20	25	20 50 helium	108	30	5 100 helium 20 50 mitroden	)	8 3.1 helium 0 4 helium	ď		20		100 helium	0 25 halium	108		20	0 50 nitrogen	707		20	0 50 helium	0 25 helium	5 108 helium	0 50 helium	) )		108	-	25	20	0 25 helium	i	0 50 helium 0 50 helium	
ID (mm)	0.50	0.50	0.50	0	0.30	0.30	0.20	0.2	0.3	0 0		3.18 h) 3.00	0	0.30	0.30		0.5	0	0.25	!	0.30	0.20	o.		0.30	0.30	0.50	0.25	0.30		0.30	0.25	0.5	0.50	0.20	0.50	,	0.30	
COLUMN TYPE	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	open	wall-coated open tubular	bonded phase bonded phase	oben	wall-coated open tubular	open	oben	wall-coated open tubular		Supelcoport (100-200 mesh) 3% w/w on Chromosorb W HP (80-100mesh)		bonded phase		wall-coated open tubular	wall-coated open tubular	and the state of t	i edo	oben	60	oben	wall-coated open tubular	wall-coated open tubular		bonded phase	wall-coated open tubular	wall-coated open tubular	מפפינת הסטינה	wall-coated open tubular		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	obeu	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	
MN MATERIAL					z glass z glass		z glass			7	z grass	less steel	,	5	z grass						.1	LT.		-	z glass					9.446	z glass	1			z glass			z glass z glass	
COLUMN	glass glass	glass	glass	glass	quartz	qlass	quartz	glass	glass	glass	quartz	stainless glass	,	quartz	quartz	qlass	glass		grass	grang	quartz	quartz	glass	glass	quartz	quartz	glass	glass	ene)	quar.c.	quartz	glass	glass	glass			glass	quartz	,
STATIONARY PHASE	-triethyl SE-30 x OV-101	1,3,5-triisopropyl SE-30	-trimethyl SE-30	SP-2100	0V-1	0V-1	0V-1	OV-1	0V-1	SE-30	SE-30	-dibromo SE-30 OV-1	-dichloro	00-1	0.4-1	SP-2100	SE-30	$\tilde{\tilde{z}}$	SE-30				SE-30	1,3-d16tny1-3-metny1 unelto SP-2100		OV-1	1,3-diisopropyl		nethyl, (m-xylene)	SP-2100	ov-1	OV-101	SE-30	Me SILICORS	SE-30	3-dimethyl-2-ethyl SE-30	SP-2100	ov-1 ov-1	:
COLUMN	1,3,5-t Quadrex	1, 3, 5-t	1,3,5-t	Supelco	Hall Hall	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		7.0	Chanter		•	I, 3 HP	1,3	SAC	Hall	Supelco	4	1,3-diethyl		Supelco	Hall			U.	Hall	=		Quadrex	1,3-dimethyl,	Supelco	Hall	Quadrex	:	井		, 1,3-dim	Supelco	Hall Hall	1
LTP	benzene, 1158 1206	benzene, 1495	benzene, 0952	0952	0952	0953	0953	0953	0953	0929	0960	benzene, 1190 1197	benzene,	0981	0982	0.982	1017	benzene,	1032	1033			1038	benzene,		1130	benzene,	1139	benzene,	0849	0849	0852	0854	0858	0864	benzene, 1070	1076	1076	•

LIT REF	ጠ 44 ማ ພ ሊ ພ	17 2 3 3 3	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1 20 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	14 2 3 3 3 3 3	1. 2. 6. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.	3 4 4 4 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
SAMPLE TYPE	standard standard standard tap water essential oil	standard standard tap water essential oil	standard standard standard standard	standard standard tap water standard essential oil standard tap water	standard standard standard tap water standard standard	standard standard atandard tap water essential oil standard	standard tap water standard standard standard standard standard standard
D LEN CARRIER n) (m) GAS	0.50 25 helium 0.25 108 helium 0.30 50 helium 0.30 50 helium	0.50 25 helium 0.25 108 helium 0.30 50 helium	25 25 25 50	3.00 4 helium 0.32 50 hydrogen 0.30 50 helium 0.30 50 helium 0.31 50 helium 0.5 100 helium	0.50 25 helium 0.25 108 helium 0.30 50 helium 0.30 50 helium 0.20 50 nitrogen 0.5 100 helium		0.5 100 helium 25 helium 0.50 25 helium 0.20 50 nitrogen 0.27 50 0.27 50 0.27 50 2.0 2 2.0 2 0.50 25 helium 0.25 108 helium
OI (mut)	0.50 0.25 0.30	0.50 0.25 0.30	0 000	(80-100mesh) 3. 0. 0.	666 666		
COLUMN TYPE	wall-coated open tubular wall-coated open tubular bonded phase wall-coated open tubular bonded phase	wall-coated open tubular wall-coated open tubular wall-coated open tubular bonded phase	1-coated open tubula 1-coated open tubula 1-coated open tubula 1-coated open tubula	3% w/w on Chromosorb W HP 25%w/w on Celite bonded phase wall-coated open tubular bonded phase bonded phase wall-coated open tubular	wall-coated open tubular wall-coated open tubular bonded phase wall-coated open tubular bonded phase wall-coated open tubular wall-coated open tubular	open open open	wall-coated open tubular wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular wall-coated open tubular
COLUMN MATERIAL	glass glass quartz glass glass quartz glass	glass glass glass quartz glass	glass glass glass quartz glass	glass quartz glass glass quartz glass quartz glass	glass glass quartz glass glass quartz glass quartz glass	glass glass nne) quartz glass glass glass	glass glass glass glass glass glass
STATIONARY PHASE	sthyl-4-ethyl SE-30 ov-101 ov-1 sP-2100 ov-1	sE-30 CV-101 SP-2100 OV-100 SP-2100 OV-1	30 30 30 30 30	romo OV-1 N10ro SE-30 OV-1 SP-2100 OV-1 SE-30 Me silicone	sthy1 SE-30 OV-101 OV-1 SP-2100 OV-1 SE-30	isopxopyl SE-30 OV-101 Methyl, (p-xyle OV-1 SP-2100 OV-1 OV-1	SE-30 Me silicone SE-30 SE-30 OV-101 OV-101 SE-30 methyl-2-ethyl SE-30 OV-101
LTP COLUMN INDEX ORIGIN	OHNH	O S H		benzene, 1,4-dibromo 1193 benzene, 1,4-dichloro 0913 0985 SAC OV-1 0988 Supelco SP-2 0988 Hall OV-1 0998 Hall SE-3	benzene, 1,4-diethyl 1037 SE- 1039 Quadrex OV- 1041 Hall OV- 1041 Supelco SP- 1041 Hall OV- 1042 SE- 1043 SE-	• • О жано	HP 6, 1,

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LIT REF	សេយស	14	ω.	14 8	8 14	28	28	28	28	សកក	32	32	en (	3 6	ت	32 32	œ	14 8	8	8	ស	m m	14	32.8		114 8
SAMPLE TYPE	tap water essential oil standard	standard	standard	standard standard	standard standard	standard	standard	standard	standard	tap water standard essential oil	standard	standard	essential oil	standard standard	tap water	standard standard	standard	standard standard	standard	standard	tap water	standard essential oil		standard standard		
LEN CARRIER (m) GAS	50 helium 108 helium	25 helium	50 nitrogen	25 helium 50 nitrogen	50 nitrogen 25 helium	50 hydrogen	50 hydrogen	50 hydrogen	50 hydrogen	50 helium 50 helium	100 helium	100 helium		108 helium 50 helium		25 hellum 100 hellum	50 nitrogen	25 helium 50 nitrogen	108 helium	108 helium		50 helium 50 helium		100 hellum 50 nitrogen		0 00
ID L	0.30	0.50	0.20	0.50	0.20	0.32	0.32	0.32	0.32	0.30	0.5 1	0.5		0.25		0.50	0.20	0.50	0.25 1	0.25 1	,	0.30	20	0.20		0.20
COLUMN TYPE	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	bonded phase	bonded phase	bonded phase	bonded phase	wall-coated open tubular bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular		wall-coated open tubular bonded phase	oben	wall-coated open tubular wall-coated open tubular	open	wall-coated open tubular wall-coated open tubular	-coated	wall-coated open tubular		bonded phase bonded phase	-coated open	wall-coated open tubular wall-coated open tubular	4 4	open
COLUMN MATERIAL	(cont) glass quartz glass glass	glass	quartz glass	glass quartz glass	quartz glass glass	quartz glass	quartz glass	quartz glass	quartz glass	lyl glass quartz glass quartz glass	glass	qlasa	quartz glass	glass Guartz glass	1	glass nlass	quartz glass	glass quartz qlass	1	വിക്ഷ		quartz glass	, ,	glass martz dlass	1 1 1 10	giass glass quartz glass
STATIONARY PHASE	1-2-ethyl ( 2100 g 1 101 g	30	-2-methyl SE-30	-3-methyl SE-30 SE-30		1-chloro-2,4-dinitro SAC OV-1 q			1-chloro-4-nitro	2,3,5-trimethy SP-2100 OV-1 OV-1		1-ethyl-2, $5-dimethyl$ $SE-30$	¥l	OV-101 9	100	SE-30 9		-2-vinyl SE-30 SE-30	propyl 1	-3-methyl	SP-2100	ov-1	0	SE-30 SE-30	-3-vinyl	SE-30 SE-30 SE-30
LTP COLUMN INDEX ORIGIN	_ a = o	benzene, 1,4-divinyl 1096 SE-	benzene, 1-allyl 1041	-allyl	benzene, 1-allyl 1033 1033	ಭ			benzene, 1-chlor 1193 SAC	SHH	benzene, 1-ethyl 1070	benzene, 1-ethyl	e, 1 Ha	0961 Quadrex		0963	8960	benzene, 1-ethyl 1086 1091	, O	a		0946 Hall		0949	benzene, 1-ethyl	1064 1064 1066

LIT REF	32 32 8	14 14 8	14	122	9 8 8 9 4 9	14	14	8 14	6 6 6 6 6	14.	14	14 8	6E	39	14 32	14
SAMPLE TYPE	tap water standard essential oil standard standard	standard standard standard	standard standard	standard standard	standard standard	standard	standard standard	standard standard	standard	standard standard	standard standard	standard standard	standard	standard	standard standard	standard standard
ID LEN CARRIER (mn) (n) GAS	0.30 50 helium 0.30 50 helium 0.50 25 helium 0.5 100 helium 0.20 50 nitrogen	.50 25 .50 25 .20 50	0.25 108 helium 0.50 25 helium	0.30 25 nitrogen 0.50 25 helium	.0 2.9 .18 3.1	0.50 25 helium	0.50 25 helium 0.25 108 helium	0.20 50 nitrogen 0.50 25 helium	3.18 3.1 helium	.50 25 .25 108	0.50 25 helium 0.25 108 helium	0.50 25 helium 0.20 50 nitrogen		3.18 3.1 helium	0.50 25 helium 0.5 100 helium	0.50 25 helium 0.25 108 helium
COLUMN TYPE	wall-coated open tubular bonded phase bonded phase wall-coated open tubular wall-coated open tubular wall-coated open tubular	<pre>wall-coated open tubular wall-coated open tubular wall-coated open tubular</pre>	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	Ó	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	Supelcoport (100-200 mesh)		wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular		Supelcoport (100-200 mesh)	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular
COLUMN MATERIAL	glass quartz glass quartz glass glass qlass	glass glass quartz glass	glass glass	quartz glass glass		glass	glass glass	quartz glass glass	stainless steel		glass glass	glass quartz glass	_	stainless steel	glass glass	glass glass
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	. 1-ethyl-4-methyl Supelco SP-2100 Hall OV-1 SE-30 SE-30 SE-30	benzene, 1-ethy1-4-viny1 1072 SE-30 1072 SE-30 1073 SE-30 benzene, 1-ethy1propy1	Quadrex OV-10 1-isopropyl-3 SE-30	Denzene, 1-180propyr-4-viny, 1006 SGE SE-30 1137 SE-30 benzene, 1-methyl-2-bromo	H ,	-, -	Denzene, 1-metny1.2-propy1 1046 SE-30 1050 Quadrex OV-101	_	Denzene, 1-methyl-3-10do 1033 HP SE-30 Denzene, 1-methyl-3-10do 1148 HP SE-30	e, 1-methyl Quadrex 1-methyl	ຸ ວ		, III	1182 HP SE-30 benzene, 1-methyl-4-isopropyl	-	O.

LIT REF	14 14 8	14	14 2 3	നന	8	7	14	14	14	7	14	28	28	28	39	7	7	28	28	1	39	നനാല
SAMPLE TYPE	standard standard standard	standard standard	standard standard standard	tap water essential oil	standard	standard	standard standard	standard	standard Standard	standard	standard standard	standard	. standard	standard	standard	standard	standard	ı standard	ı standard	standard	standard	essential oil standard tap water
LEN CARRIER (m) GAS	25 helium 25 helium 50 nitrogen	25 helium 5 108 helium	25 helium 5 108 helium 5 50 helium	o 50 helium	5 108 helium	5 108 helium	-	0 25 helium	0 25 helium 5 108 helium	5 108 helium	0 25 helium 5 108 helium	2 50 hydrogen	2 50 hydrogen	2 50 hydrogen	8 3.1 helium	5 108 helium	5 108 helium	2 50 hydrogen	2 50 hydrogen	0 4 helium	8 3.1 helium	0 50 helium 0 50 helium
ID (mm)	0.50 0.50 0.20	0.50	0.50 0.25 0.30	0.30	0.25	0.2	0.50	0.50	0.50	0.2	0.50	0.32	0.32	0.32	3.1	0.2	0.25	0.32	0.32	(80-100mesh) 3.00	3.18	0.30
COLUMN TYPE	wall-coated open tubular wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular bonded phase	wall-coated open tubular bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	bonded phase	bonded phase	bonded phase	Supelcoport (100-200 mesh)	wall-coated open tubular	wall-coated open tubular	bonded phase	bonded phase	3% w/w on Chromosorb W HP (80-	Supelcoport (100-200 mesh)	bonded phase bonded phase wall-coated open tubular
COLUMN MATERIAL	glass glass quartz glass	glass glass	glass glass quartz qlass		glass	glass	iyi glass qlass	glass	glass glass	glass	glass glass	quartz glass	quartz glass	quartz glass	stainless steel	glass	glass	quartz glass	quartz glass	ı glass	stainless steel	thyi quartz glass quartz glass glass
UMN STATIONARY GIN PHASE	γ1 S S	<pre>1-methylbutyl SE-30 uadrex OV-101</pre>	V.	1co SP-2100 OV-1	1-t-butyl-2-methyl guadrex OV-101	l-t-buryi-3,4,3-trimediryi juadrex OV-101 glasi	1-t-buty1-3,3-aimetnyi SE-30 g	SE-30	1-t-buty1-3-methy1 SE-30 wadrex OV-101	1-t-butyl-4-ethyl Nuadrex OV-101	1-t-buty1-4-methy1 SE-30 puadrex OV-101	2,3-dichloronitro AC OV-1	2,4-dichloronitro SAC OV-1	2,5-dichloronitro	2-dilodo IP SE-30	2-methylbutyl juadrex OV-101	2-methylpentyl Quadrex OV-101	3,4-dichloronitro	3,5-dichloronitro	3-amino-1,2-dimetnyi OV-1	3-d110d0 P SE-30	benzene, 3-ethyl-1,2,4-trimethyl 1185 Hall 0V-1 qu 1185 Hall 0V-1 qu 1185 Supelco SP-2100 gl
LTP COLUMN INDEX ORIGIN	benzene, 1-m 0978 0978 0978	, o	, o=	: 02 22			benzene, 1-t-bul 1152 1163 Ausdrey	K	0	benzene, 1-t-but 1166 Quadrex	benzene, 1-t-but 1072 1076 Quadrex	benzene, 2,3 1344 SAC	Ω	Ω	Ξ,		benzene, 2-methy 1191 Quadrex	benzene, 3,4 1339 SAC	93		benzene, 3-d 1431 HP	benzene, 3-ethy 1185 Hall 1185 Hall 1185 Supelco

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SAMPLE TYPE	standard tap water essential oil	standard	standard standard	standard	standard standard	tap water standard	essential oil	essential oil tap water			standard	essential oil		tap water standard		standard		standard standard	standard	standard	standard standard	standard	standard	standard	essential oil standard standard tap water standard
ID LEN CARRIER (mm) (m) GAS	0.25 108 helium 0.30 50 helium	3.18 3.1 helium	0.50 25 helium 0.20 50 nitrogen	3.18 3.1 helium	0.50 25 helium 0.25 108 helium	0.20 50 nitrogen		0.30 50 helium	0.30 50 helium	100	3.16 3.1 neilum 2.0 2	0.30 50 helium	20		50	0.30 50 hellum 0.50 25 hellum	100	0.20 50 nitrogen 2.0 2	3.18 3.1 helium	50	0.22 25 hydrogen 0.32 50 hydrogen	0.25 108 helium	0.25 108 helium	3.18 3.1 helium	0.30 50 helium 0.25 108 helium 0.30 50 helium 0.50 25 helium
COLUMN TYPE	wall-coated open tubular wall-coated open tubular bonded phase	Supelcoport (100-200 mesh)	wall-coated open tubular wall-coated open tubular	Supelcoport (100-200 mesh)	wall-coated open tubular	open tubular open tubular	bonded phase	bonded phase		open tubular	0-120 mesh)	bonded phase	,	wall-coated open tubular wall-coated open tubular		bonded phase	open tubular	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	, , , , , , , , , , , , , , , , , , ,	ed phase	wall-coated open tubular bonded phase	wall-coated open tubular	wall-coated open tubular	Supelcoport (100-200 mesh)	bonded phase wall-coated open tubular bonded phase wall-coated open tubular wall-coated open tubular
COLUMN MATERIAL	ass ass artz glas	stainless steel	glass quartz glass	യ	glass glass	glas	quartz glass	quartz glass glass	quartz glass		stainless steel	quartz qlass	glas	glass glass	glas	quartz glass		quartz glass	stainless steel		quartz glass quartz glass	glass	glass	stainless steel	quartz glass glass quartz glass glass glass
STATIONARY PHASE	buty1 OV-101 SP-2100 OV-1	lo SE-30	SE-30 SE-30	SE-30	SE-30 OV-101	SP-2100 SE-30	I-00	OV-1 SP-2100	OV -1	SE-30	SE-30 SE-30	0.00	ov-1	SP-2100 OV-101	ov-1	OV-1 SE:30	SE-30	SE-30 SE-30	SE-30	(HCB -1	CP Sil 5CB OV-1	1y1 0v-101	:hyl OV-101	SE-30	OV-1 OV-101 OV-10 SP-2100 SE-30
LTP COLUMN INDEX ORIGIN	O 03 EE	benzene, 4-diiodo 1412 HP	benzene, allyl 0929 0934	, H	benzene, butyl 1037 1040 Ouadrex		1041 Hall benzene, chloro	0820 Hall			0839 HP 0844	benzene, ethyl		0840 Supelco 0843 Quadrex		0848 <b>Hall</b>	0820	0854 0859	benzene, fluoro 0664 HP	a) (1	1662 CHRONPAK CP 1680 SAC OV	benzene, hexaethyl 1682 Quadrex Ö		ж,	Denzene, 1sobutyl 0992 Hall 0992 Quadrex 0992 Hall 0992 Supelco

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SAMPLE TYPE	standard tap water essential oil	standard standard tap water		standard	standard essential oil	standard standard	standard	tap water standard	standard	standard	standard	standard		standard standard	standard		standard	standard	standard	standard	standard	standard	standard	standard essential oil	tap water	standard	standard standard	tap water essential oil
ID LEN CARRIER (mm) (m) GAS	50	0.25 108 helium 0.50 25 helium 25 helium		5	0.30 50 helium 0.30 50 helium	0.30 50 helium 0.30 50 helium	108		0.30 25 helium	20		0.27 100 0.50 25 helium	50	3.18 3.1 helium 2.0 2	0.32 50 hydrogen		0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.32 50 hydrogen	0.30 50 helium 0.30 50 helium		0.25 15 helium	0.25 108 helium 0.30 50 helium	0.30 50 helium
COLUMN TYPE		open tubular open tubular	wall-coated open tubular wall-coated open tubular		bonded phase bonded phase		open tubular	wall-coated open tubular wall-coated open tubular	tubular	open tubular	open tubular	wall-coated open tubular wall-coated open tubular	open tubular	Supelcoport (100-200 mesh) 15% $w/w$ on Gas-Chrom Q (100-120 mesh)	bonded phase		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase		open tubular	bonded phase	open tubular	wall-coated open tubular bonded phase
COLUMN MATERIAL	quartz g glass quartz g		glass quartz glass	quartz glass	quartz glass quartz glass		h	glass qlass	glass	grass quartz glass	glass	goda glass glass	quartz glass	stainless steel	de quartz qlass	1	glass	glass	glass	glass	glass	glass	quartz glass	quartz glass quartz glass		quartz glass	glass quartz glass	glass quartz glass
STATIONARY PHASE	Pyl, (cumen OV-1 SP-2100 OV-1	OV-101 SE-30 Me silicone	0000	_	0V-1 0V-1	OV-1	_	SP~Z100 OV-1	0V-1	0V-1	SE-30	OV-101	SE-30	SE-30 SE-30	1, sulphonamide OV-1	1	OV-101	Y* OV-101	1 0V-101	1 ov-101	1 ov-101	tyl OV-101	0V-1	1	SP-2100 nloronitro	DB-1 ethvl	!	SP-2100 OV-1
LTP COLUMN INDEX ORIGIN	benzene, isopropyl, 0906 Hall OV 0906 Supelco SP 0906 Hall OV	0909 Quadrex 0910 0913 HP		m .	0739 Hall			0748 Supelco 0751	0752	0753		0757 PEC	0761	0764 HP 0767	benzene, n-butyl, 1721 SAC	ō	1659 Quadrex	(3)	benzene, n-hexyl 1244 Quadrex	benzene, n-nonyl 1555 Quadrex	benzene, n-octyl 1451 Quadrex		benzene, nitro 1046 SAC	0	·.	1719 DB-benzene. nentamethyl	$\circ$	1266 Supelco 1266 Hall

LIT	14 2 3 3 14	64 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	14 2 38	14	28 33	26	56 56	56	23 29	. H 4.		28 1 28	52
SAMPLE TYPE	standard standard standard tap water essential oil standard	standard tap water essential oil standard standard standard standard standard	standard standard standard	standard standard	standard essential oil standard	standard	standard standard	standard	grandard gtandard	standard standard	standard I) standard	standard II) standard standard	standard
LEN CARRIER (m) GAS	25 helium 108 helium 50 helium 50 helium 25 helium	50 helium 50 helium 108 helium 25 helium 50 nitrogen 2 25 helium	25 helium 108 helium 2	25 helium 108 helium	50 helium 50 helium 50 hydrogen	12	12	12	12 15 helium	4 helium		50 hydrogen (endosulfan 4 helium 50 hydrogen	25 nitrogen standard
II)	0.50 0.25 0.30 0.30	0.30 0.25 0.50 0.50 2.0	0.50 0.25 2.0	0.50	0.30 0.30 0.32	0.20	0.20	0.20	0.25	рат) 3.00	zam) 3.00 2,4,3- 3.00	0.32 2,4,3- 3.00 0.32	0.33
COLUMN TYPE	wall-coated open tubular wall-coated open tubular bonded phase wall-coated open tubular bonded phase wall-coated open tubular	bonded phase wall-coated open tubular bonded phase wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular wall-coated open tubular	bonded phase bonded phase bonded phase		bonded phase bonded phase	bonded phase	bonged phase wall-coated open tubular	7-chloro-1-(cyclopropylmethyl)-1,3-dihydro-5-phenyl-2H-1,4- (prazepam) glass 3% w/w on Chromosorb W HP (80-100mesh) 3.0/SE-30 glass	illuoromethyl-14-1,5- (trifluba Chromosorb W HP (80-100mesh) 5a,6,9,9a-hexahydro-6,9-methano-2 on Chromosorb W HP (80-100mesh)	ass bonded phase 0.32 0-hexachlorol,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3- 3% w/w on Chromosorb W HP (80-100mesh) 3.00 ass bonded phase	wall-coated open tubula $oldsymbol{r}$
MATERIAL	88 B 88 B	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8			8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	rd rd	888	<b>53</b>	n 51	ropylmet		ass O-hexach ass	83
COLUMN	glass glass quartz gl glass quartz gl	quartz gl. glass quartz gl. glass glass qlass quartz gl.	glass glass	glass glass	quartz gl quartz gl quartz gl		quartz gl. quartz gl.	artz	quartz gla quartz gla	·I- (cyclor glass glass	F 3	quartz glass 6,7,8,9,10,10-h glass quartz glass	yl ester Boda glas
STATIONARY PHASE	SE-30 CV-101 CV-1 SP-2100 CV-1 SE-30	OV-1 SP-2100 OV-1 OV-101 SE-30 SE-30 SE-30 SE-30 Me silicone	SE-30 OV-101 SE-30	SE-30 OV-101	V-1 V-1 V-1	e silicone	Me silicone o	Licone		one, 7-chloro-1 OV-1 OV-1/SE-30	1	6,7	1,2-dimethylpropyl SE-30 sod
COLUMN	pentyl Quadrex Hall Supelco	propyl Hall Supelco Hall Quadrex HP	Quadrex	uadrex	all all aC	2405 HP benzo(a) fluorene	2177 BP benzo(b)fluorene 2195 BP	Denzo(D)naphuno(Z,1-u) 1726 HP Me si benzo(ghi)fluoranthene	nr Ine Jaw Sai.	benzodiazepin-2-one, 2610 OV-1 2612 OV-1	ıne-Z, hiepin	w.	acid, 1,2 SGE
LTP INDEX	benzene, 1135 1141 1145 1145 1145	benzene, 0936 0936 0936 0937 0937 0941 0944 0950	0975 0975 1008	1076 Q	1683 1683 2042 2042	2405 benzo(a)	2177 benzo(b) 2195	benzo(b) 1726 benzo(gh	benzocaine	benzodia 2610 2612	benzodia 2244 benzodio 2085	2086 benzodio 2175 2183	benzoic 1356

LIT	52	52	52	52	52	2.1	21	2.1	21	52	21	52	52	21	21	2.1	, r	3	52	52	52	52	52	52	52	52	52	52 56
SAMPLE TYPE	en standard	en standard	en standard	en standard	en standard	standard	standard	standard	standard	en standard	standard	en standard	en standard	standard	standard	standard			en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard standard
CARRIER GAS	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	argon	argon	argon	argon	nitrogen	argon	nitrogen	nitrogen	argon	argon	ardon	nitrogen	6010111	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen
LEN (m)		25	25	25	25	1.5	1.5	1.5	1.5	25	1.5	25	25	1.5	1.5	1.5			25	25	25	25	25	25	25	25	25	25 12
ID (mm)	0,33	0.33	0.33	0.33	0.33	4.00	4.00	4.00	4.00	0.33	4.00	0.33	0.33	4.00	4.00	4.00	0.33	•	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	derivative 10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular	tive 10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular	wall-coated open tubular	derivative 10% w/w on Diatoport S (80-100mesh)	derivative 10% w/w on Diatoport S (80-100mesh)		11.9		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	•	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	Hall-coated open tubular	wall-coated open tubular	wall-coated open tubular bonded phase			
COLUMN MATERIAL	nyl ester soda glass	ester soda glass		ethyl ester soda glass	B 25	17118		aılyl	ethylsilyl	92	trimethylsilyl derivative	r soda glass	soda glass	silyl		trimethylsilyl de	1,2-dimethylpropyl	1-methyl-3-butenyl	soda glass -methylbutyl ester	_		4,2,2 circurorogumy soda glass	soda glass				2 propenti ester soda glass 2-propunul ester	propyny, earer soda glass quartz glass
MN STATIONARY IN PHASE	1-methyl-3-but SE-30	a a	1-methylpropyl SE-30	2,2,2-trichloroethyl SE-30 soda	ς .				_				0	4-dihydroxy, ov-1		3, 5-dihydroxy, OV-1	3,5-dinitro, 1, SE-30	tro,	SE-30			SE-30		3,5-dinitro, Z-SE-30	4 0	4 0		Ē
LIP COLUMN INDEX ORIGIN											benzoic acid, 1501		O		benzoic acid, 1684	benzoic acid, 1828	benzoic acid,	υ	1962 SGE benzoic acid,	ξ					Denzoic acid, 2015 SGE		1842 SGE	

LIT	52	52	21	52	51	51	51	51	51	51	52	51	51	51	52	7 1	52	52	51	52	21	0 3	7.7	21 20	21	21	21
R SAMPLE TYPE	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard	en standard		en standard	en standard	en standard	en standard			standard	standard en standard	standard	standard	standard
CARRIER GAS	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nítrogen	nitrogen	nitrogen			nitrogen	nitrogen	nitrogen	nitrogen			argon	argon nitrogen	argon	argon	argon
LEN (m)	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25	3 25		3 25	3 25	3 25	3 25			e	0 1.5	0 1.5	0 1.5	4.00 1.5
0 (E)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	ń (	0.33	0.33	0.33	0.33	4.00	0.00	4.00	4.00	4.00	4.00	4.0
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	Wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	uedo	wall-coated open	wall-coated open tubular	ir wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	m/m %0	13% w/w on Chromosorb w derivative	<pre>10% w/w on Diatoport S (80-100mesh) :ive</pre>	10% w/w on Diatoport S (80-100mesh)	45	<pre>/l derivative 10% w/w on Diatoport S (80-100mesh)</pre>	lyl derivative 10% w/w on Diatoport S (80-100mesh)
ARY COLUMN MATERIAL	3-butenyl e soda gla		butyl ester soda glass		, decyl ester soda glass	dod		heptyl est soda gl	hexyl este soda gl	, methyl ester soda glass			oct	ben	propyl est soda gl	soda glass , trans-3-butenyl ester	soda glass	trans-3-he soda gl	, undecyl ester soda glass	ester soda glass	trimethylsilyl derivative	-methoxy, trimethylsilyl	] 	† *1	hoxy,		-methoxy, trimethylsilyl
N STATIONARY N PHASE	3,5-dinitro,	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	3,5-dinitro, SE-30	SE-30 3,5-dinitro,	SE-30	3,5-dinitro, SE-30	H		λ,	SE-30 3-hydroxy-4-methoxy	OV-1	* "Yatory, OV-1 SE-30	4-hydroxy-3 OV-1	4-hydroxy-3-ethoxy, OV-1	4-hydroxy-3-methoxy, OV~1
COLUMN	acid, SGE	acid, 3 SGE	acid, S SGE	acid, 3 SGE	acid, 3 SGE	acid, SGE	acid, 3 SGE	acid, 3 SGE	acid, i SGE	acid, SGE	acid, SGE	acid, SGE	ř	ਜ	σ'	SGE acid, :		acid, : SGE	acid,	acid, : SGE	acid,	acid,	7		acid,	acid,	acid,
LTP INDEX	benzoic 1938	benzoic 2054	benzoic 1957	benzoic 2158	benzoic 2581	benzoic 2791	benzoic 1755	benzoic 2266	benzoic 2162	benzoic 1690	benzoic 1785	benzoic 2476	benzoic 2370	benzoic 2058	benzoic 1761	1853 benzoic	1970	benzoic 2156	benzoic 2686	benzoic 1334	benzoic 1557	1560 benzoic	1760	1620 1620 1621	benzoic 1889	benzoic 1804	benzoic 1753

LIT REF	21	52	52	52	52	52	52	52	52	52	52	52	52	52	51	52	51	51	51	51	51	51	52	51	51	51	52 51
N CARRIER SAMPLE TYPE  SAMPLE TYPE	5 argon standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	5 nitrogen standard	5 nitrogen standard	5 nitrogen standard	5 nitrogen standard	5 nitrogen standard	5 nitrogen standard	5 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard	25 nitrogen standard 25 nitrogen standard
ID LEN	.00 1.5	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33	0.33	0.33	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33 2	0.33	0.33	0.33	0.33	0.33
COLUMN TYPE	.ive 10% w/w on Diatoport S (80-100mesh) 4	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	er wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular							
STATIONARY PHASE COLUMN MATERIAL	trimethylsilyl de	1,2-dimethylpropyl soda glass	l-methyl-3-buten soda glas	1-methylbutyl e soda glé	l-methylpropyl ester soda glass	2,2,2-trichloroe	2,2-dic	2-chloroethyl e	2-methylpro	2-propenyl soda	2-propy	3-butenyl este	3-methylbut	4-pent	butyl ester soda glas	cis-3-hexenyl es soda qlas	decyl ester soda glas	dodecyl este soda	ethyl ester soda	heptyl	hexyl e	methyl ester sods	methyl	nonyl	octyl e	pentyl	itro, propyl ester SE-30 soda glass SE-30 soda glass
COLUMN SOURIGIN	acid, 4-met	acid, 4-nitro, SGE SE-30	acid, 4-nitro, SGE SE-30	acid, 4-nitro, SGE SE-30	d, 4-n	d, 4-n	d, 4-n	4-n	4-n	a, 4-n	d, 4-n	4-n	4-n	acid, 4-nitro, SGE SE-30	1, 4-n	d, 4-n	d, 4-n	d, 4-n	acid, 4-nitro, SGE SE-30	acid, 4-nitro, SGE SE-30	4-n	acid, 4-nitro, SGE SE-30	4-n	4-n	4-n	ਰੇ .	acid, 4-nitro, SGE SE-30 SGE SE-30
×	benzoic a	r)	benzoic a 1708 S	benzoic a	υ	75	υ		benzoica 1649 S	benzoic a 1577 S	O	υ	£3	benzoic a 1791 S	benzoic a	n	n	rs	n	benzoic a 2016 S	benzoic a 1911 S	benzoic a 1423 S		benzoic a 2227 S	U		benzoic a 1491 S 1594 S

LIT	52	52	51	52	<b>~</b>	51 19	52	51	51	51	52	4.5	45			51	51	C T	52 19	52	13	51	38	-	19	34	52	51	51	51
SAMPLE TYPE	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard standard		standard	standard	stalldatu	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	4 helium	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25	25 nitrogen			4 helium 4 helium		25 nitrogen	25 nitrogen		25 nitrogen	25 nitrogen		25 nitrogen	7	4 helium	•	2.9	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen
ID (mm)	0,33	0.33	0.33	0.33	3.00	0.33	0.33	0.33	0.33	0.33	0.33	0.27	0.27	3.00		0.33	0.33		0.33	0.33		0.33	2.0	3.00		2.0	0.33	0.33	0.33	0.33
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular 25%w/w on Celite	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	open	wall-coated open tubular			3% w/w on Chromosorb W HP (80-100mesh)	:	wall-coated open tubular	ate	25%W/w on Celife	wall-coated open tubular 25%w/w on Celite	wall-coated open tubular	25%W/w on Celite	wall-coated open tubular	25%W/W on Celife 15% W/W on Gas-Chrom Q (100-120 mesh)	3% w/w on Chromosorb W HP (80-100megh)	w/w on Celite	3% on Chromosorb W HMDS (80-100 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL		trans-3-hexenyl ester soda glass	undecyl ester soda glass	er soda glass	glass	soda glass	ester soda glass	soda glass	soda glass	soda qlass	las	glass	d ass	glass	grand	soda glass	soda glass		soda glass	r soda glass		soda glass		4-hydroxy	2 3 4 5	glass	ester soda glass	soda glass	soda glass	soda glass
IN STATIONARY			4-nitro, undecy SE-30	4-pentenyl ester SE-30	benzyl ester OV-1	butyl ester SE-30 SE-30	hexenyl 30	decyl ester SE-30	dodecyl ester SE-30	ethyl ester SE-30	SE-30	OV-101	00-101	0V-1	Ov=1 heptvl ester	(1)	hexyl ester SE-30	SE-30	1sobutyl ester SE-30 SE-30	isopentyl ester SE-30	SE-30 methyl ester	SE-3	SE-30 SE-30	methyl ester,	SE-30		ethyl 30	nonyt ester SE-30		pentyl ester SE-30
LTP COLUMN INDEX ORIGIN	benzoic acid, 1709 SGE	benzoic acid, 1904 SGE	benzoic acid, 2443 SGE	benzoic acid, 1444 SGE	benzoic acid, 1738	benzoic acid, 1353 SGE 1360	acid, SGE	~		benzoic acid,		1153	1155	1227	1349 benzoia acid.		benzoic acid, 1551 SGE	7	benzoic acid, 1306 SGE 1318	benzoic acid, 1413 SGE	1425 henzoic acid.		1080 1095	benzoic acid,	1435					benzoic acid, 1455 SGE

LIT REF	51	-1	52	52	21 20	51	ī) c	, 55 15 15 15 15 15 15 15 15 15 15 15 15 1	, ,	4,00	53	4	-	47	47		ოო	4 4	ř	47	4.7		47	4	59	ഥനന	ოოთ
SAMPLE TYPE	standard	standard	standard	standard	standard standard	standard	tap water			standard	standard	standard	standard	standard	atandard		essential oil essential oil	standard		standard standard	atandard	40 to	standard	standard	standard	tap water essential oil standard	standard essential oil tap water
LEN CARRIER (m) GAS	25 nitrogen	4 helium	25 nitrogen	25 nitrogen	1.5 argon 2.4 nitrogen	25 nitrogen	50 balium			15 helium	2 nitrogen		4 helium	25 helium	25 helium		50 helium 50 helium	25 helium		25 helium 25 helium	25 helium		25 helium		2 nitrogen	50 helium 50 helium	50 helium 50 helium
(mm)	0.33	3.00	0.33	0.33	4.00	0.33	90	0.31		0.25	ις		3.00	0.20	0.20		0.30	0.20	)  -  -	0.20	0.20		0.20		0.32	0.30	0.30
COLUMN TYPE	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	wall-coated open tubular	wall-coated open tubular	bonded phase			(bromoxynil octanoate) 3% w/w on Chromosorb W HP (80-100mesh)		3% w/w on Chromosorb W HP (80-100mesh)	2-amino-2"-chioro-3-nitro (clomazepam benzopnemone) Me silicone quartz glass	orazepam benzophenone) Lasa		bonded phase bonded phase		-amino-5-chloro-2'-fluoro (flurazepam benzophenone)		ppan benzophenone)				Chromosorb P AW DMCS (60-80 mesh)	wall-coated open tubular bonded phase bonded phase	bonded phase bonded phase wall-coated open tubular
COLUMN MATERIAL	soda glass	4-nydroxy glass	ester soda glass	ester soda glass		soda glass	glase	ייכ	ichlobenil)		ester lass	glass	glass	ro-3-nitro (clona) quartz glass	.C. o	" !	quartz glass quartz glass	glass gnartz glass	o-2'-fluoro (flura	quartz glass quartz glass	(nitraze		grants glass	glass	,	thylpropyl)-1,4- glass quartz glass quartz glass	ethyl)-1,4- quartz glass quartz glass glass
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	acid, propyl ester SGE SE-30	acid, propyl ester, OV-1	acid, SGE	acid, trans-3-hexenylsGE SGE	CE1MECNY1811Y1 OV-1 SE-30	benzoic acid, undecyl ester 2068 SGE SE-30	Ξ.	0976 HP OVI-1/SE-54	trile, 2,6	DB-1	benzonitrile, 3,5-dibromo-4-oc 2316 PEC SE-30	benzophenone 1610 OV-1/SE-30		benzophenone, Z-amino-Z'-chio 2494 HP Me silicone	henone, 2-a	nenone, 2-a	1989 Hall OV-1 1995 Hall OV-1		N	2517 HP Me silicone 2542 HP Me silicone	benzophenone, 2-amino-5-nitro	nenone, 2-methylamino-5	НР	4	<del>ر</del> ,	100,	benzoguinone, Z,6-di(methoxymethyl)-1, 1447 Hall OV-1 quartz g 1447 Hall OV-1 quartz g 1447 Supelco SP-2100 glass

LIT REF	59	59	59	59	59	59	en en	П	23	23	38 46 1	ოო	æ	œ	ស	8	56	ოო	. m (	2 4 4 4	9 13	សួ	3 00 6	30 -	•
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard food standard	standard essential oil	standard	standard	tap water	standard	standard	standard essential oil		standard tap water	standard standard	tap water	standard	standard standard	
LEN CARRIER (m) GAS	2 nitrogen	50 helium 50 helium	4 helium	15 helium	15 helium	2 80 nitrogen 4 helium	50 helium 50 helium	50 nitrogen	50 nitrogen		50 nitrogen standard	12	50 helium 50 helium	50	50 hydrogen 25 helium	108 helium 50 helium		200	100 helium 25 nitrogen 4 helium						
ID (mm)	0.32	0.32	0.32	0.32	0.32	0.32	6.0	3.00	0.25	0.25	2.0 0.28 3.00	0.30	0.20	0.20		0.20	0.20	0.30	0.30	0.32	0.25	0	0.20	0.33	)
COLUMN TYPE	Chromosorb P AW DMCS (60-80 mesh)	bonded phase bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular 3% w/w on Chromosorb W HP (80-100mesh)	bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	bonded phase		bonded phase	wall-coated open tubular bonded phase	wall-coated open tubular	open	wall-coated open tubular wall-coated open tubular 32	W/W on Chromosold w ne					
COLUMN MATERIAL	, 4 -	÷	<u>I</u>		,	oxymethyl-1,4-	quartz glass quartz glass	glass	quartz glass	quartz glass	glass glass	quartz glass quartz glass	ne quartz glass	quartz glass	glass	quartz glass	quartz glass	91	glas	quartz glass	glass martz glass	, '	quartz glass quartz glass	glass quartz glass	grass
STATIONARY	2, 6-di-t-butyl-1, SE-30	2, 6-dimethoxy-1,4	2, 6-dimethyl-1,4 SE-30	2-methoxy-1,4- SE-30	2-methyl-1,4- SE-30	3-methoxy-6-hydroxymethyl SE-30	0V-1 0V-1	2-mercapto OV-1	. SE-30	. SE-30	SE-30 OV-101 OV-1	OV-1 OV-1	ona-3,6(1)-dier SE-30	SE-30	4-phenyl to SP-2100	ne SE-30	Me silicone	OV-1	0V-1	OV-1 Me silicone			Me silicone SE-30	SE-30 SE-30	00-1
LTP COLUMN INDEX ORIGIN	benzoquinone, 2,	benzoquinone, 2, 1522	uinone,	uinone,					benzphetamine 1806 J&W Sci	^		benzyl cyanide 1094 Hall 1094 Hall	bicyclo[4.3.0]nona-3,6(1)-diene 1038 SE-30 q	bicyclohexyl 1313	bicyclohexyl, 4-1971 Supelco	o o	binaphthyl, 1,1' 2306 HP	ጚ	1343 Hall 1348 Hall	1348 SAC			1357 HP 1359	1365 1374 SGE	1389

	CARRIER GAS SAMPLE TYPE	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	hydrogen standard	standard	hydrogen standard	hydrogen standard	hydrogen standard	standard nitrogen standard
	(m)	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	25 h	12	25 h	25 h	25 h	12 25 n
	T QI	0.22	0.22	0.22	.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.20	0.22	0.22	0.22	0.20
	I (n)	0.	0.		0.		.0					o											0				
	COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	) wall-coated open tubular	wall-coated open tubular	94) wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	201) wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase wall-coated open tubular
•	LTP COLUMN STATIONARY INDEX ORIGIN PHASE COLUMN MATERIAL	2,2',3',4,5-pentachloro (PCB 97) ROMFAK CP Sil 5CB quartz glass	octachloro (FCB quartz glass	4,4',5-heptachlo Sil 5CB quartz	,4,4'-hexa Sil 5CB	2,2',3,3',4,4'5,5'-octachloro (FCB 1 ROWDAK CP Sil 5CB quartz glass	quartz glass		biphenyl, 2,2',3'4'4',3'-nexaculoro (FCB 130) 2273 CHROMPAK CP Sil 5CB quartz glass	biphenyl, 2,2',3,4,4',5,5' -heptachioro (FCB 100) 2423 CHROMPAK CP Sil 5CB quartz glass	biphenyl, 2,2',3',4',5'hexachloro (FCB 13') 2257 CHROMPAK CP Sil 5CB quartz glass	biphenyl, 2,2',3,4,5'-pentachloro (FCB 6') 2088 CHROMPAK CP Sil 5CB quartz glass	biphenyl, 2,2',3,4'5,5' hexachloro (PCB 141) 2244 CHROMPAK CP Sil 5CB quartz glass	biphenyl, 2,2',3,5',6-pentachloro (PCB 93) 2003 CHROMPAK CP Sil 5CB quartz glass		Sil 5CB quartz	2,2',4,4',5,5'-hexachloro (ROMPAK CP Sil 5CB quartz	ro (PCB quartz	ro (PCB quartz	quartz glass	2,2'3,3',4',5,5',6-octachioro (rus ROMPAK CP Sil 5CB quartz glass	biphenyl, 2,2'4,5,5'-pentachloro (FCB 101) 2053 CHROMPAK CP Sil 5CB quartz glass	2,2-dinitro  Me silicone	ro (FCB quartz	biphenyl, 2,4',5-trichloro (FCB 31) 1818 CHROMPAK CB Sil 5CB quartz glass	Z,4,4"-trichloro (FROMPAK CP Sil 5CB	Diphenyl, z-nitro 1651 HP Me silicone quartz glass 1669 SGE SE-30 quartz glass

LIT REF	30	36 30	56	-	28 43	47	12	12	10	13	12	10	10	10	12	10	10	12	12	10	23	23	23	23	49	23
SAMPLE TYPE	standard standard	standard standard	standard	standard	standard tap water	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	12 25 nitrogen	12 25 nitrogen	12	4 helium	50 hydrogen 50 helium	25 helium	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium
OII)	0.20	0.20	0.20	3.00	0.32	0.20	0.30	0.30	0.30	0.30	0:30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.25	0.25
COLUMN TYPE	bonded phase wall-coated open tubular	bonded phase wall-coated open tubular	bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	bonded phase		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular
COLUMN MATERIAL	quartz glass quartz glass	quartz glass quartz glass	quartz glass	glass	quartz glass quartz glass				butenyl ester quartz glass	yl ester quartz glass	pyl ester quartz glass	ester quartz glass	ester quartz glass	ester quartz glass	yl ester quartz glass		yl ester quartz glass	yl ester quartz glass	ester quartz glass	enyl ester quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass
STATIONARY PHASE	o Me silicone SE-30	o Me silicone SE-30		ate, 4,4- OV-1	liso OV-1 OV-101	~	l, 1,1-dimethylpropyi SE-30 quartz		i, 1-methyl-3-butenyl SE-30 quartz	0,1	2-methylpro 3E-30	2-propenyl	2-propynyl 3E-30		3-methylbut SE-30	4-pentenyl E-30	l, cis-3-hexenyl SE-30 q	l, dimethylethyl ester SE-30 quartz		l, trans-3-hexenyl ester SE-30 quartz gl	ımine SE-30	SE-30	SE-30	SE-30 quartz gl		SE-30
LTP COLUMN INDEX ORIGIN	biphenyl, 3-nitro 1786 BP 1808 SGE	biphenyl, 4-nitro 1815 HP 1834 SGE	biphenyl, methyl 1465 HP	_	borneol, 2-methyliso 1164 SAC OV-1 1183 OV-	bromazepam 2613 HP		bromoacetic acid		bromoacetic acid 1094 SGE	bromoacetic acid, 1021 SGE			bromoacetic acid, 1040 SGE		bromoacetic acid, 1146 SGE S	bromoacetic acid, 1255 SGE			bromoacetic acid, 1251 SGE	bromodiphenhydramine 2125 J&W Sci. SE-	brompheniramine 2067 J&W Sci.	buclizine 3267 J&W Sci.	bupivacaine 2251 Jaw Sci. S	2	butacaine 2422 J&W Sci.

LIT REF	80	æ	28	40 1	38	38	38	46	40	40	40	40	-	41 40	40	40	ო	40	40	o c	2 4 6 0 8	40	37	40	37 37 37
SAMPLE TYPE	standard	standard		cap water standard standard	standard	standard	standard	food	standard	standard	standard	standard	standard	standard standard	standard	standard		tap water standard	standard	7 6 7 6 4			standard standard	standard	standard standard standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen	50 hydrogen	50 nitrogen 4 helium		7	7	80 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	4 helium	15 helium 50 nitrogen	50 nitrogen	50 nitrogen	50 helium	50 nitrogen	50 nitrogen	50 hydrogen		50 nitrogen	108 helium 100	50 nitrogen	17 100 17
ID (mm)	0.20	0.20	0.32	3.00	2.0	2.0	2.0	0.28	0.2	0.2	0.2	0.2	3.00	0.32	0.2	0.2	0.30	0.2	0.2	33	2.0	0.2	0.25	0.2	0.2 0.27 0.2
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular		wall-coated open tubular wall-coated open tubular 3% w/w on Chromosorb W HP (80-100mesh)	Gas-Chrom Q (10	15% w/w on Gas-Chrom Q (100-120 mesh)	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular wall-coated open tubular	wall-coated open tubular		ø	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	honded nhase	wall-confined open tubular 15% w/w on Gas-Chrom O (100-120 mesh)	1-coated open tubula	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	<pre>% wall-coated open tubular wall-coated open tubular % wall-coated open tubular</pre>
COLUMN MATERIAL	z gla	(isoprene) quartz glass	quartz glass	giass quartz glass glass	i.			glass	quartz glass	quartz glass		quartz glass	glass	quartz glass quartz glass			L1	glass quartz glass	quartz glass		9	quartz glass	glass soda glass	quartz glass	borosilicate glass soda glass borosilicate glass
COLUMN STATIONARY ORIGIN PHASE	2,3-dimethyl-1 SE-30	2-methyl-1,3- SE-30	ö	Superco SF-2100 Me silicone OV-1	, 3,3-	ie, $4$ -phenyl SE-30	SE-30	3-methy1 OV-101	2-dibromo Me silicone	2-dichloro Me silicone	1,3-dibromo Me silicone		1,4-diamino (pucrescine) OV-1 gl	1,4-dibromo J&W SCI DB-1 Me silicone	1,4-dichloro Me silicone	1-bromo Me silicone	0	Supelco SP-2100 Me silicone	1-chloro-3-methyl Me silicone	1-iodo Sac	-	1-iodo-3-methyl Me silicone	drex OV-101	2,2-dichloro Me silicone	.c ov-1 c ov-1 c sE-30
LTP C INDEX C	butadiene, 0616	butadiene, 0507	Ç.	1206 Su 1222 1285	butan-2-one 0698	butan-2-one 1230		butanal, 3 0645	butane, 1,2 0945	butane, 1,2 0785			Dutane, 1, 0930	_		butane, 1- 0718		0635 Su 0637	butane, 1- 0706	butane, 1-i					0536 PEC 0537 PEC 0540 PEC

LIT REF	40	40	37 37	37	40	40	40	40	40	61	<del>,</del> .	7	40	40	40	46	46	œ	18	19	46	18	38 10 28	38 12	12
SAMPLE TYPE	n standard	ın standard	standard standard standard	standard	on standard	n standard	on standard	n standard	an standard	standard	standard	standard	on standard	n Btandard	on standard	n food	n food	standard	standard	standard	n food	standard	standard n standard n standard	standard on standard	n standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen	108 helium 17 100		50 nitrogen	108 helium	4 helium	4 helium	50 nitrogen	50 nitrogen	50 nitrogen	80 nitrogen	80	9.0	3.6		80 nitrogen	3.6	2 25 nitrogen 50 hydrogen	2 25 nitrogen	25 nitrogen				
OI (mm)	0.2	0.2	0.25	0.2	0.2	0.2	0.2	0.2	0.2	0.25	3.00	3.00	0.2	0.2	0.2	0.28	0.28				0.28		2.0 0.30 0.32	2.0	0.30
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	<pre>wall-coated open tubular s wall-coated open tubular wall-coated open tubular</pre>	wall-coated	wall-coated open tubular	succinamide) 3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	10%w/w on Celite 560 AW(60-80mesh)	on Celite	25%w/w on Celite	wall-coated open tubular	10%w/w on Celite 560 AW(60-80mesh)	15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular bonded phase	15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular	wall-coated open tubular									
COLUMN MATERIAL	ıyı quartz glass	quartz glass		borosilicate glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	:	ımethyl	prophenyl (bulan) glass	o quartz glass	quartz glass	quartz glass	glass	glass	r aluminium	2-propenyl ester aluminium		glass	aluminium	quartz glass quartz glass	quartz glass	quartz glass
COLUMN STATIONARY ORIGIN PHASE	2,3-dimeth gilicone	silicone	Z,3-dimethyl Quadrex OV-101 9 PEC SE-30 1 PEC OV-101 6	OV-1		2-methyl Me silicone	one	yl icone	-metnyı Me silicone	2-methyl Quadrex OV-101	2-methyl-2,3-dicarboxamide OV-1	2-nitro-1,1-bis(4-chlorophenyl OV-1	abron one	cone	ichloro Me silicone	2,3- OV-101	acid, (butyric acid) OV-101	acid, 2-propenyl ester SE-30	٦,	acid, benzyl ester SE-30	methyl ester OV-101	cid, vinyl ester SE-30	SE-30 SE-30 OV-1	SE-30 SE-30	me <b>cny</b> 1-2- SE-30
LTP			butane, 2, 0558 Ot 0563 PE 0567 PE			butane, 2- 0734			butane, 2- 0829			butane, 2- 2310	butane, me 1549	butane, me 0915	butane, re 0903	butanedione, 0619	butanoic a 0834	butanoic a	i c	butanoic a 1325	ט	••	Dutanol, 1- 0637 0646 SGE 0661 SAC	U	Dutano1, 2- 0625 SGE

LIT REF	12 46 38	12	38	46	46	38	23	10	40	14	80	14	14	40	40	40	40	Φ.	40	40	40	40	40	40	40	80
SAMPLE TYPE	standard food standard	standard	standard	food	food	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	25 nitrogen 80 nitrogen 2	25 nitrogen	2	80 nitrogen	80 nitrogen	2	15 helium	25 nitrogen	50 nitrogen	25 helium	50 nitrogen	25 helium	25 helium	50 nitrogen												
I QI (mm)	0.30 0.28 2.0	0.30	2.0	0.28	0.28	2.0	0.25	0.30	0.2	0.50	0.20	0.50	0.50	0.2	0.2	0.2	0.2	0.20	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
COLUMN TYPE	wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	15% w/w on Gas-Chrom Q (100~120 mesh)	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular																			
COLUMN MATERIAL	quartz glass glass	quartz glass		(acetol) glass	oin) glass		quartz glass	quartz glass	quartz glass	glass	quartz glass	glass	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	- quartz glass	quartz glass	quartz glass	quartz glass	quartz glass
COLUMN STATIONARY ORIGIN PHASE	3-methyl-1- SGE SE-30 OV-101 SE-30	, 3-methyl-2- SGE SE-30		1-hydroxy-2- OV-101	3-hydroxy-2- OV-101	e, $3$ -methyl- $2$ - $SE$ - $30$	azine J&W Sci. SE-30	-ol, 3- sge se-30		-													trans-1,4-dichloro-Z			trans-1-phenyl-1- SE-30
LTP INDEX	butanol, 0716 0725 0725	butanol,	butanone 0579	butanone, 0652	butanone, 0693	butanone, 0646	butaperazine 3308 J&W	buten-1-ol, 0609 SGE	butene, 0837	butene, 1098	butene, 1052	butene, 1058	butene, 1091	butene, 0769	butene, 0655	butene, 0576	butene, 0695	butene, 1028	butene, 0812	butene, 0874	butene, 0595	butene, 0829	butene, 0895	butene, 0734	butene, 0622	butene, 1105

LIT		18	18	18	18	18	18	18	53	46	ω	80	19	19	53	. 19	38	19	38	23	33	4 4	25	25
IER SAMPLE TYPE	um standard	standard	standard	standard	standard	standard	standard	standard	nitrogen standard helium standard	nitrogen food	nitrogen standard	nitrogen standard	standard	standard	nitrogen standard	standard	standard standard	standard	standard	um standard	standard	um essential oil standard um standard		standard
GARIER GAS	4 helium	10	10	10	10	10	10	10	2 nitrog 4 helium						2 nitr		7		8	5 helium		) helium 5 helium		
LEN (m)		3.6	3.6	3.6	3.6	3.6	3.6	3.6		80	) 50	0 50			20		•			Ħ		) 50 0 25		3.0
A (M)									3.00	0.28	0.20	0.20			-,		2.0		2.0	0.25	0.25	0.30	3,0	3.00
COLUMN TYPE	<pre>l maleate) 3% w/w on Chromosorb W HP (80-100mesh)</pre>	10%w/w on Celite 560 AW(60-80mesh)	10%w/w on Celite 560 AW(60-80mesh)	108W/w on Celite 560 AW(60-80mesh)	10%w/w on Celite 560 AW(60-80mesh)	Srotonate) 10%w/w on Celite 560 AW(60-80mesh)	ate) 10%w/w on Celite 560 AW(60-80mesh)	ate) 10%w/w on Celite 560 AW(60-80mesh)	(mevinphos)  3% w/w on Chromosorb W HP (80-100mesh)  3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	25%w/w on Celite	25%w/w on Celite	?B) $3\% \text{ w/w on Chromosorb W HP (80-100mesh)}$	25%w/w on Celite	15% w/w on Gas-Chrom Q (100-120 mesh) 25%w/w on Celite	25%w/w on Celite	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	0	bonded phase	18 w/w on Gas-Chrom O (100-120mesh)	w/w on Gas-Chrom Q w/w on Gas-Chrom Q
COLUMN MATERIAL	r, cis- (disextyl glass	yl ester aluminium	pyl ester aluminium	(butyl Lluminiu	(ethyl crotonate)	O E	(pentyl uminium	r (propyl crotonate) aluminium	osphinyl)oxyl-2- quartz glass glass	gamma-lactone glass	quartz glass	quartz glass		ester	thylphenoxy) (MCPB) quartz glass	thyl ester				quartz glass	glas glas	quartz glass glass quartz qlass		glass glass
COLUMN STATIONARY ORIGIN PHASE	acid, disextyl ester, OV-1	2-, 3-methylbut SE-30	2-, 3-methylpro SE-30	2-, butyl ester SE-30	2-, ethyl este SE-30	2-, isopropyl SE-30	, 2-, pentyl este SE-30		id, 3-[(dimethoxy SE-30 OV-1	-methy1-2-, OV-101	-30	ny1-1- SE-30	, z-hydroxy, SE-30	id, 2-methyl, methyl SE-30	ซ้		_	acid, hexyl ester SE-30	ile SE-30	W Sci. SE-30	Soi. SE-30 OV-1	1 OV-1 OV-1/SE-30 Me silicone	OV-1	
LTP CC INDEX OF	· Ā		butenoic ad 0983		ט	butenoic ad 0863			υ <sup>Θ</sup> Ι	Ö				butyric acid, 0758		υ		butyric aci	butyronitril 0642	cadaverine 0974 J&W	1749 J&W :	1777 Hal. 1810 1840 HP	campestenone 3320	3320 3325

LIT	25 25 25	1 2	2 4	53	49	49	49	<del></del> i	4 53	49	53	53	49	53 49	4.9	49	49	49	49	49	49	49	53 49	53
SAMPLE TYPE	standard standard standard	standard		standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard . standard
N CARRIER ) GAS	000	4 helium		2 nitrogen	5 helium	15 helium	15 helium	4 helium	15 helium 2 nitrogen	ß	2 nitrogen	2 nitrogen	5 helium	2 nitrogen 5 helium	5 helium	5 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	2 nitrogen 15 helium	2 nitrogen
ID LEN (mm) (m)	3.00 3.0 3.00 3.0 3.00 3.0	00.		īΩ	.25 1	.25 1	.25 1	.00	0.25 1	.25 1	Ŋ	2	0.25 1	5 0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	5 0.25 1	ស
COLUMN TYPE	1% w/w on Gas-Chrom Q (100-120mesh) 3. 1% w/w on Gas-Chrom Q (100-120mesh) 3. 1% w/w on Gas-Chrom Q (100-120mesh) 3.	w/w on Chromosorb W HP (80-100mesh) 3 ester (methomyl)	bonded phase	ester (caromosorb W	(furadan 3 keto) 0	ester (furadan) 0	(Vegadex, Sullaifate) bonded phase 0	Chromosorb W HP (80-100mesh) 3	dimethyl ester (pirimicarb) 18e Chromosorb W HP (80-100mesh)	(baygon, propoxur)	dene amino ester (aldicarb) 3% w/w on Chromosorb W HP (80-100mesh)	methyl e 3% w/w	methyl ester (matacil) bonded phase	ester (barban) 3% w/w on Chromosorb W HP (80-100mesh) bonded phase	1) ase	(molinate) bonded phase	r (tillam) bonded phase	(sutan) bonded phase		nam, vernolate) bonded phase	er (benthiocarb) bonded phase	ester (roneet, cycloate) bonded phase	(chlorpropham) 3% w/w on Chromosorb W HP (80-100mesh) bonded phase	3% w/w on Chromosorb W HP (80-100mesh)
COLUMN MATERIAL	glass glass glass	glass ethylideneamino methyl	SE-30 quartz glass 1-naphthyl methyl ester (sevin) DR-1 cmartz glass	2,3-dihydro-2,2-dimethyl-7-benzofuranyl SE-30 quartz glass 3% w/w	2,3-dihydro-2,2-dimethylbenzofuran-7-yl methyl DB-1 quartz glass		lithio glass	nethyldithio (CDEC) glass	2-dimethylamino -5,6-dimethylpyrimidin-4-yl DB-1 cr-30 misrtz glass 3% w/w on	quartz glass	2-methyl-2 (-methylthio) propylidene SE-30 quartz glass	3,5-dimethyl-4-methylthiophenyl SE-30 quartz glass	4-(dimethylamino)-3-methylphenyl DB-1 quartz glass		'Y1	lene, s-ethyl ester quartz glass	nio, s-propyl ester quartz glass	a-ethyl est lartz glass	a-ethyl ester quartz glass	s-propyl ester quartz glass	ylthio glass	-ethyl glass	isopropyl ester (cl quartz glass quartz glass	glass quartz glass
STATIONARY PHASE	ov~1 ov~1 ov~1	OV-1 1-(methylthio)ethylide	SE-30 1-naphthyl met nR-1	2,3-dihydro-2, SE-30	2, 3-dihydro-2, DB-1	2,3-dihydro-2, DB-1	2-chlorcallyl DB-1	2-chloroallyldıethyldı OV-1	2-dimethylamin DB-1 sr-30	2-isopropoxyphenyl methyl NR-1	2-methyl-2(-me SE-30	3,5-dimethyl-4 SE-30	4 - (dimethylami DB-1	4-chlorobut-2- SE-30 DB-1	4-methylthio-3,5-xylyl DB-1 quartz	N,N-hexamethylene, s-ethyl DB-1 quartz glass	butyl(ethyl)thio, s-propyl DB-1 quartz glass	diiosbutylthio-, DB-1 q	dipropylthio, DB-1	dipropylthio-, DB-1	a-4-chlorobenzyl DB-1	-ethyl-N-cy DB-1	m-chloro, SE-30 DB-1	OV-1/SE-30 SE-30
LTP COLUMN INDEX ORIGIN	er	id,	1059 PEC carbamic acid, 1	nic acid, PEC	acid,			carbamic acid, 2 1685	ic acid,	id,	ic acid, PEC	c acid, PEC	carbamic acid, 4 1743	carbamic acid, 4 1102 PEC 2119	carbamic acid, 4	carbanic acid, N 1539	acid,	acid,	carbamic acid, c	carbamic acid, c		iid,	carbanilic acid, 1626 PEC 1629	carbaryl 1490 1494 PEC

LIT REF	55 56 55 55	23	23	46	т	48	48	23	12	12	10	12	12	12	10	10	10	12	10	10	12	12	10	48
SAMPLE TYPE	standard standard standard standard	standard	standard standard	food	essential oil	standard	standard	standard	standard	standard	standard	standard	ı standard	standard	n standard	n standard	n standard	n standard	n standard	n standard	n standard	n standard	n standard	n standard
LEN CARRIER (m) GAS	4 helium 25 hydrogen 12 12 25 hydrogen	15 helium	15 helium 1.5 argon	80 nitrogen	50 helium	25 hydrogen	25 hydrogen	15 helium	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 hydrogen
I DI (mm)	3.00 0.31 0.20 0.20 0.31	0.25	4.00	0.28	0:30	0.22	0.22	0.25	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.22
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh) bonded phase bonded phase bonded phase bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular derivative 10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	glass glass quartz glass quartz glass	quartz glass	quartz glass trimethylsilyl der	дјавв	quartz glass	quartz glass	quartz glass	quartz glass	ylpropyl ester quartz glass	ylpropyl ester quartz glass	-butenyl ester quartz glass	tyl ester quartz glass	opyl ester quartz glass			quartz glass	quartz glass	ityl ester quartz glass	. ester quartz glass	nnyl ester quartz glass	hyl ester quartz glass	quartz glass	axenyı ester quartz glass	quartz glass
STATIONARY PHASE	OV-1 OV1-1/SE-54 Me silicone Me silicone OV1-1/SE-54	SE-30	SE-30 3-indoly1, OV-1	eta- OV-101	0V-1	cP sil 5CB	CP Sil 5CB	SE-30	d, 1,1-dimeth SE-30	d, 1,2-dimeth SE-30	acid, 1-methyl-3-butenyl SE-30 quartz g	acid, 1-methylbutyl ester SE-30 quartz g	124	ᄪ		d, 2-propynyl SE-30	12.	124		d, cis-3-hexenyl ester SE-30 quartz g	acid, dimethylethyl ester SE-30 quartz g	acid, methylethyl SE-30	acıd, trans-3-nexenyı ester SE-30 quartz gla:	CP Sil 5CB
LTP COLUMN INDEX ORIGIN	le HP HP	E .	carbinoxamine 2047 J&W Sci. carboxylic acid,	caryophyllene, beta- 1442 OV-	cedrenyl acetate 1752 Hall	chlordane, alpha~ 2050 CHROMPAK CP	chlordane, gamma- 2018 CHROMPAK CP Sil	chlordiazepoxide 2742 J&W Sci.	chloroacetic acid, 1,1-dimethylpropyl ester 0995 SGE SE-30	chloroacetic acid, 1,2-dimethylpropyl 1012 SGE SE-30 quartz	chloroacetic aci	chloroacetic aci		chloroacetic acid, 0956 SGE S	chloroacetic acid, 0870 SCE SE	chloroacetic acid, 0885 SGE S	chioroacetic acid, 0969 SGE SE			chloroacetic acid, 1182 SGE SI	chloroacetic aci 0891 SGE		n	chlorodane, oxy 1982 CHROMPAK CP Sil

LIT REF	48	48	40	23	49	23	23	23	23	47	25	25	25	1	2.5	25	25	25	1 23	<b>4</b> 28	25	25	25 25	56 30	23
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard standard	Btandard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard standard	standard	standard	standard standard	standard standard	standard
N CARRIER ) GAS	5 hydrogen stan	5 hydrogen stan	50 nitrogen star	15 helium stan	15 helium star	15 helium star	15 helium star	15 helium star 25 helium star	15 helium star	25 helium star	.0 star	.0 star	.0 star	4 helium star	.0 star	.0 star	.0 star	.0 star	4 helium 5 helium	ne	.0 star			12 25 nitrogen star	5 helium
ID LEN (mm) (m)	0.22 2	0.22 2	0.2 5	0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	0.25 1	0.20	3.00 3.	3.00 3.	3.00 3.	3.00	3.00 3.	3.00 3.	3.00 3.	3.00 3.	3.00		3.00 3.	3.00 3.0	3.00 3.0 3.00 3.0	0.20	0.25 1
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		1% w/w on Gas-Chrom Q (100-120mesh)	1% w/w on Gas-Chrom Q (100-120mesh)	18 w/w on Gas-Chrom Q (100-120mesh)	3% w/w on Chromosorb W HP (80-100mesh)	1% w/w on Gas-Chrom Q (100-120mesh)	18 w/w on Gas-Chrom Q (100-120mesh)	18 w/w on Gas-Chrom Q (100-120mesh)	18 w/w on Gas-Chrom Q (100-120mesh)	3% w/w on Chromosorb W HP (80-100mesh) wall-coated open tubular	bonded phase	18 w/w on Gas-Chrom Q (100-120mesh)	1% w/w on Gas-Chrom Q (100-120mesh)	1% w/w on Gas-Chrom Q (100-120mesh) 1% w/w on Gas-Chrom Q (100-120mesh)	bonded phase wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	quartz glass	ər quartz glass	quartz glass	ab.) quartz glass	quartz glass	quartz glass	quartz glass quartz glass	quartz glass	quartz glass	glass	glass	glass	glass	glass	glass	glass	glass	glass gnartz glass	glas	glass	glass	glass glass	quartz glass quartz glass	quartz glass
N STATIONARY N PHASE	1 0	gamma~ MPAK CP Sil 5CB	chloroformic acid, methyl ester 0569 Me silicone q	i. SE-30	, p- (fundal metab.) DB-1 quar	e i. SE-30	ne i. SE-30	i. SE-30 Me silicone	e i. SE-30	Me silicone	-one OV-1	ov-1	dien-3-one OV-1	5alpha- ov-1	00-1	OV-1	OV-1	24-oxo OV-1	OV-1		24-oxo OV-1	4,4-dimethyl OV-1	7-dehydro OV-1 OV-1	Me silicone SE-30	i. SE-30
LTP COLUMN INDEX ORIGIN	ıð	chlorodene, garmie 1902 CHROMPAK	chloroformic a 0569	chloroprocaine 2177 J&W Sci.	chlorotulidine 1272	chlorpentermine 1329 J&W Sci.	chlorpheniramine 1972 J&W Sci.	chlorpromazine 2452 J&W Sci 2526 HP	chlorprothixene 2460 J&W Sci.	chlorpyrifos 1982 HP	cholest-7-en-3-one 3165	cholest~/-en-3beta~or 3135 OV-1	CI.		cholestanol 3115	cholestanone 3145	cholestenone 3220	ō	cholesterol 3008 3041 JEW Sri	1			rol,	chrysene 2405 HP 2465 SGE	cinchocaine 2675 J&W Sci

LIT	13	20	19	21	20	20	1 0	21	20	20	20	19	5	1 1	21	20	19	21	¦	20	21 20	19	19	19	19	19	23	19
ID LEN CARRIER SAMPLE TYPE (mm) (m) GAS SAMPLE TYPE	3.20 6.1 nitrogen standard	5.50 2.4 nitrogen standard	standard	4,00 1.5 argon standard	5.50 2.4 nitrogen standard	5.50 2.4 nitrogen standard	2.4 nitroden	1.5 ardon	2.4 nitrogen	2.4 nitrogen	2.4 nitrogen	<b>S</b>	4.00 1.5 argon standard	n 1	1.5 argon	5.50 2.4 nitrogen standard	standard	4.00 1.5 argon standard	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5.50 2.4 nitrogen standard	4.00 1.5 argon standard 5.50 2.4 nitrogen standard	standard	standard	standard	standard	standard	0.25 15 helium standard	standard standard
COLUMN TYPE	on Chromosorb W HMDS (60-80mesh)	derivative 13% w/w on Chromosorb W AW	25%w/w on Celite	% w/w on Diatoport S (80-100mesh)	ive 13% w/w on Chromosorb W AW	Chromosorb W	Chromosorb W AW	re Diatoport S (80-100mesh)	W AW	3	W AW		70 W/W %	ı t	% w/w on Diatoport S (80-100mesh)	13% w/w on Chromosorb W AW	25%w/w on Celite	iatoport S (80-100mesh)	(400-100-1)	b w/w on Directoric S (80-100mesn)	k w/w on Diatoport S (80-100mesh) k w/w on Chromosorb W AW	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite	wall-coated open tubular	25%w/w on Celite
STATIONARY PHASE COLUMN MATERIAL	stainless steel	oxy, trimethylsilyi	methyl ester	oxy, trimethylsilyl derivative 10	oxy, trimethylsilyl derivative 0	rimethoxy, trimethylsilyl	ydroxy, trimethylsilyl	hydroxyphenyl, t	methoxy, trimethylsilyl	ethoxy, trimethylsilyl	ethoxy-4-hydroxy,	oxy, methyl ester	oxy, trimethylsilyl derivative	oxy-4-methoxy, t	10° oxy, trimethylsilyl derivative	0 over mother autor	Tools + Eurom	trimethylsi	oxy-3-methoxy, t		oxy, trimethylsilyl derivative 103 0	ester 0	$\gamma$ l ester $0$			escer 0 5+1:-1 54-5-	cuyr est	OV-1/5E-30 glass SE-30
COLUMN STAT	!		acid, 2-hydroxy, SE-30	acid, 2-hydroxy, OV-1	acid, 2-methoxy, SE-30	acid, 3,4,5-t	acid, 3,4-dih	acid, 3,4-dil	acid, 3,4-dim	acid, 3,5-dim	acid, 3,5-dim	acid, 3-hydroxy,	acid, 3-hydroxy,	acid, 3-hydro	OV-1 acid, 3-methoxy,	SE-30	_	acid, 4-hydroxy, OV-1	acid, 4-hydro	OV-1 SE-30	acid, 4-methoxy, OV-1 SE-30	acid, benzyl SE-30			Acid, labbucyt SE-30	acia, metnyi SE-30	Jew Sci. SE-30	OV -1/ SE-30
LTP		cinnamic 2012	cinnamic 1430	cinnamic 1800	cinnamic 1754	ic	ic	i.	ы. С	, c	j.	Ö.	Ö	jc	2054 cinnamic		1498	cinnamic 1928	Ö	2080	cinnamic 1796 1803	cinnamic 1682	r. C				, J	2143

LIT	21 20	23	-	-	-	7	-	п	13	13	55 55 4	23	23	23	23 4 47	23	23	55 55	47	23	48
SAMPLE TYPE	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard standard	standard standard	standard	standard standard	standard standard standard	standard	standard	standard standard	standard	standard standard	standard standard
LEN CARRIER (m) GAS	1.5 argon 2.4 nitrogen	15 helium	4 helium	4 helium	4 helium	4 helium	4 helium	4 helium	.1 nitrogen	6.1 nitrogen	25 hydrogen 25 hydrogen	15 helium 25 helium	15 helium	15 helium 25 helium	15 helium 25 helium	15 helium	15 helium	25 hydrogen 25 hydrogen	25 helium	5 15 helium (chlordecone) 0 4 helium (mirex)	25 hydrogen 4 helium
ID L	4.00 1 5.50 2	0.25	3.00	3.00	3.00	3.00	3.00	3.00	3.20 6	3.20 6	0.31	0.25	0.25	0.25	0.25	0.25	0.25	0.31	0.20	0.25 2H- (cl) 3.00	
COLUMN TYPE	10% w/w on Diatoport S (80-100mesh) 413% w/w on Chromosorb W AW	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh) 3	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)	bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase		wall-coated open tubular, 5b, 6-decachlorocotahydro-1,3,4-metheno-3% w/w on Chromosorb W HP (80-100mesh) 5b,6-dodecachlorocotahydro-1.3,4-metheno	wall-coated open tubular 3% w/w on Chromosorb W HP (80-100mesh)
COLUMN MATERIAL	derivative	quartz glass	glass	ester glass	ester glass	glass	glass	glass	stainless steel	stainless steel	glass glass glass	quartz glass quartz glass	quartz glass	quartz glass quartz glass	quartz glass glass quartz glass	quartz glass t	quartz glass	glass glass	quartz glass	quartz glass one, 1,1a,3,3a,4,5,5,5a glass 1 1 2 2 3 3 4 4 5 5 5 5	- O
MN STATIONARY IN PHASE	rimethylsilyl OV-1 SE-30	SE-30		Φ Ω	iethyl es	ester	ester	trimethyl ester OV-1	SE-30	SE-30	OV1-1/SE-54 OV1-1/SE-54 OV-1/SE-30	Sci. SE-30 Me silicone	Sci. SE-30	Sci. SE-30 Me silicone	Sci. SE-30 OV-1/SE-30 Me silicone	1758 J&W Sci. SE-30 q	Jew Sci. SE-30	ov1-1/SE-54	Me silicone	. SE-30 ntalen-2- OV-1	
LIFP COLUMN INDEX ORIGIN	cinnamic acid, 1497 1527	cinnamoylcocaine 2480 J&W Sci.	citral 1272	acid,	acid,		acid,	citric acid, 1442	citronellal 1146	citronellol 1225	clofibrate 1456 HP 1481 HP 1549	3	JDGW	J&W HP	34 di	1758 J&W Sci.	1828 JEW S	cyanoacetic a 0958 HP 0960 HP	cyclobarbitone 1973 HP	cyclobenzaprine 2204 J&W Sci. SE-30 cyclobuta[cd]pentalen-2 2240 OV-1	2445 CHROM

LLIT REF	1	39 8	39 38	40	40	8 6 6	41	98 8	39	39	39	39	39	39 8	& 6 17	8	<b>6</b> 8	39	œ	80	32	2 2 3.7	37 37	, m
SAMPLE TYPE	standard	standard standard standard	standard standard	standard	standard	standard standard	standard	standard standard	standard	standard	standard	standard	standard	standard standard	standard standard	standard	standard	standard	ı standard	standard	standard	cap water standard standard	standard standard	essential oil
ID LEN CARRIER (mm) (m) GAS	3.00 4 helium	3.18 3.1 helium 0.20 50 nitrogen	3.18 3.1 helium 2.0 2	.2 50 nitrogen	.2 50 nitrogen	0.20 50 nitrogen 3.18 3.1 helium	.32 15 helium	.18 3.1 helium	.18 3.1 helium	.18 3.1 helium	.18 3.1 helium	1.18 3.1 helium	1.18 3.1 helium	3.18 3.1 helium 0.20 50 nitrogen	0.20 50 nitrogen 3.18 3.1 helium	0.20 50 nitrogen	3.18 3.1 helium	3.18 3.1 helium	0.20 50 nitrogen	0.20 50 nitrogen	0.5 100 helium	0.25 108 helium		0.30 50 helium
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh) 3	wall-coated open tubular 0 Supelcoport (100-200 mesh) 3 wall-coated open tubular 0	Supelcoport (100-200 mesh) 15% w/w on Gas-Chrom Q (100-120 mesh) 2	Wall-coated open tubular	wall-coated open tubular 0	Wall-coated open tubular 0 Supelcoport (100-200 mesh) 3	wall-coated open tubular	Supelcoport (100-200 mesh) 3 wall-coated open tubular 0	Supelcoport (100-200 mesh) 3	Supelcoport (100-200 mesh)	wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular	Supelcoport (100-200 mesh)	Supelcoport (100-200 mesh)	wall-coated open tubular	wall-coated open tubular	open tubular	Wall-coated open tubular wall-coated open tubular	Wall-coated open tubular wall-coated open tubular wall-coated open tubular	hase				
COLUMN MATERIAL	glass	quartz glass stainless steel quartz glass	stainless steel	quartz glass	quartz glass	quartz glass stainless steel	quartz glass	stainless steel quartz glass	stainless steel	hyl stainless steel	stainless steel	stainless steel	stainless steel	stainless steel quartz glass	quartz glass stainless steel	quartz glass	- stainless steel	- stainless steel	quartz glass	quartz glass	glass		borosilicate glass borosilicate glass	guartz glass
STATIONARY PHASE	0V-1	1,3- SE-30 SE-30 SE-30	SE-30 SE-30	bromo Me silicone	chloro Me silicone	, 1,3,5- SE-30 SE-30	, 1-methoxy DB-1	SE-30 SE-30		1-bromo-4-methyl SE-30	1-chloro SE-30	1-iodo SE-30	1-nitro SE-30	1,3- SE-30 SE-30	1,4- SE-30 SE-30	1-ethyl-1,4- SE-30	1-methoxy-1,3 SE-30	1-methoxy-1,4- SE-30	1-methyl-1,3- SE-30	SE-30	SE-30	SP-2100 OV-101	SE-30 OV-1	0V-101
LTP COLUMN INDEX ORIGIN	cyclododecanone 1524	cycloheptadiene, 0800 0811 HP 0815	cycloheptane 0794 HP 0797		cycloheptane, ch 1026	cycloheptatriene, 0784 S	cycloheptatriene, 0994 J&W SCI D			cyclohex-1-ene, 1036 HP								cyclohexadiene, 0939 HP	cyclohexadiene, 0771	cyclonexaclene, 0800	ŏ		0661 PEC 0662 PEC	0662 Hall

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SAMPLE TYPE	standard standard standard standard standard	essential oil tap water standard	standard standard standard	standard standard	standard standard standard standard standard	standard standard standard standard	standard standard essential oil tap water standard	standard standard standard	standard standard standard	standard standard
ID LEN CARRIER (mm) (m) GAS	3.18 3.1 helium 0.30 50 helium 0.30 50 helium 0.20 50 nitrogen 2.0 2	50	0.25 108 helium 0.25 108 helium 0.25 108 helium	0.25 108 helium 0.20 50 nitrogen	0.22 25 0.32 50 3.00 4 0.2 50	0.32 50 3.00 4 0.2 50 0.2 50 3.18 3.1	0.25 108 helium 0.30 50 helium 0.30 50 helium 0.20 50 nitrogen	0.2 50 nitrogen 3.18 3.1 helium 0.25 108 helium	108	0.25 108 helium 0.20 50 nitrogen
COLUMN TYPE	Supelcoport (100-200 mesh) bonded phase bonded phase wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	open tubul	<pre>wall-coated open tubular wall-coated open tubular wall-coated open tubular</pre>	wall-coated open tubular	wall-coated open tubular bonded phase 3% w/w on Chromosorb W HP (80-100mesh) wall-coated open tubular wall-coated open tubular	bonded phase 3% w/w on Chromosorb W HP (80-100mssh) wall-coated open tubular wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular bonded phase bonded phase wall-coated open tubular wall-coated open tubular	lcoport (100-coated open	uedo oben	<pre>wall-coated open tubular wall-coated open tubular</pre>
COLUMN MATERIAL	stainless steel quartz glass quartz glass	quartz glass glass quartz glass	glass glass glass		(alpha- quartz quartz glass quartz (beta-BE		glass quartz glass quartz glass glass quartz glass	n cu	7 7 7	glass quartz glass
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	cyclohexane (cont) 0662 HP SE-30 0664 Hall OV-1 0669 Hall OV-1 0669 SE-30	<b>6</b> 6		an an	CHROMPAK CP Sil 5CB SAC OV-1 OV-1 Me silicone exane, beta-hexachloro CHROMPAK CP Sil 5CB ACHOMPAK CP Sil 5CB	OV-1 OV-1 OV-1 Dromo Me sil:	4 -	xane, Chloro Me silicone HP SE-30 xane, cis,cis,cis-1,3, Quadrex OV-101 xane, cis,cis,trans-1,	Quadrex OV-101 grane, cis, trans, cis-1, grane, cis, trans, cis-1, Quadrex OV-101 grane, cis, trans, trans- Quadrex OV-101 axane, cis, trans, trans- grane, cis-1, 2-dimethyl	0820 Quadrex OV-101 0834 SE-30

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SAMPLE TYPE		standard	standard	standard	atandard		standard	4	standard	standard	standard	standard		standard standard	standard	4	scandard	standard		standard	standard	Brandard	standard	standard	standard	standard	standard		standard	acainata	essential oil	standard	tap water	gtandard		tap water	ecandard Aggential oil		standard	standard	standard standard	
LEN CARRIER (m) GAS			100	50 nitrogen	50 nitrogen		50 nitrogen	100 100	00.	108 helium	108 helium	108 helium		4 helium 50 nitrogen	50 nitrogen	ď		3.1 helium		12	2 2		2 nitrogen		4	50 nitrogen	50 hydrogen		50 nitrogen		50		108 helium	20	ı	1 50 helium	50	108	100	3.1	50 nitrogen	
(mm)		0.25	0.27	0.20	0.2		0.20	Ċ	7	0.25	0.25	0.25		3.00	0.20	0	0.40	3.18		0.25	0.6	0.32	īΟ		e	0.5	0.32		9.5		0.30	0.30	0.25	0.20		3.0	0.30	0.25	0.27	3.18	0.20	
														(80-100mesh)									(80-100mesh)	•	(80-100mesh)																0-120 mesh)	
COLUMN TYPE		oben	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	•	wall-coated open tubular	1000	coarea oben	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		3% w/w on Chromosorb W HP wall-coated open tubular	wall-coated open tubular			Supelcoport (100-200 mesh)		open tubul	Wall-coated open tubular	political pliase	3% w/w on Chromosorb W HP		romosorb W HP	wall-coated open tubular	bonded phase		wall-coated open tubular		bonded phase		wail-coated open tubular	uedo		wall-coated open tubular bonded nhase	bonded phase			(100-	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	
COLUMN MATERIAL		glass	soda glass	quartz glass	martz alass		quartz glass	chyl	grass	glass	chyl glass	sopropyl glass	(delta-BHC)	glass quartz glass	quartz qlass	, 7	quartz grass	at			5	quariz grass glass	grass quartz qlass	, ,	m	quartz glass	quartz glass	1	quartz glass stainless steal	1	glas		g.a.s.s.	quartz glass		grass martz dlass	glas	,	Jass	888	quartz glass	
	cis-1,3-dimethyl	c OV-101	ov-101	SE-30	cis-1,4-dichloro	cis-1,4-dimethyl	SE-30		cis-1-ethyl-3-methyl	Quadrex OV-101	cyclohexane, cis-1-ethyl-4-methyl 0904 Quadrex OV-101 gla	cyclohexane, cis-1-methyl-4-isopropyl 0984 Quadrex OV-101 glass	delta-hexachloro	OV-1 Me silicone	ethyl SE-30	ethylidene	35-30	SE-30		. SE-30	K CF S11 5CB	OV-1 /SE-30	SE-30	OV-1/SE-30	ov-1	Me silicone	0V-1	iodo	Me silicone	opropy!	00-1	001-100			methyl				OV-101	SE-30	SE-30	
COLUMN			PEC							Quadres	ane, cis Quadrex	cane, cis Quadrex	ane, de							<b>U2</b> :	CHROMPAK	5AC	PEC	<u>.</u>					QH.			Hall	Ouadrex			Superco	Hall	Quadrex	PEC	HP		
LTP INDEX	cyclohexane,	0770	0776	0804	cyclohexane,	cyclohexane,	0810	×	0921 Quad cvclohexane,	0881	cyclohexa 0904 (	cyclohexa 0984 (	cyclohexane,	1755	cyclohexane, 0837	cyclohexane,	0870	cyclonexane, 0738 HP	8	1682	1694				1757	1797	1645	~	1067	Č	1 0160			0915	63	0715					0/30 0736	

LIT REF	80	ഗത	m	0 W	39	^	100	40	. '	74 CC	•	œ	40	·	37	<b>.</b>	c	7	7	٥	0	99	<b>)</b>	9	6 8 3 8	39	, .	)	39	39	9. 6.	~	n ro en
SAMPLE TYPE	standard	tap water essential oil		standard standard	standard	standard	standard	standard		standard standard		standard	standard	at ordered	standard	standard	7	scandard	standard	71000	aralidatu.	standard		standard	standard standard	standard	essential oil		standard	standard	standard	essential oil	
D LEN CARRIER n) (m) GAS	20 50 nitrogen	.30 50 helium	20	25 108 helium 20 50 nitrogen	.18 3.1 helium	25 108 helium	50	2 50 nitrogen	•	25 108 hellum 20 50 nitrogen		.zu su nitrogen	2 50 nitrogen	75 108 helium	100	.20 50 nitrogen	100		25 108 helium	20 50 nitrogen	3	.18 3.1 helium	1 r	.18 3.1 hellum	18 3.1 helium 0 2	18 3.1 helium	50	) )	.18 3.1 helium	.18 3.1 helium	18 3.1 helium	30 50 helium	3.1
OI (mm)	0.20	0	0.30	0.25	 	0.2	0.20	0.2	•	0.20		2	0.2	c	0.27	0.			0.2	0.00	•	m 0		n	3.18	3,18	O	,	3.1	3.1	3.18	0.30	3.18
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular bonded phase		wall-coated open tubular wall-coated open tubular	Supelcoport (100-200 mesh)	wall-coated open tubular	open	wall-coated open tubular	•	wall-coated open tubular wall-coated open tubular	•	wall-coated open tubular	wall-coated open tubular	wall-coated onen tubular	oben	open	me ledge to to the last	oben	wall-coated open tubular	wall-coated onen tuhular	1113435 2545 50000 1111	Supelcoport (100-200 mesh) 15% w/w on Gas-Chrom O (100-120 mesh)	006-0017	supercoport (100-200 mesn)	Supelcoport (100-200 mesh) 15% w/w on Gas-Chrom Q (100-120 mesh)	Supelcoport (100-200 mesh)	- 6		Supelcoport (100-200 mesh)	Supelcoport (100-200 mesh)	Supelcoport (100-200 mesh)	bonded phase	wall-coated open tubular Supelcoport (100-200 mesh)
COLUMN MATERIAL	quartz glass	glass cnartz class	ימי	glass quartz glass	stainless steel	880 <u>-</u>	guartz glass	sthyl quartz qlass	<b>.</b>	glass quartz qlass	· '	quartz glass	quartz glass	/] 	grass soda qlass	z gl	nethyl zlag	grass isopropyl	glass	marty dlagg	1 1 1	stainless steel		scainless steel	stainless steel	stainless steel	quartz qlass	1	stainless steel	stainless steel	stainless steel	quartz qlass	103
MN STATIONARY IN PHASE	methylene SE-30	propyl SP-2100 OV-1	0V-1	OV-101 SE-30	nitro SE-30	-101	SE~30	tetradecafluoromethyl	ans-1,2-dimethy	OV-101 SE-30	-dimethy	SE-30 trans-1 4-dichloro	Me silicone	ans-1,4-dimethy	OV-101	SE-30	hyl-2-n	Quadrex 0v-101 gane, trans-1-methvl-4-isopropv	ex OV-101	vinyl SE-30		SE-30 SE-30	3-methyl			, 3-methyl SE-30	, 4-t-butyl OV-1	-01, 2-	SE-30	ເດ	-one, 3:mecny1-2- SE-30	OV-1	SP-2100 SE-30
LTP COLUMN INDEX ORIGIN		cyclohexane, n-1 0921 Supelco		0923 Quadrex 0931	cyclohexane, nitro 1079 HP SI	cyclohexane, phenyl	1314	cyclohexane, 1	exane,	0792 Quadrex 0804	exane,	0783		cyclohexane, tra			xane,	cvelohexane, 1	0970 Quadrex	cyclohexane, vinyl	cyclohexanol	0885 HP	exanol,	cvclohexanone	0081 HP	cyclohexanone, 0945 HP	cyclohexanone,	exen-1	0887 HP	O920 HP	<del>-</del>	cyclohexene 0661 Hall	0661 Supelco 0667 HP

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SAMPLE TYPE	standard standard standard	standard	standard	standard standard standard	standard	standard	standard standard	øtandard øtandard	standard standard	standard	standard	standard	standard standard	standard standard standard	standard	standard standard	standard	standard	standard standard	standard
LEN CARRIER (m) GAS	5 108 helium 0 50 nitrogen 2	0 50 nitrogen	0 50 nitrogen	5 108 helium 0 50 nitrogen 8 3.1 helium	0 50 nitrogen	50 nitrogen	0 50 nitrogen 8 3.1 helium	0 50 nitrogen 8 3.1 helium	0 50 nitrogen 2	8 3.1 helium	8 3.1 helium	5 15 helium	0 50 nitrogen 8 3.1 helium	0 50 nitrogen 8 3.1 helium 0 25 helium	8 3.1 helium	0 50 nitrogen 8 3.1 helium	0 50 nitrogen	0 50 nitrogen	2 50 hydrogen 50 nitrogen	5 15 helium
	0.25 0.20 2.0	0.20	0.20	0.25 0.20 3.18	0.20	0.2	3.18	3.18	0.20	3.18	3.18	0.2	0.20	0.20 3.18 0.50	3.18	0.20	0.20	0.20	0.32	0.25
COLUMN TYPE	wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	Supelcoport (100-200 mesh)	Supelcoport (100-200 mesh)	wall-coated open tubular	wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular Supelcoport (100-200 mesh) wall-coated open tubular	Supelcoport (100-200 mesh)	wall-coated open tubular Supelcoport (100-200 mesh)	wall-coated open tubular	wall-coated open tubular	bonded phase wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	glass quartz glass	quartz glass	quartz glass	glass quartz glass stainless steel	quartz glass	quartz glass	quartz glass stainless steel	quartz glass stainless steel	quartz glass	stainless steel	stainless steel	quartz glass	quartz glass stainless steel	quartz glass stainless steel glass	stainless steel	quartz glass stainless steel	quartz glass	- quartz glass	quartz glass quartz glass	quartz glass
STATIONARY PHASE	c) OV-101 SE-30 SE-30	1,3-dimethyl-1- SE-30	1,4-dimethy1-1- SE-30	1-methy1 ex OV-101 SE-30 SE-30	1-phenyl SE-30	3-bromo Me silicone	3-metny1-1- SE-30 SE-30	-methy1-1- SE-30 SE-30	4-vinyl-1- SE-30 SE-30	SE-30	3-methyl SE-30	SE-30	1,5- SE-30 SE-30		e, 1,3,5,7- SE-30	SE-30 SE-30	L, 3- SE-30	5-methy1-1,3 SE-30	hexachloro OV-1 Me silicone	SE-30
COLUMN C ORIGIN	<b>~</b> ∺			¥.				_		cyclohexylamine 0862 HP	cyclohexylamine, 0926 HP	_ :	ene,	ctane HP	cyclooctatetraene, 1,3 0880 HP SE-30	ctene	cyclopentadiene, 0540	cyclopentadiene, 0639	cyclopentadiene, 1318 SAC 1343	cyclopentamine 1065 J&W Sci.
LTP INDEX	cyclohexene 0667 Quac 0681 0690	cyclohexene, 0825	cyclohexene, 0825	cyclohexene, 0758 Quad 0772 0773 HP	cyclohexene, 1384	cyclohexene, 0988	cyclohexene, 0743 0745 HP	cyclohexene, 0743 0744 HP	cyclohexene, 0833 0840	cyclohe 0862	cyclobe 0926	cyclome 2841	cyclood 0926 0949	cyclooctane 0920 0932 HP 1004	cycloo, 0880	cyclooctene 0900 0910 HP	cyclope 0540	cyclope 0639	cyclope 1318 1343	cyclop 1065

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	SAMPLE TYPE	standard standard standard standard	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard standard standard	standard		essential oil standard standard	tap water essential oil standard	standard	standard	standard	standard	standard	standard	standard	food
	ID LEN CARRIER (mm) (m) GAS	0.25 108 helium 0.27 100 0.20 50 nitrogen 2.0 2	0.27 100	0.27 100	0.27 100	0.27 100	0.2 50 nitrogen	0.2 50 nitrogen	0.25 108 helium 0.27 100	0.27 100	0.27 100	0.25 108 helium 0.27 100 0.20 50 nitrogen	0.25 108 helium		0.30 50 helium 0.27 100 0.20 50 nitrogen	0.30 50 helium 0.30 50 helium	0.20 50 nitrogen	0.27 100	0.27 100	0.27 100	0.27 100	0.20 50 nitrogen	2.0 2	0.28 80 nitrogen
	COLUMN TYPE	wall-coated open tubular wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular wall-coated open tubular	-coated open	open	bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular
	COLUMN MATERIAL	glass soda glass quartz glass	Boda glass	stnyı soda glass	soda glass	soda glass	quartz glass	quartz glass	7] glass soda glass	/l soda glass	1-trimethyl soda glass	glass soda glass		glass glass	quartz glass soda glass quartz glass		quartz glass	thyl soda glass	cnyı soda glass	3-trimethyl soda glass	4-trimetnyi soda glass	quartz glass	2	-3-metnyı-z- glass
	STATIONARY PHASE	OV-101 OV-101 SE-30 SE-30	1,1,2-trimethy1 OV-101	1,1,3,3-tetramethy1 OV-101 sod	1,1,3-trimethy1 OV-101	1,1-dimethyl OV-101	bromo Me silicone	chloro Me silicone	cis-1,2-dimethyl ax OV-101 OV-101	cis-1,3-dimethyl OV-101	cis-1-trans-2,4-trimethyl OV-101 soda glas	ethyl sx OV-101 OV-101 sr-30	رد:	SE-30 SP-2100	OV-1 OV-101 SE-30	ç	phenyl $SE-30$	trans-1,2-dimethyl OV-101	trans-1,3-dimetnyi OV-101 so	trans-1-cis-2,3-trimethyl OV-101 soda glas	-1-c18-2,	vinyl SE-30	SE-30	one, Z-hydroxy-3-methy1-z OV-101 glass
	LTP COLUMN INDEX ORIGIN	ntane Quadre PEC						cyclopentane, c 0767	cyclopentane, ci 0715 Quadrex 0722 PEC	entane, PEC	cyclopentane, c 0773 PEC	cyclopentane, et 0725 Quadrex 0733 PEC	antane, Quadro			•							cyclopentanol 0792	cyclopenten-1-one, 1021 Ö

LIT REF	8 8 8	<b>60</b>	80	80	53 28	8 7	8 73	8	28 43	40	4.0	44 1 40	40	2	81	8	19	28 19	ппп	11	<b>∞</b> α	æ
SAMPLE TYPE	standard standard	standard	standard	standard	n) etandard standard	standard standard	standard standard	standard	standard tap water	standard	standard	tap water standard standard	standard	standard standard	standard	standard	standard	standard standard	standard essential oil tap water	standard	standard standard	standard
LEN CARRIER (m) GAS	50 nitrogen 2	50 nitrogen	50 nitrogen	) nitrogen		108 50	108 50	50 nitrogen	50 hydrogen 50 helium	50 nitrogen	50 nitrogen	25 helium 4 helium 50 nitrogen	50 nitrogen	108 helium	108 helium	108 helium		50 hydrogen	50 helium 50 helium	25 nitrogen	50 nitrogen 108 helium	50 nitrogen
OI (mm)	0.20	0.20	0.20	0.20	171 es 5 0.32	0.25	0.25	0.20	0.32	0.2	0.2	3.00	0.2	0.25	0.25	0.25		0.32	0.30	0:30	0.20	0.20
	r (100-120 mesh)			weenhoner 1 moth	(3-phenoxypheny1)mechyl ester orb W HP (80-100mesh) 5 2 0.32 50							(80-100mesh)										
COLUMN TYPE	wall-coated open tubular 15% w/w on Gas-Chrom Q (10	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	D)	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	25%w/w on Celite	bonded phase 25%w/w on Celite	bonded phase bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	quartz glass	quartz glass	quartz glass	o- (2, 2-archiotoviny) quartz glass quartz glass	glass quartz glass		ď	crans-y- (geosmin) quartz glass quartz glass	quartz glass	quartz glass	glass quartz glass		glass stainless steel	glass	glass		quartz glass	quartz glass quartz glass glass	quartz glass	quartz glass glass	quartz glass
STATIONARY PHASE	SE-30 SE-30	1, Z -dimetnyl - 1 - SE-30		; ; ;	acıu,	ov-101 sE-30	OV-101 SE-30	SE-30	trans-1,10-qimetnyi-trans-9 AC OV-1 quartz OV-101 quartz	romo Me silicone	hloro Me silicone	Me silicone OV-1 Me silicone	Me silicone	Lny1 OV-101 SE-30	ov-101	OV-101	ecnyi eacer SE-30	OV-1	OV-1 OV-1 SP-2100	SE-30	SE-30 OV-101	SE-30
COLUMN				9	cyclopropanecarboxyllc 2634 PEC SE-30 2657 SAC OV-1	P- Quadrex	<b>O</b>		້ວ: <sub>ເ</sub>			<b>-</b> ¤				1-merny Juadrey	acto,	SAC SAC	Hall Hall Supelco	03 -	4 01+	
LTP INDEX	cyclopentene 0558 0565	cyclopentene, 0764	cyclopentene 0654	cyclopentene, 0615	cyclopi 2634 2657	cymene, 1009 1013	decalin, 1084 1087	decalin, 1049	1384 1385	decane, 1735	decane, 1546	decane, 1251 1326 1344	decane, 1258	decane, 1119 1119	decane, 1065	decane, 1061	1379	1308 1310 1310	1187 1187 1187 1188	1257	0988	0660

LIT REF	æ	∞	49	23	25	23	23	47	ĸ	e e.	28	4.5	7	23	41	ĸ	5.44 5.6	4		90	44	56	12	•	7.7	10	12	12	12	10
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard		essential oil	standard	standard	grandard	standard	standard	essential oil	tap water standard	tap water		standard	tap water	standard	standard		standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen	15 helium	15 helium	3.0	15 helium	15 helium	25 helium		50 helium 15 helium		of helium		15 helium	15 helium		25 helium 12	25 helium		77	25 helium	12	25 nitrogen		cs nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen
ID (mm)	0.20	0.20	0.25	0.25	3.00	0.25	0.25	0.20	0.30	0.30	0.32	Ċ	0.40	0.25	0.32	0.30	0.20		0	0.20		0.20	0.30	ć	0.30	0.30	0.30	0.30	0.30	0.30
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	1% w/w on Gas-Chrom Q (100-120mesh)	wall-coated open tubular	wall-coated open tubular		bonded phase	bonded phase	bonded phase	•		wall-coated open tubular	wall-coated open tubular	bonded phase	bonded phase	•		bonded phase		bonded phase	wall-coated open tubular		Wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	quartz glass	quartz glass	quartz glass	glass	quartz glass	quartz glass	quartz glass	quartz glass		quartz glass quartz glass		quartz glass	quartz glass	quartz glass	quartz glass				quartz glass		quartz glass	hylpropyl ester quartz glass	hylpropyl ester	quartz glass 3-butenvi ester	quartz glass	duartz glass	ropyl ester quartz glass	ropyl ester quartz glass	l ester quartz glass
STATIONARY PHASE	SE-30	SE-30	DB-1	SE-30	ov-1	SE-30	SE-30	Me silicone	ov-1	0V-1	SE-30 OV-1	OV-1/SE-30	Me silicone	ethyl SE-30	oxazepine DB-1	ov-1	Me silicone Me silicone	2-chloro	3-nitro	Me silicone	Me silicone	Me silicone	id, 1,1-dimet SE-30	acid, 1,2-dimethylpropy	SE-30 quartz acid 1-methvl-3-butenv	SE-30 quartz	14, 1-mecnyı SE-30	acid, 1-methylpropyl es SE-30 quartz	acid, 2-methylpropyl es SE-30 quartz	acıd, Z~propenyl ester SE-30 quartz
LTP COLUMN INDEX ORIGIN		decene, trans-5- 1000	1f 2126	desipramine 2200 J&W Sci.	desmosterol 3125	dextromethorphan 2097 J&W Sci.	diacetylmorphine 2581 J&W Sci.	diamorphine 2639 HP	diazepam 2376 Hall		2383 J&W SCI.		2461 HP	diazepam, n-desmethyl 2428 Jaw Sci. SE-30	dibenz(b,t)(1,4)oxazepine 1726 Jaw SCI DB-1	dibenzofuran 1459 Hall		ofuran,	nr ofuran,		1790 HP	dibenzothlopnene 1713 HP	ric R	acetic	1244 SGE					dibromoacetic ac 1114 SGE
H	dec 0	dec 1	def 2]	des 2	des 3	dex 2	dia 2	die 2	die	· 67 (	.40	<b>4</b> (7)	(N	die	dik 1	dib 1		dik	dib	1,1	11	119	dib	dik	1. 1.	; ;	110	dil 1	4.	di. L

LIT	10	10	12	10	10	12	12	10	5	ოო	12	12	10	12		71	12	10	10	10	12	10	10	12	12	10	-	48
R SAMPLE TYPE	en standard	en standard	pen standard	Jen standard	jen standard	Jen standard	pen standard	Jen standard	tap water	n essential oil n standard	yen standard	en standard	en standard	en standard			yen standard	en standard	en standard	en standard	pen standard	pen standard	yen standard	yen standard	Jen standard	en standard	n standard	en standard en standard
LEN CARRIER (m) GAS	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen		50 helium 50 helium	25 nitrogen	25 nitrogen	25 nitrogen	25 nitroden	u		25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	4 helium	25 hydrogen 25 hydrogen
I QI (mm)	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30		0.30	0.30	0.30	0.30	0.30		0.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	(80-100mesh) 3.00	0.22
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	1	oben	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP	<pre>wall-coated open tubular wall-coated open tubular</pre>
LIP COLUMN STATIONARY INDEX ORIGIN PHASE COLUMN MATERIAL	acid, 2-propynyl	acid, 3-butenyl ester SE-30 quartz	3-methylbut	dibromoacetic acid, 4-pentenyl ester 1318 SGE SE-30 quartz glass	acid, SE	dibromoacetic acid, dimethylethyl ester 1103 SGE SE-30 quartz glass	acid, methylethyl ester SE-30 quartz		l etner Supelco SP-2100 glass	0873 Hall OV-1 quartz glass 0873 Hall OV-1 quartz glass	ic acid, 1,1-dimethylprop SE-30 quartz	dichloroacetic acid, 1,2-dimethylpropyl ester 1084 SGE SE-30	dichloroacetic acid, 1-methyl-3-butenyl ester 1077 SGE SE-30 quartz glass	tic acid, 1-methylbutyl es SE-30	cocctic acid, 1-methylpropyl e	quartz -methylpropyl e	1030 SGE SE-30 quartz glass	SE-3	dichloroacetic acid, Z-propynyl ester 0962 SGE SE-30 quartz glass	SE-3	acid, SE-3	4-pentenyi esi 30 quart		dichloroacetic acid, dimethylethyl ester 0960 SGE SE-30 quartz glass dichloroacetic acid, methylethyl ester	quartz	dichiologuetic acid, trams 3-mexemy, ester Sich SGE SE-30 quartz glass		311 5CB

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0.22 25 hydrogen standard
wall-coated open tubular
5CB quartz glass 5CB quartz glass 5CB quartz glass 6cr, 2,4- 5CB quartz glass
CHROWEAK CP 511
S11 5CB chartz diasa wall-coated open tubulat

LIT	4 4 4 4 8 8 8 8	4 4 4 4 8 8 8 8	4 4 4 4 8 8 8 8	4 4 4 4 8 8 8 8	28		23	23	38	nun	23	23		25	ოო	ო	m
SAMPLE TYPE	n standard n standard n standard n standard	standard standard standard	o standard o standard o standard o standard	n standard n standard n standard n standard	n standard standard	standard	Btandard Btandard	standard		essentiai oli tap water standard	standard standard	standard standard	standard	standard	standard essential oil	standard	essential oil
N CARRIER  GAS	5 hydrogen 5 hydrogen 5 hydrogen 5 hydrogen	5 hydrogen 5 hydrogen 5 hydrogen 5 hydrogen	5 hydrogen 5 hydrogen 5 hydrogen 5 hydrogen	5. hydrogen 5. hydrogen 5. hydrogen 5. hydrogen	50 hydrogen 15 helium	C1 14	5 helium	5 helium	2	o helium	5 helium 5 helium	5 helium 5 helium	0	0.	50 helium 50 helium	50 helium	50 helium
ID LEN	0.22 0.22 0.22 0.22 2	0.22 2 0.22 2 0.22 2 0.22 2	0.22 2	0.22 2 2 0 0.22 2 0 0.22 2 2 2 2 2 2 2 2	2 2	0 0	່າ ເດ	0.25 1		0.30 5	0.25 1	0.25 1	m	.00 3.	0.30 5	0.30 5	0.30 5
COLUMN TYPE	wall-coated open tubular 0.2 wall-coated open tubular 0.2 wall-coated open tubular 0.2 wall-coated open tubular 0.2	wall-coated open tubular 0. wall-coated open tubular 0. wall-coated open tubular 0. wall-coated open tubular 0.	wall-coated open tubular 0. wall-coated open tubular 0. wall-coated open tubular 0. wall-coated open tubular 0.	wall-coated open tubular 0. wall-coated open tubular 0. wall-coated open tubular 0. wall-coated open tubular 0.	bonded phase 0.3	נים		wall-coated open tubular	on Gas-Chrom Q (100-120 mesh)	bonded phase wall-coated open tubular bonded phase	wall-coated open tubular 0.2	wall-coated open tubular 0. -3,5- (oryzalin) bonded phase	on Gas-Chrom Q (100-120mesh)	1% w/w on Gas-Chrom Q (100-120mesh) 3.	bonded phase 0.	bonded phase 0.	bonded phase 0.
COLUMN MATERIAL	2,4- quartz glass quartz glass quartz glass	er, 2,4- quartz glass quartz glass quartz glass	, 2,4- quartz glass quartz glass quartz glass quartz glass	2,4- quartz glass quartz glass quartz glass	quartz glass quartz glass	7	quartz glass quartz glass	quartz glass	;	quartz grass glass quartz glass	quartz glass quartz glass	glass gylamino) glass		glass	quartz glass quartz glass	quartz glass 2,4~	quartz glass
MN STATIONARY	AK CP	>-	1 tridecyl ether, PAK CP Sil 5CB PAK CP Sil 5CB PAK CP Sil 5CB PAK CP Sil 5CB	benzyl undecyl ether, CHROMPAK CP Sil 5CB CHROMPAK CP Sil 5CB CHROMPAK CP Sil 5CB CHROMPAK CP Sil 5CB	OV-1 Sci. SE-30		ci. SE-30 mine ci. SE-30	ine Sci. SE-30	ether, 2,2'-dichloro	0	ci. SE-30 ci. SE-30	E-30 honamide, B-1	00-1	OV-1	0V-1 0V-1	OV-1 propyl ether,	, ov-1
LTP COLUMN INDEX ORIGIN	dichlorobenzyl pi 1464 CHROMPAK 1464 CHROMPAK 1465 CHROMPAK 1467 CHROMPAK	dichlorobenzyl tetr 2588 CHROMPAK CP 2594 CHROMPAK CP 2600 CHROMPAK CP 2600 CHROMPAK CP	dichlorobenzyl tridecyl 2483 CHROMPAK CP Sill 2490 CHROMPAK CP Sill 2495 CHROMPAK CP Sill 2495 CHROMPAK CP Sill	dichlorobenzyl undecyl 2275 CHROMPAK CP Si 2280 CHROMPAK CP Si 2284 CHROMPAK CP Si 2287 CHROMPAK CP Si	dicyclomine 2080 J&W S	- <del>"</del>	diethyltryptamine 1875 J&W Sci.		copy.	1029 Hall 1029 Supelco 1029 Hall	dimehydrinate 1841 J&W Sci dimethindine 2250 J&W Sci	dimethyltryptamine 1720 J&W Sci. Sl dinitrobenzenesulpl 2619 Dl	diosgenin 3255	dioxyemone 3360 dioxane 1.3-	<b>EE EE</b>		0687 Hall

LIT REF	38 38	38	വനന	۵	23	23	ოსო	1	4	56	23	-	49	23	41	നന		იო	32	9 6	32	8 7 8 7 8	32	49	41	
SAMPLE TYPE	standard standard	standard	essential oil standard tap water	standard	standard standard	standard	essential oil tap water standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard		standard	standard	standard	standard	standard standard	standard	standard	standard	
LEN CARRIER (m) GAS	50 hydrogen 2	7	50 helium 50 helium	50 nitrogen	15 helium 25 helium	15 helium	50 helium 50 helium	4 helium		12	15 helium	4	15 helium 25 helium	15 helium	15 helium	50 helium 50 helium		50 helium	100	-	100		100 helium	15 helium	15 helium	
OI (mm)	0.32	2.0	0.30	0.20	0.25	0.25	0.30	3.00		0.20	0.25	3.00	0.25	0.25	0.32	0.3			0.5	2.4	0.5	0.32	0.5	0.25	0.32	
COLUMN TYPE	bonded phase 15% w/w on Gas-Chrom Q (100-120 mesh)	15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase wall-coated open tubular bonded phase	lifon) 3% w/w on Chromosorb W HP (80-100mesh)		bonded phase	wall-coated open tubular		bonded phase	wall-coated open tubular	wall-coated open tubular	bonded phase		bonded phase bonded phase	oben	Wail-Coaced open tuburar Chromosorb W DCMS (100-120 mesh)	wall-coated open tubular	bonded phase bonded phase	wall-coated open tubular	bonded phase	wall-coated open tubular	1 1
COLUMN MATERIAL	quartz glass		quartz glass quartz glass glass	quartz glass	quartz glass quartz glass	quartz glass	ત ત	rachlo lass	glass	quartz glass	quartz glass	O,O,O',O'-tetraethyl glass	quartz glass quartz glass	quartz	quartz glass	quartz glass	) 1 7	quartz glass martz glass	•	glass glass	-	quartz glass quartz glass	glass	quartz glass	quartz glass	
UMN STATIONARY GIN PHASE	- (cont) OV-1 SE-30	1,3- SE-30	-ethyl-4-methyl $0V-1 \\ 0V-1 \\ 0V-1 \\ 1CO SP-2100$	SE-30		ine metabolite Sci. SE-30	er Ico SE OV	phone, 2,4,4',5-tetrachloro OV-1	2-amino-5-chlos OV-1/SE-30	e, Z-nitro Me silicone		diphosphorodithioic acid, 0,0, 2220	DB-1 Me silicone	Sci. SE-30	bis(2-chloroethyl) SCI DB-1	diethyi OV-1	dimethyl	0V-1 0V-1	SE-30	OV-101 SE-30	ethylmethyl SE-30	0V~1 0V~1	propylmethyl SE-30	sulfone DB-1	4-   SCI DB-1	
LTP COLUMN INDEX ORIGIN			_# # # #	dipentene 1019	diphenhydramine 1842 J&W Sci. 1888 HP		diphenyl ether 1363 Hall 1376 Supelco 1376 Hall	diphenyl sulphone, 2430	diphenylamine, 2078	diphenylamine, 1965 HP	diphenylpyralamine 2073 Jaw Sci. SE-30	diphosphorod 2220	2232 2265 HP	· ·		disulphide, 0903 SAC	hide,	0718 SAC		0736 0743	2	0869 SAC 0869 SAC	e,		dithane, 1,4- 1019 J&W SCI	

LIT REF	49	44	സസ	40	40	15	ო ო	19	28	555	11	81	23	23	ω	23 19	44	40	40	23	38	ттт	25
SAMPLE TYPE	standard	tap water	essential oil standard tap water	standard	standard	standard	standard essential oil	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	tap water	standard	standard	standard	standard	essential oil standard standard	standard
LEN CARRIER (m) GAS	15 helium	25 helium	50 helium 50 helium	50 nitrogen	50 nitrogen		50 helium 50 helium		50 hydrogen	25 hydrogen 25 hydrogen	25 nitrogen	108 helium	15 helium	15 helium	50 nitrogen	15 helium	25 helium	50 nitrogen	50 nitrogen	15 helium	7	50 helium 50 helium 50 helium	3.0
ID (mm)	0.25		0.30	0.2	0.2		0.30		0.32	$0.31 \\ 0.31$	0.30	0.25	0.25	0.25	0.20	0.25		0.2	0.2	0.25	2.0	0.30 0.30 0.30	3.00
COLUMN TYPE	diyl) (morestan) bonded phase		bonded phase bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	25%w/w on Celite	popuo	23%W/W on Cellice bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 25%w/w on Celite		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase bonded phase bonded phase	1% w/w on Gas-Chrom Q (100-120mesh)
COLUMN MATERIAL	s,s-(6-methylquinoxaline-2,3-diyl) DB-1 quartz glass bor		quartz glass quartz glass glass	guartz glass		- stainle	quartz glass quartz glass		quartz glass	glass glass	quartz glass	glass	quartz glass	quartz glass	quartz glass	quartz glass		quartz glass	quartz glass	quartz glass		quartz glass quartz glass quartz glass	glass
STATIONARY PHASE	s, s-(6-methyl DB-1	Me silicone	OV-1 OV-1 SP-2100	licone	o Me silicone	trimethy SE-30	(lauric acid) OV-1	ethyl ester SE-30		SE-30 OV1-1/SE-54 OV1-1/SE-54	SE-30	OV-101	SE-30	SE-30	SE-30	sE-30 SE-30	Me silicone	no Me silicone	oro Me silicone	SE-30	SE-30	ov-1 ov-1 ov-1	-3-one 0V-1
	dithiocarbonate,	docosane 2200 HP	dodecanal 1389 Hall 1389 Hall	ě	dodecane, 1-bromo	ne,	dodecanoic acid, 1732 Hall 1742 Hall	ĕ	dodecanoic acid, 1507 SAC	1513 1526 HP 1526 HP	dodecanol, 1- 1460 SGE	dodecene, 1- 1189 Quadrex	doxepin 2194 J&W Sci.	doxylamine 1888 J&W Sci.	durene 1100	ecgonine, methyl 1439 J&W Sci. 1462	O.	eicosane, 1-bromo 2395	eicosane, 1-chloro 2292 M	ephedrine 1336 Jaw Sci.	epichlorhydrin 0700	epoxide, propylene 0636 Hall 0636 Hall O' 0664 Hall O'	ergost-8(14)-en-3-one 3230 OV-1

LIT	25	25	25	46	38	41	40	r	'nm	ស	40 88	Ì	40	97	<u>,</u> –	ო	m	28	ec C	-	4	ო (	m	28	}	~ ;	53 48	2	40	96	40	က	ന്	,	40	40	40	1	40
SAMPLE TYPE	standard	standard	standard	food	standard	standard	standard	7 2 2 2 2	standard essential oil	tap water	standard		standard	7 2 0 1	standard	standard	essential oil	standard	gtandard	standard	standard		essential oil	standard		standard	standard		standard	ה היים לה מים לה מי מים לה מים ל	standard	essential oil	standard tan water	10000	standard	standard	standard		standard
LEN CARRIER (m) GAS	3.0	3.0	3.0	80 nitrogen	2	15 helium	50 nitrogen	50 50			50 nitrogen 2		50 nitrogen	25 hudrogen	7 4	20		50 hydrogen	z nitrogen	4 helium			uniled oc	50 hydrogen		4 helium	z nitrogen 25 hydrogen		50 nitrogen	50 hydrogen			oo hellum		50 nitrogen	50 nitrogen	50 nitrogen	: :	50 nitrogen
OI (IIII)	3.00	3.00	3.00	0.28	2.0	0.32	0.2	6			2.0		0.5	000	3.00	0.30	0.30	0.32	n	3.00		0.30	0.30	0.32		3.00	0.22	! !	0.2	0.32	0.2	0.30	0.30		0.5	0.2	0.2		0.2
	(100-120mesh)	(100-120mesh)	(100-120mesh)		(100-120 mesh)						r (100-120 mesh)				(80-100mesh)			/ 40 0 m 0 0 m 0 of 1	(usemont-ns)	(80-100mesh)	•					(80-100mesh)	(vgemont-ne)												
COLUMN TYPE	Gas-Chrom Q (100	Gas-Chrom Q (100	Gas-Chrom Q (100	open tubula	Gas-Chrom Q (10	open tubular	open tubular		D OD	oben	open tubula 3as-Chrom O	1	open tubular	and tubular	romosorp W	ø	ø	3	MOSOLD	on Chromosorb W HP		<b>o</b>	Φ	ø	) (o,p'-DDT)	H	3% W/W on Chromosorb W MP Wall-coated open tubular		open tubular	Œ	open tubular	Ð	e open tubular	•	open tubular	open tubular	open tubular		open tubular
	18 w/w on G	18 w/w on G	18 w/w on G		15% w/w on	wall-coated	wall-coated	1000 de 1000		wall-coated	wall-coated		wall-coated	(p, p' - DUI)	3% w/w on C	bonded phase		bonded phase	3% W/W	38 W/W			bonded pnase	bonded phase		38 w/w on C	wall-coated		wall-coated	bonded phase	wall-coated	bonded phase	bonded phase		wall-coated	wall-coated	wall-coated	,	wall-coated
COLUMN MATERIAL	glass	glass	glass	glass		oroethyl)thio)} quartz glass	quartz glass	, [	quartz glass quartz qlass	1	quartz glass	-trifluoro	quartz glass	13 (4-chlorophenyl)	quartz yrass qlass	quartz qlass	quartz glass	quartz glass	quartz glass 2-bis(4-methoxyphenyl)	qlass		9	Hall 1.1 1-trichloro-2.2-bis(chloropheny)) (D		henyl)-2		quartz glass quartz glass	i i	quartz glass	quartz qlass	9.19	glas	quartz glass glass		quartz glass	quartz glass	-triiituoro quartz glass	, ,	quartz glass
STATIONARY PHASE	-en-3beta-ol OV-1	ov-1	OV-1	OV-101	SE-30	1,1'-oxybis[2-((2-chloroethyl)t J&W SCI DB-1 quartz gl	1,1,1,2-tetrachloro Me silicone	1-trichloro	0V-1	SP-2100	Me silicone	1-trichloro-2, 2, 2-trifluoro	Me silicone	1,1,1-trichloro-2,2-bis(4-chlor	OV-1	OV-1			SE-30 -trichloro-2.2-b	ov-1	OV-1/SE-30	0V-1	0V-1 -ichloro-2,2-b	OV-1	ro-2-(2		SE-30 CCP Sil 5CB	-	Me silicone	1,1,2,2-tetrachiore SAC OV-1	Me silicone	ov-1	OV-1 SP-2100	ribromo	Me silicone	Me silicone	Z-trichloro-1,2,2-trifiluoro Me silicone quartz gl		Me silicone
COLUMN	4)	nol	none			1,1'-0xy J&W SCI	1,1,1,2-		Hail Hall	Supelco		1,1,1-tr	,	1,1,1-tr	Chrome	Hall	Hall	SAC	PEC 1-1-1-	4		Hall	Hall	SAC		Ç	CHROMPAK	1,1,2,2-		SAC	} i	Hall	Hall Supelco	1,1,2-tribromo	1	1,1,4,1,1	1,1,2-tr	1,1-dibromo	
LTP	ergost-8(14) 3215	ergostanol 3210	ergostanone 3240	ethanal 0363	6960	ethane, 1910	ethane,	ethane,	0630	0632	0635	ethane,	0528	ethane,	2290	2293	2300	2300	2330	2410	2417	2420	2420	2232	ethane,	2220	2242	ethane,	1269	ethane,	0886	0888	0888	ethane,	1013	0751	ethane, 0529	ethane,	0724

LIT	    	nen	-	<b></b>	0	5 <del>8</del> 2	-	<b>- 4</b>	28	41	90	55	52	40	c	40	დ i	ນ ດ ນາ ດ	1	40	40	•	m u	റെത	40	<b>a</b>	•	48	7.8	040	3	40	& a	, ,	ന	40
SAMPLE TYPE	standard standard	essential oil	standard	standard	atandard	standard	7	standard	standard	standard	atandard	standard	standard	standard	- t	standard	standard	standard standard	•	standard	standard		essential oil	cap water standard	standard	at and and		standard	standard	standard		standard	standard		essential oil	standard standard
_	4 helium		4 helium	4 helium	15 helium	50 hydrogen	4 boliss		50 hydrogen	15 helium	50 nitroden		25 hydrogen	50 nitrogen	100 belium			25 hydrogen 25 hydrogen		50 nitrogen	50 nitrogen		50 helium	50 helium		25 hudrogen		25 hydrogen	on nydrogen	50 nitrogen	1 (	50 nitrogen	50 nitrogen 50 hydrogen		50 helium	
	3.00	0:30	3.00	3.00	200	0.32	6	3.00	0.32	0.32	6	0.31	0.31	0.2		7 7 7	2.0	0.31		0.2	0.2	6	0.30	0.30	0.2	0.22		0.22	0.32	0.2		. z	0.20	;	0.30	0.2
COLUMN TYPE	(p,p'-TDE) 3% w/w on Chromosorb W HP (80-100mesh)	ed phase	'w on Chromosorb W HP (80-100mesh)	(pertnane) 3% w/w on Chromosorb W HP (80-100mesh)	tonded these	288	(o,p'-TDE)	W/W on chicomosold war (ev-loamesa)	ded phase	1-coated open tubular			bonded phase	wall-coated open tubular	for the second of the second s	,	on Gas-Chrom Q (100-120 mesh)	bonded phase bonded phase		wall-coated open tubular	wall-coated open tubular	•	+t1	open cubutar	coated open tubular	(4,4'DDD) wall-coated open tubular	2,4'DDD)	open tubular	bonded phase	wall-coated open tubular		Wall-coated open tubular	wall-coated open tubular bonded bhase	open tubular	bonded phase	phase sated open tubular
COLUMN MATERIAL	ll .			4-etnyipnenyi) (p glass	1,1-dichloro-2,2-bischlorophenyl (TDE)	quartz glass	oropheny1) -2- (4-c	glass qlass	quartz glass bon	g E	State of see	) ! !	glass	quartz glass		grass quartz glass	•	gtass	tetrachloro	quartz glass	quartz glass	, 1	quartz glass	grass quartz qlass	glass		henyl)	quartz glass	quartz grass	quartz glass	,	quartz glass	quartz glass	,	quartz glass	g
IN STATIONARY :N PHASE	1,1-dichloro-2,2-bis(4-chlorophenyl)	OV-1	1,1-dichloro-2,2-bis(4-ethylphenyl) 0V-1 glass	1,1-dichloro-2,2-bis(4-ernyiphenyi) OV-1 glass	chloro-2,2-bisc	OV-1	1, 1-dichloro-2-(2-chlorophenyl)	OV-1/SE-30	SAC OV-1 quartz	.aj (z-cnioroetny :I DB-1	bromo Ma oilicopa	OV1-1/SE-54	HP OV1-1/SE-54 g1: $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$	Me silicone	1,2-dichloro	Me silicone	SE-30	OV1-1/SE-54	-difluoro-1,1,2,2-tetrachlor	Me silicone	lodo Me silicone	1-bromo-2-chloro	OV-1		Me silicone	2,2-bis(4-chloropheny CHROMPak CP Sil 5CR	- (2-chlorophenyl) -2- (4-chlorop	CHROMPAK CP Sil 5CB	T- 00	Me silicone SE-30		Me silicone loro	SE-30 OV-1		0V-1	Me silicone
	1,1-di	Hall	1,1-di	1, 1-d1	1,1-di	SAC	1, 1-di		SAC	J.Z-DIB	1,2-dibromo	НP	HP	TD-7'T	1,2-di		į	HP HP	N	•	1, 2 - al 1.0 do Me	1-brom	Hall	Superco Hall		2,2-bi	2-(2-0	CHROMP	SAC		chloro	hexachloro	SAC	Supelco	Hall Hall	† *
LTP INDEX	ethane, 2200	2212	ethane, 2175	ethane, 2175	ethane,	2213	ethane,	2130	2146	ethane, 1623	ethane,	0803	0805	ernane, 1016	ethane,	0632	0640	0641	ethane,	0704	ethane, 1008	ethane,	0704	0704	0707	ethane,	ethane,	2118	2146 ethane,	0518	ethane,	0429 ethane,	1000	1057	1057	1073

LIT	40	40	40	۳,	om	, rv	40	0	) P	38	11	41	38	7	) F	40	48	·	m	m	9	o	28		40	ĸ	•	) r	m	S	m į	32	40 38	-	-	40	40
SAMPLE TYPE	standard	standard	standard	lio Leitadose		tap water	standard	400000000000000000000000000000000000000	e candata	standard	standard	standard	standard	£009	1	standard	שורה מוריים מוריים	standard		essential oil	7 7 7	standard	standard	4 1	standard	tap water	400000	Scandard	essential oil	tap water	standard	standard	standard standard	77 77 17 17	stalidard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen	50 nitrogen	50 helium	0 20	,	50 nitrogen	50 011		8		15 helium	7	80 mitrogen		50 nitrogen	25 hydrogen	4	20	50 helium	26 hudrogen	7	20		on urreden		50 nitrogen	12 A 11 C 12 A 21	50 helium		50 helium		50 nitrogen 2	A Paliforn		50 nitrogen	50 nitrogen
(mm)	0.2	0.2	0.2	0.30	0000		0.2	۰	4	2.0	0.30	0.32	2.0	20		0.2	0 22	3.00	0.30	0.30	000	3.00	0.32	c	7.7		,	•	0.30		0.30	o. 0	2.0	9	9	0.2	0.2
										(100-120 mesh)			00-120 mesh)					(80-100mesh)	•			(80-100mesh)											r (100-120 mesh)	(80~100meeb)	(meemoot_oo)		
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	מס מילד במה הירול מס מילד	bonded phase	wall-coated open tubular	wall-coated open tubular	ne ludich many bothon-line	open	15% w/w on Gas-Chrom Q (10	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	teludut meno beteon-lieu		wall-coated open tubular	(P, P' -bbb)	3% w/w on Chromosorb W HP	bonded phase	bonded phase	-Z-(4-chlorophenyl) (o,p'-DDE)	3% w/w on Chromosorb W HP	bonded phase		waii-coated open tubular	wall-coated open tubular	wall-coated onen fubular		bonded phase	wall-coated open tubular	bonded phase		wall-coated open tubular 15% w/w on Gas-Chrom Q (10	The company of the St.	W W CIT CHI CHI CHI CHI CHI	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	-dichloro quartz glass	quartz glass	7	quartz glass	رخ 1	quartz glass	-	quatic grass		quartz glass	quartz glass		ָּהָלָ בּיַרָּ	grand	233	enyı)		quartz glass			Ĝ	quartz glass	7	quartz glass	glass	marte alaga	1	quartz glass		quartz glass		quartz glass	500	rest f	quartz glass	quartz glass
A STATIONARY A PHASE	Me silicone	Dromo-1,2 e silicone	como Me silicone	loro	017-1		Me silicone	rac-1, 2-dibromo-1, 2-dichloro	Me allicone	SE-30	SE-30	niour DB-1	Z, Z, Z-trichloro SE-30	101	ov-ior	Me silicone	1,1-dichloro-2,2-bis(4-chioroph Cubowbak CD e11 5CB	OV-1	OV-1	ov-1	1,1-dichloro-2-(2-chloropheny1)	OV-1	OV-1		Me silicone bromotrichloro	SP-2100	cis-1,2-dibromo	loro	ov-1			SE-30	Me silicone SE-30	senyl OV-1	trans-1,2-dibromo	Me silicone	Me silicone
COLUMN	iodo	meso-1,	pentabromo M	pentachloro	Hall	Supelco	•	rac-1,			SGE	Z, Z -cnloar Jew sci DB-		phenyl	1.1-dichloro	;	I, I-dic	Chrone	Hall	Hall	1,1-dit	Carone	SAC	bromo	hromot	Supelco	cia-1,,	retrachloro	Hall	Supelco	Hall			tetraphenyl	trans-1	7 2 2	_ C T W II 3 _ T
LTP INDEX		ethane, 1076	ethane, 1525		0820				10/3	0427		•	ethanol, 0862	ethanol,	1104		ethene,				ethene,				0450	_	ethene,					1610		ethene,			0551

LIT REF ===	40	ഗനാ	35 35	40 38	40	40	40	28	40	40	44	44	40	38	4	49	49	23	49	#	г	1 23	23	38	23	∞
SAMPLE TYPE	standard	tap water essential oil	standard standard	standard standard	standard	standard	standard	standard	standard	standard	tap water	tap water	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen			50 nitrogen 2	50 nitrogen	50 nitrogen	50 nitrogen	50 hydrogen	50 nitrogen	50 nitrogen	25 helium	25 helium	50 nitrogen	7		15 helium	15 helium	15 helium	15 helium	4 helium	4 helium	4 helium 15 helium	15 helium	7	15 helium	50 nitrogen
ID (mm)	0.2	0.30	0	0.2 2.0	0.2	0.2	0.2	0.32	0.2	0.2			0.2	2.0		0.25	0.25	0.25	0.25	3.00	3.00	3.00	0.25	2.0	0.25	0.20
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular bonded phase	bonded phase wall-coated open tubular	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)		wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular			wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)		bonded phase	bonded phase	wall-coated open tubular	bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh) wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	glass quartz glass	9,	quartz glass	quartz qlass	quartz gla	quartz glass	quartz glass	quartz glass	quartz glass			quartz glass		glass	quartz glass	quartz glass	quartz glass	quartz glass	glass	lamine) glass	glass quartz glass	quartz glass	1	quartz glass	quartz glass
COLUMN STATIONARY ORIGIN PHASE	tribromo Me silicone	trichloro Supelco SP-2100 Hall OV-1	OV-1	licone	1,2-dichloroethyl ethyl	2,2'-dichlorodiethyl Me silicone	2-bromoethyl ethyl Me silicone	4-bromophenyl phenyl SAC OV-1	chloromethyl ethyl Me silicone	chloromethyl methyl Me silicone	di-n-hexyl HP Me silicone	dibenzyl HP Me silicone	dichloromethyl methyl Me silicone	ether, methyl-t-butyl 0562 SE-30	/SE-30	dioxin DB-1	nonoxon DB-1	tazine J&W Sci. SE-30	0	1-phenyl OV-1		ine, 2-phenyl OV-1 J&W Sci. SE-30	ethylbenzoylecgonine 2219 J&W Sci. SE-30	ethylene, trans-1,2-di-t-butyl 0793 SE-30	rphine Jaw Sci. SE-30	phenyl SE-30
LTP INDEX		ethene, 0673 0677		6890			ether, 2 0798	ether, 4	ether, c 0632	ether, c 0544	ether, d 1287		ether, d 0657	ether, n 0562	ethinylo 2719	ethion d 2077	ethion monoxon 2142	ethoheptazine 1823 J&W S	ethyl gu 2424	ethylamine, 1050	ethylamine, 0780	ethylamine, 1125 1133 J&W	ethylber 2219	ethylene 0793	ethylmorphine 2364 J&W Sc	ethyne, 0862

LIT REF	1	നവന	47 53	23	8534 4 8634 44	ოდ	44 56 1 30	44	30 56	56	56 1 44	23 47	23	23	18	19	19	38	25	25
SAMPLE TYPE	standard	standard tap water essential oil	standard standard	standard	essential oil standard tap water tap water	essential oil standard	tap water standard standard standard	tap water	standard standard	standard	standard standard tap water	standard standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	4 helium	50 helium 50 helium	25 helium 2 nitrogen	15 helium	50 helium 12 25 helium 25 helium		25 helium 12 4 helium 25 nitrogen	25 helium	25 nitrogen 12	12	12 4 helium 25 helium	15 helium 25 helium	15 helium	15 helium	9.			2	0.1	3.0
I QI (um)	3.00	0.30	0.20	0.25	0.30	0.30	0.20 3.00 0.33		0.33	0.20	3.00	0.25	0.25	0.25	m			2.0	3.00 3	3.00 3
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh)	phase oated open tubular phase	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	phase phase	bonded phase wall-coated open tubular	bonded phase 3% w/w on Chromosorb W HP (80-100mesh) 3 wall-coated open tubular		wall-coated open tubular bonded phase	bonded phase	phase on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	/w on Celite 560 AW (60-80mesh)	/w on Celite	25%w/w on Celite	15% w/w on Gas-Chrom Q (100-120 mesh) 2	w/w on Gas-Chrom Q (100-120mesh)	1% w/w on Gag-Chrom Q (100-120mesh)
COLUMN MATERIAL	glass 3% v	quartz glass bonded glass wall-c quartz glass bonded	quartz glass quartz glass 3% v	quartz glass wall	quartz glass bonded quartz glass bonded	quartz glass bonc quartz glass wall	quartz glass bonc glass 3% v quartz glass wall		quartz glass wall quartz glass bonc	quartz glass bonc	quartz glass bonded glass 3% w/w	quartz glass wall quartz glass	quartz glass wall	quartz glass wall	aluminium 10%w/w	25%w/w	2584	15%	glass 18 v	glass 1% v
IN STATIONARY IN PHASE	0V-1	OV-1 SP-2100 OV-1	Me silicone SE-30	SE-30	OV-1 Me silicone Me silicone 3-chloro Me silicone	.1 .30	e silicone e silicone V-1 E-30	-chloro Me silicone -nitro	SE-30 Me silicone	3-nitro-9- Me silicone	Me silicone OV-1 Me silicone	Sci. SE-30 Me silicone N-desalkyl		1	Z-propenyi ester SE-30	enzyl egler SE-30	cinnamyi escei SE-30 ethul ester	SE-30	ov-1	OV-1
LTP COLUMN INDEX ORIGIN	eugenol 1368	Ienchone 1067 Hall 1067 Supelco 1067 Hall	fenitrothion 1922 HP 1944 PEC	zentanyı 2681 J&W Sci	fluoranthene 1352 Hall 2023 HP 2030 HP fluoranthene, 2239 HP	6	GE P	າພິ		Iluorene, 5-ni 2149 HP	1698 HP 1705 1708 HP	2741 J&W Sc 2788 HP flurazebam. N-		JAW	acid,	acto,	1332 forming actid of	, actu,	3280	3390 3390

LIT REF	38	46	46	32	46	32	38	46	46	46	19	21	21	21	21 21 21	19	н	49	23	<b>-</b>	44	47	44	44	40	15
SAMPLE TYPE	standard	food	food	standard	pooj	standard essential oil	standard standard	food	food	food	standard	standard	standard standard	standard	standard standard standard	standard	standard	standard	standard	standard	tap water	standard	tap water	tap water	standard	standard
LEN CARRIER (m) GAS	2	80 nitrogen	80 nitrogen	100 helium	80 nitrogen	100 helium 50 helium		80 nitrogen	80 nitrogen	80 nitrogen		1.5 argon	1.5 argon 1.5 argon	1.5	1.5 argon 1.5 argon 1.5 argon		4 helium	15 helium	15 helium	4 helium	25 helium	25 helium	25 helium	25 helium	50 nitrogen	
ID (mm)	2.0	0.28	0.28	0.5	0.28	0.5	2.0	0.28	0.28	0.28		4.00	4.00	4.00	4.00 4.00 4.00		3.00	0.25	0.25	3.00		0.20			0.2	
COLUMN TYPE	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	15% w/w Gas-Chrom Q (100-120 mesh) bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	25%w/w on Celite	trimethylsilyl derivative 10% w/w on Diatoport S (80-100mesh)	<pre>derivative     10% w/w on Diatoport S (80-100mesh)     10% w/w on Diatoport S (80-100mesh)</pre>	0% w/w on Diatoport S	10e 108 w/w on Diatoport S (80-100mesh) 108 w/w on Diatoport S (80-100mesh) 108 w/w on Diatoport S (80-100mesh)	W/w on Celite	3% w/w on Chromosorb W HP (80-100mesh)	bonded phase	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)					wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL		glass	(furfuryl alcohol) glass	glass	glass	,	quartz glass	n I	glass	glass			trimethylsilyl der	,	trimethyl811Y1 derivative 1 1 1		glass	quartz glass	quartz glass	glass		quartz glass			quartz glass	ethyl stainless steel
MN STATIONARY IN PHASE	SE-30	OV-101	ymethyl OV-101	SE-30	ionyl OV-101	ydro SE-30	SE-30	(hydroymethy1) OV-101	5-methyl OV-101		methyl ester SE-30	4-methoxypheny OV-1	phenylacetyl, OV-1		Y1,	l, dimethyl ester SE-30	dibenzoate isomer OV-1	en analog DB-1	Sci. SE-30	OV-1	Me silicone	ne Me silicone	Me silicone	Me silicone	1-bromo Me silicone	2,6,10,14-tetramethyl SE-30 stai
LTP COLUMN INDEX ORIGIN	furan 0498	furan, 2-acetyl 0896	furan, 2-hydr 0856	furan, 2-methyl 0501	furan, 2-propionyl 0984 Ö	₽	0624 Hall 0626	al, 5-	furfural, 5-m 0984	furfuraldehyde 0812	furoic acid,	glutamic acid, 2319	glutamic acid, 2039		ine,	glutaric acid,	λŢ	guthion oxygen 2358	haloperidol 2887 J&W S	harman 2000	heneicosane 2100 HP	heptabarbitone 2098 HP	heptacosane 2700 HP	heptadecane 1700 HP	heptadecane, 2073	heptadecane, 1893

LIT REF	æ	ശനന	40	40	40	8	82	8	7	81	8	7	40	37	8	8	8	7	3.2	, «	1 01	2 5	; ~	37
SAMPLE TYPE	standard	tap water essential oil standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	gtandard	standard	standard	standard	standard
ID LEN CARRIER (mm) (m) GAS	0.20 50 nitrogen	0.30 50 helium 0.30 50 helium	0.2 50 nitrogen	0.2 50 nitrogen	0.2 50 nitrogen	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.2 50 nitrogen	0.25 108 helium 0.27 100	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium	0.25 108 helium		.25 108	0.25 108 helium	.25	0.27 100
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	open o	open	wall-coated open tubular	uedo	wall-coated open tubular
COLUMN MATERIAL	quartz glass	glass quartz glass quartz glass	quartz glass	quartz glass	quartz glass	l glass	glass	glass	glass	glass	glass	glass	quartz glass	glass soda glass	glass	glass	glass	glass		soda grass	glass	,	dlass	soda glass
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	ne, 1,6-	heptanal 0876 Supelco SP-2100 0876 Hall OV-1 0876 Hall OV-1	heptane, 1-bromo 1027 Me silicone		heptane, 1-iodo 1123 Me silicone		_ OI		heptane, 2,4,6-trimethyl 0874 Quadrex OV-101	heptane, 2,4-dimethyl 0821 Quadrex OV-101	heptane, 2,5-dimethyl 0833 Quadrex OV-101	O.	heptane, 2-chloro 0894 Me silicone	heptane, 2-methyl 0761 Quadrex OV-101 0766 PEC OV-101	a, 3,3-dime Quadrex	heptane, 3-ethyl 0868 Quadrex OV-101	- (3)		e, 3-methyl Quadrex	heptane, 4,4-dimethyl	Suadrek e, 4-ethyl Ouedrek	m	heptane, 4-propyl 0945 Onadrex OV-101	e, n-

LIT	19	19	19	11	38	നന	'nΩ	28	28	0.80	41	44	44	40	40	15	15	15	ოო	4 4 4	19 46	1 44 19	80	ω	80
SAMPLE TYPE	standard	standard	standard		standard	essential oil	tap water	standard	standard	standard standard	standard	tap water	tap water	standard	standard	standard	standard	standard	essential oil standard	standard tap water	standard food	standard tap water standard	standard	standard	standard
LEN CARRIER (m) GAS				25 nitrogen	22	50 helium		50 hydrogen	50 hydrogen	108 helium 50 nitrogen		25 helium	25 helium	50 nitrogen	50 nitrogen				50 helium 50 helium	25 helium	80 nitrogen	4 helium 25 helium	50 nitrogen	50 nitrogen	50 nitrogen
TD (mm)				0.30	2.0	0.30		0.32	0.32	0.25				0.2	0.2				0.30		0.28	3.00	0.20	0.20	0.20
COLUMN TYPE	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase	poured phase wall-coated open tubular	bonded phase	bonded phase	wall-coated open tubular wall-coated open tubular				wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase		25%w/w on Celite wall-coated open tubular	te) 3% w/w on Chromosorb W HP (80-100mesh) 25%w/w on Celite	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL				quartz glass	glass	glas	quartz glass glass	quartz glass	quartz glass	glass quartz glass	glass			quartz glass	quartz glass	thyl (phytane) stainless steel	stainless steel	stainless steel	acid) quartz glass quartz glass	glass	glass	er (methyl palmitate) glass 2	quartz glass	quartz glass	quartz glass
STATIONARY PHASE		ao -	methyl ester SE-30	SE-30	OV-101 SE-30	0V-1	OV-1 SP-2100	5-methyl-3- OV-1	6-metny1-5- OV-1	OV-101 SE-30	OV-1/SE-30	Me silicone	Me silicone	1-bromo Me silicone	1-chloro Me silicone	2, 6, 10, 14-tetramethyl (phyt SE-30 stainless	2, 6, 10-trimethyl SE-30	3,7,11-trimethyl SE-30	acid, (palmitic OV-1 OV-1	7-1/SE- silic	acid, ethyl ester SE-30 OV-101	acid, methyl ester OV-1 G. Me silicone SE-30	SE-30	SE-30	SE-30
LTP COLUMN INDEX ORIGIN	heptanoic acid, 1163	acid,	c acid,	heptanol, 1- 0948 SGE	0953 0955	5	0866 Hall 0866 Supelco	E	one,	heptene, 1- 0685 Quadrex 0689	hexachlorophane 2807	hexacosane 2600 HP	hexadecane 1600 HP	hexadecane, 1-br 1968	hexadecane, 1-ch 1871	hexadecane, 2,6, 1814	hexadecane, 2,6,	hexadecane, 3,7, 1751	hexadecanoic aci 1945 Hall 1945 Hall		hexadecanoic aci 1979 1981	canoic			hexadiene, 1,5- 0575

COLUMN MATERIAL	COLUMN TYPE	9 H		LEN CAR (m) G	CARRIER GAS	SAMPLE TYPE
quartz glass	wall-coated open tubular	яц	0.20	50 nj	nitrogen	standard
quartz glass	wall-coated open tubular	ar	0.20	50 ni	nitrogen	standard
quartz glass	wall-coated open tubular	ar	0.20	50 ni	nitrogen	standard
quartz glass glass quartz glass	bonded phase wall-coated open tubular bonded phase	ц	0.30	50 he	50 helium 50 helium	essential oil tap water standard
quartz glass glass quartz glass	bonded phase wall-coated open tubular bonded phase	a r	0.30	50 he	50 helium 50 helium	standard tap water essential oil
quartz glass	wall-coated open tubular	ar	ó.2	50 ni	nitrogen	standard
quartz glass	wall-coated open tubular	аг	0.2	50 nj	nitrogen	standard
quartz glass	wall-coated open tubular	ar.	0.2	50 nj	nitrogen	standard
quartz glass	wall-coated open tubular	ar	0.2	50 nj	nitrogen	standard
quartz glass	wall-coated open tubular	ıe	0.2	50 ni	nitrogen	standard
glass	wall-coated open tubular	ar	0.25 1	108 he	helium	standard
glass	wall-coated open tubular	ar	0.25 1	108 he	helium	standard
glass borosilicate glass borosilicate glass	wall-coated open tubular wall-coated open tubular wall-coated open tubular	a a c c	0.25 1 0.2 0.2	108 he 17 17	helium	standard standard standard
glass soda glass	wall-coated open tubular wall-coated open tubular	ar ar	0.25 1 0.27 1	08 he	108 helium 100	standard standard
glass	wall-coated open tubular	я	0.25 1	108 he	helium	standard
glass soda glass	wall-coated open tubular wall-coated open tubular	ar ar	0.25 1	108 he 100	helium	øtandard øtandard
glass soda glass	wall-coated open tubular wall-coated open tubular	ar ar	0.25 1	108 he 100	helium	standard standard
glass soda glass	wall-coated open tubular wall-coated open tubular	ar ar	0.25 1	108 helium 100		standard standard
quartz glass	wall-coated open tubular	a r	0.2	50 nj	nitrogen	standard
quartz glass	wall-coated open tubular	ar	0.2	50 ni	nitrogen	standard
glass glass eoda glass	wall-coated open tubular wall-coated open tubular wall-coated open tubular	ar ar	0.25 1 0.5 1 0.27 1	108 he 100 he 100	helium helium	standard standard standard
	page 129					

hexadiene, 2,5-dimethyl-2,40862
hexadiene, cis, trans-2,40663
hexadiene, trans, trans-2,40663
hexanal
0773 Ball
0773 Hall
0932 Supelco SP-2100
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LIT REF

LEN CARRIER

a

STATIONARY PHASE

COLUMN

silicone

2-chloro 2-methyl

hexane, 0795

PEC

LIT REF	8	37	8	37	40	2 37	32 37	m	37	28	18	19	19	19	19	10 38	നഗ	÷ 88	80	10	10	CJ 69	ιń
SAMPLE TYPE	standard	standard standard	standard	standard standard	standard	standard standard	standard standard standard	essential oil	standard	standard	standard	standard	standard	standard	standard	standard standard	essential oil tap water	standard	standard	ı standard	standard	standard standard	tap water
ID LEN CARRIER (mm) (m) GAS	0.25 108 helium	0.25 108 helium 0.27 100	0.25 108 helium	0.25 108 helium 0.27 100	0.2 50 nitrogen	0.25 108 helium 0.27 100	0.25 108 helium 0.5 100 helium 0.27 100	0.30 50 helium	0.27 100	0.32 50 hydrogen standard	3.6					0.30 25 nitrogen 2.0 2	0.30 50 helium	0.30 50 helium 2.0 2	0.20 50 nitrogen	0.30 25 nitrogen	0.30 25 nitrogen	0.25 108 helium 0.20 50 nitrogen	
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular wall-coated open tubular	bonded phase	wall-coated open tubular	bonded phase	10%w/w on Celite 560 AW(60-80mesh)	25%w/w on Celite	25%w/w on Celite	25%w/w on Gelite	25%w/w on Celite	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase	100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	glass	glass soda glass	glass	glass soda glass	quartz glass	glass soda glass	glass glass soda glass	quartz glass	soda glass	quartz glass	er aluminium					quartz glass	quartz glass	grantz quartz glass	quartz glass	quartz glass	quartz glass	glass quartz glass	glass
COLUMN STATIONARY ORIGIN PHASE	amethy 101	3,3-dimethyl Quadrex OV-101 PEC OV-101	3,4-diethyl Quadrex OV-101	3,4-dimethyl Quadrex OV-101 PEC OV-101	3-chloro Me silicone	3-ethyl Quadrex OV-101 PEC OV-101	3-methyl Quadrex OV-101 SE-30 PEC OV-101	5,5-dimethyl~2- Hall OV-1		Z-ethyl OV-1	acid, 2-propenyl ester SE-30	ally1 SE-3	acid, ethyl ester SE-30	hexyl e	acid, methyl ester SE-30	SE-30 SE-30	3- all 0V-1	, at co			trans-3-	1- Quadrex OV-101 SE-30	5,5-dimethyl-z- Supelco SP-2100
LTP CC INDEX OF	hexane, 3,3 0971 Qua	hexane, 3,3- 0735 Quac 0741 PEC	hexane, 3,4 0937 Qua	hexane, 3,4. 0764 Quac 0770 PEC	hexane, 3-c 0795	hexane, 3-e 0770 Qua 0775 PEC	hexane, 3-me 0669 Quad 0675 0676 PEC	hexane, 5,5- 0709 Hall	hexane, n- 0600 PEC	hexanoic acid, 1117 SAC	hexanoic ad 1056		hexanoic ac 0981			hexanol, 1- 0848 SGE 0854	9	0761 Hall 0768	hexatriene, 0647	hexen-1-01, 0818 SGE	0 2 .		hexene, 5,7 0709 Sup

LIT	21	21	21	21	21	21	7	-	21	21	23	Ŋ	നന		28 8	00	•	23	23	23	23	23	23	23	49	-	23	56
SAMPLE TYPE	standard	standard	Btandard	standard	standard	standard	standard	standard	standard	standard	standard	tap water	standard essential oil		standard standard	standard		standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	1.5 argon	1.5 argon	1.5 argon	1.5 argon	1.5 argon	1.5 argon	4 helium	4 helium	1.5 argon	1.5 argon	50 hydrogen		50 helium 50 helium		50 hydrogen 50 nitrogen	50 nitroden		15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	4 helium	15 helium	12
ID (mm)	4.00	4.00	4.00	4.00	4.00	4.00	3.00	3.00	4.00	4.00	0.32		0.30	)    -	0.32	0.20		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.00	0.25	0.20
	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)	0-100mesh)	(80-100mesh)	(80-100mesh)																(80-100mesh)		
COLUMN TYPE	ß	on Diatoport S (8	on Diatoport S (8	iatoport S	iatoport S	C2	romosorb W HP	3≥ -	-i 03	Ø		wall-coated open tubular			open tubular	coen tubular	oben caparar	open tubular	open tubular	open tubular	open tubular	open tubular	open tubular	wall-coated open tubular		Chromosorb W HP	wall-coated open tubular	an.
	10% w/w on Diatoport	w/w &	M/M %	rimethylsilyl derivative 10% w/w on Diatoport	rimethylsilyl derivative 10% w/w on Diatoport	ve 10% w/w on Diatoport	3% w/w on Chromosorb		•	trimethylsilyl derivative 10% w/w on Diatoport	honded phase	wall-coated	bonded phase	polited pilase	bonded phase			wall-coated	wall-coated	wall-coated	wall-coated	wall-coated	wall-coated	wall-coated	bonded phase	38 w/w on Ch	wall-coated	bonded phase
[NE	ı	derivative	derivative	/lsily	lsily	derivative 10			theud	rimeth																		
MATERIAL			.yl de	imethy	imethy	yl de	_,		scnox <u>y</u> j	1y1), t:	, p		glass	71000	glass		grass	glass	glass	glass	glass	glass	glass	glass	glass		glass	glass
COLUMN MATERIA	ਰ	methylsil	methylsi]	ŭ	Ħ	methylsi]	-5-phenyl qlass	glass	roxy-4-me	roxyphenj	, trees			2	tz		quartz	quartz	quartz	quartz	quartz	quartz	quartz	quartz	quartz	glass	quartz	quartz
STATIONARY PHASE	trimethylailyl OV-1	2-hydroxy, trimethylsilyl OV-1	3-hydroxy, trimethylsilyl OV-1	3-hydroxy-4-methoxy, OV-1	4-hydroxy-3-methoxy, OV-1	4-methoxy, trimethylsilyl OV-1	5-(4-methylphenyl)-5-pheny OV-1 glass	5-methyl-5-phenyl OV-1	beta-(3-hydroxy-4-methoxypheny1), OV-1	hydracrylic acid, beta-(3-hydroxyphen 1863	phenyl	SP-2100	ov-1	OV-1 (boyrabydroindane)	(nexamyarozz OV~1 SE~30	trans (hexahydroindane)	SE-30	SE-30	SE-30	ine SE-30	ine SE-30	SE-30	SE-30	SE-30	nog DB-1	ov-1	SE-30	Me silicone
COLUMN	acic, tri	acid, 2-h	acid, 3-h	acid, 3-h	acid, 4-h	acid,		-meth	ic acid,	ic acid,	ne, 1,2-dil	001		֭֝֟֝֝֟֝֜֝֞֜֝֟֝֓֓֓֓֟֝֓֓֓֓֟֝֟֜֟֓֓֓֓֓֓֟֜֟֓֓֓֓֓֟֜֜֝֡֡֡֓֜֝֡֡֡֡֡֡֡֡֡֡	in N	e, trans			rphone J&W Sci. 1	umitriptyl) J&W Sci.	nortriptyline Jaw Sci. SE-30	Sci.	W Sci.	JEW Sci. SE-30	ygen ana		N Sci.	5-nitro HP
×	hippuric 1802	ü	υ C	ic	Ö	C	hydantoin,	hydantoin, 1866	hydracrylic 2004	hydracryl 1863	.=	1596 2		1596 H	hydrindane, 0975 SAC	hydrindane,	0955	hydrocodone 2375 J&W	hydromorphone 2381 J&W S	hydroxyamitriptyline 2309 J&W Sci. SE-	hydroxynortriptyline 2325 Jaw Sci. SE-	hydroxyzine 2832 J&W	hyocyamine 2146 J&	ž	1midan ox 2266	1095 1095	Ξ.	1ndan, 5- 1501 H

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SAMPLE TYPE	standard tap water standard standard standard	tap water essential oil	tap water standard standard standard	standard	standard essential oil standard standard tap water standard	standard	standard essential oil standard standard	standard standard standard	standard standard
LEN CARRIER (m) GAS	108 helium 50 helium 50 helium 50 nitrogen 100 helium	50 helium	epoxide) 25 hydrogen 50 hydrogen 4 helium	100 helium	25 helium 50 helium 50 nitrogen 50 helium 2 4 helium	50 hydrogen 50 hydrogen	25 hydrogen 50 helium 50 helium 50 hydrogen	4 helium 2 nitrogen 50 nitrogen	25 helium :dene) 4 helium
ID (mm)	0.25 0.30 0.30 0.20 0.5	0.30	hlor 0.22 0.32 3.00	0.5	0.50 0.30 0.20 0.30 2.0 3.00	0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.33	0.22 0.30 0.30 0.32	3.00 5	0.50 chlo
			(heptac OOmesh)		rr rr (100-120 mesh) HP (80-100mesh) H- (Alordanesh)			(80-100mesh)	(1-hydroxy 3-100mesh)
COLUMN TYPE	wall-coated open tubular wall-coated open tubular bonded phase wall-coated open tubular wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase	wall-coated open tubular 4,7,7a-tetrahydro-4,7-methano-1H- wall-coated open tubular bonded phase 3% w/w on Chromosorb W HP (80-1)	wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular bonded phase wall-coated open tubular 15% w/w on Gas-Chrom Q (10 3% w/w on Chromosorb W HP	ass bonded phase	_	3% w/w on Chromosorb W HP 3% w/w on Chromosorb W HP wall-coated open tubular	wall-coated open tubular 7a-tetrahydro-4,7-methano-1 3% w/w on Chromosorb W HP
COLUMN MATERIAL	glass glass quartz glass quartz glass quartz glass	nyl glass quartz glass	3-epoxy-3a, glass glass	glass	glass glass glass	glass glass glass glass glass glass glass glass glass	9919	glass quartz glass quartz glass	2,3-dihydro SE-30 4,5,6,7,8,8-hexachloro-1-hydroxy-3a,4,7, OV-1 glass
STATIONARY PHASE	OV-101 SP-2100 OV-1 OV-1 SE-30 SE-30	1,1,3-trimethyl-3-phenyl Supelco SP-2100 gl Hall OV-1 qu	Supelco SP-2100 glass 1,4,5,6,7,8,8-heptachloro-2, CHROMPAK CP Sil 5CB quartz SAC OV-1 quartz OV-1 glass OV-1/SE-30 glass	SE-30	SE-30 glass OV-1 quartz SE-30 quartz OV-1 quartz SP-2100 glass SE-30 glass	00-1 00-1 00-1 00-1 00-1 00-1 00-1 00-1 00-1 00-1 00-1 00-1 00-1	CP Sil 5CB quartz CV-1 quartz CV-1 quartz CV-1/SE-30 quartz	-1, -30	dro SE-30 8,8-hexachloro OV-1
COLUMN	Quadrex Supelco Hall	1,1,3-trimet Supelco SP- Hall OV-	Supelcon 1,4,5,6, CHROMPAK SAC	T Moont 7	100	SAC SAC SAC SAC SAC SAC SAC SAC SAC SAC	OMP AK	PEC 1-methyl	2,3-dihydro SE 4,5,6,7,8,8
LTP	indane 1013 1014 1014 1014 1018	indane, 1695 1695 indane.	1081 indane, 1975 2012 2015 2015	1077	1017 1020 1023 1023 1023 1023 1059	16106, 1834 1834 1939 1939 2042 2042 2063 2063 2097 2097 2234 2234	1843 1870 1870 1873 1880	1890 1968 indene,	indene, 1012 indene, 1955

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SAMPLE TYPE	tap water standard essential oil	standard	standard	atandard		standard	standard	standard	Brandard	standard	standard standard		scandard	standard		standard	standard			standard	Scandard			standard	standard		standard		standard		standard	5	standard	standard	standard		
LEN CARRIER (m) GAS	50 helium 50 helium	4 helium	4 helium				50 nitrogen	4 helium		4	15 helium 2 nitrogen	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	42 helium		42 helium	4 helium			50 nitrogen			50 hydrogen	42 hellum	50 hydrogen		42 helium		50 nyarogen		42 helium			50 nitrogen	50 nitroden	50 hydrogen	
ID (mm)	0.30	3.00	3.00				0.20	3.00	07.0	3,00	0.25	9	67.0	0.30	0	05.0	3.00		0.30	0.30	?	0.30	0.30	0.30	0.30	0.30	0.30	ć	9.00	900	0.30	)    -	3.00	0.30	0.30	0.30	0.30
		(80-100mesh)	(80-100mesh)					(80-100mesh)	(captan)	(80-100mesh)	(80-100mesh)						(80-100mesh)	•															(80-100 mesh)				
COLUMN TYPE	wall-coated open tubular bonded phase bonded phase	3% w/w on Chromosorb W HP	3% w/w on Chromosorb W HP	osew, on Celite	5	25%w/w on Celite	wall-coated open tubular	mosorb W HP	-[(trich]oromethy])this]-1H-	HP	bonded phase 3% w/w on Chromosorb W HP	!	wall-coated open tubutar	wall-coated open tubular		wall-coated open tubular	3% w/w on Chromosorb W HP		oben	wall-coated open tubular	ii odo	oben	-coated open	wall-coated open tubular	wall-coated open tubular	-coated open tubul	wall-coated open tubular		wait-coated open tubular	1	coated open			wall-coated open tubular	wall-coated open tubular	-coated	-coated open
COLUMN MATERIAL	glass quartz glass quartz glass	glass	qlass	er er	H		quartz glass		quartz glass 7 7s-tetrabudro-2	Jass	quartz glass quartz qlass	١ ٦	quartz glass	glass	ester	glass	ם נ		glass	glass	1 20	glass	glass	glass	olass olass	glass	glass	u,	glass	G + R. S.	grass glass	1	glass	glass	glass	glass	glass
STATIONARY PHASE	SP-2100 OV-1 OV-1	0V-1	0V-1	cinnamyl est	isobutyl ester	SE-30		one, 1	Me silicone (107)	111	DB-1 SE-30		5E-30 butul octul	SE-30	decyl ethyl	SE-30		dibutyl este	V-101	ov-101	diethyl este	OV-101	-	SE-30	uilleptyi est OV-101		SE-30	dihexyl este	OV-101			dimethyl est	ov-1	OV-101	arpentyr est OV-101		
LTP COLUMN INDEX ORIGIN	, octahydro Supelco Hall Hall	indole 1276	isatin 1712	isobutanoic acid,	isobutvric acid,	0901	•	ole-1,3	2077 HP	2	2019 2030 PEC	drine	1339 J&W SC1.	asophenalic actu, 2419	isophthalic acid,		13opnenalic acid,	isophthalic acid,		2025	1300hthalic acid,	1638	1638	1639	180phthalle actu,	2605	2608	isophthalic acid,	2414	# T # Z	2417	isophthalic acid,		1512	1sophthalic acid,	2219	2222

LITREF	72 72 72	27	27	27	58	80	19	23	21	21	20	21	21 20	20	17	19 46	23	23	23	m	71 60	4.5	4. 4. 5. 5.	13 1	13	13
SAMPLE TYPE	standard standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard	scandard	standard food	standard	standard	standard	essential oil	standard	standard	standard	standard standard	standard	standard
LEN CARRIER (m) GAS	H H H	42 helium	42 helium	42 helium	20 nitrogen	50 nitrogen		15 helium	1.5 argon	1.5	2.4	1.5 argon	1.5 argon 2.4 nitrogen	2.4		80 nitrogen	15 helium	15 helium	15 helium	50	100 nellum 50 nitrogen	50	20	<pre>6.1 nitrogen 4 helium</pre>	6.1 nitrogen	6.1 nitrogen
OI (mm)	0.30	0.30	0.30	0.30	0.23	0.20		0.25	4.00	4.00	5.50	4.00	4.00 5.50	5.50		0.28	0.25	0.25	0.25	0.30	0.20	0.27	0.27	3.20	3.20	3.20
COLUMN TYPE	wall-coated open tubular wall-coated open tubular wall-coated open tubular	25%w/w on Celite	wall-coated open tubular	derivative 10% w/w on Diatoport S (80-100mesh) 10% w/w on Diatoport S (80-100mesh)	derivative atoport S	lerivative w/w on Chromosorb W	10% w/w on Diatoport S (80-100mesh)	methylsilyl derivative 10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	% w/w on Chromosorb W	10% W/W on Diacopoic S (00-100mesm)	25%w/w on Celite wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	o o	wall-coated open tubular wall-coated open tubular			10%w/w on Chromosorb W HMDS (60-80mesh) 3% w/w on Chromosorb W HP (80-100mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)					
COLUMN MATERIAL	ear glass glass glass	pentyl ester glass		. ester glass	glass	quartz glass	អ្ន	quartz glass	trimethylsilyl d		tri	•	trı	trimethylsilyl derivative 13		glass	quartz glass	quartz glass	quartz glass	quartz glass	glass quartz qlass		glass	stainless steel glass	stainless steel	stainless steel
STATIONARY PHASE	dipropy OV-101 OV-101 SE-30	heptyl SE-30	methyl SE-30	nonyl propyl SE-30	OV-101		cinnamyl ester SE-30		beta-(3-indoly1), OV-1	beta-(4-hydroxy-3-methoxyph OV-1	beta-(4-hydroxyphenyl), SE-30	ov-1	ဋ	nyl, 0	OV-1 ethyl ester		SE-30	SE-30	SE-30		OV-101 SE-30		OV-101 OV-101	SE-30 OV-1	d- SE-30	SE-30
COLUMN	    0	D.	lic acid,	lic acid,	line	lin	ic acıd,	ന	acid, beta	acid, bet	acid, bet			acid, beta	acid, eth		phan J&W Sci.	nol J&W Sci.	ne J&W Sci.	наіі	Quadrex				oxide,	
LTP INDEX	isophthalic 1828 1828 1828	isophthali 2416	isophthali 2459	isophthalic 2419	isoquinoline 1248	isotetralin 1179	isovaleric 1663	ketamine 1798		lactic ac			lactic ad 1795 1797		1587 Jactic ad	0801	levallorphan 2306 J&W	levorphanol 2169 JæW	lidocaine 1842 J	ě	1018 (	1029	1031	1051 1053	limonene 1148	linalool 1082

LIT REF	4	4	25	25	23	23	н	ŗ	19	19	41	21	21	21	21	21	23	23	13	13	13	13	13	13 8	23	23
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	Btandard	standard	standard	standard standard	standard	standard
ID LEN CARRIER (rm) (m) GAS			3.00 3.0	3.00 3.0	0.25 15 helium	0.25 15 helium	3.00 4 helium	3.00 4 helium			0.32 15 helium 3.00 4 helium	4.00 1.5 argon	4.00 1.5 argon	4.00 1.5 argon	4.00 1.5 argon	4.00 1.5 argon	0.25 15 helium	0.25 15 helium	3.20 6.1 nitrogen	3.20 6.1 nitrogen 0.20 50 nitrogen	0.25 15 helium	0.25 15 helium				
COLUMN TYPE			18 w/w on Gas-Chrom Q (100-120mesh)	18 w/w on Gas-Chrom Q (100-120mesh)	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	25%w/w on Celite	25%w/w on Celite	wall-coated open tubular 3% w/w on Chromosorb W HP (80-100mesh)	derivative 10% w/w on Diatoport S (80-100mesh)		<pre>1y1 derivative 10% w/w on Diatoport S (80-100mesh)</pre>	tive 10% w/w on Diatoport S (80-100mesh)	10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular	wall-coated open tubular	10%w/w on Chromosorb W HMDS (60-80mesh)	10%w/w on Chromosorb W HMDS(60-80mesh) wall-coated open tubular	wall-coated open tubular	wall-coated open tubular				
COLUMN MATERIAL	glass	glass	glass	glass	quartz glass	quartz glass	glass	glass			lene quartz glass glass	trimethylsilyl	trimethylsilyl derivative	4-hydroxy-3-methoxy, trimethylsilyl OV-1	trimethylsilyl derivative 10	derivative	quartz glass	quartz glass	stainless steel	stainless steel quartz glass	quartz glass	quartz glass				
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	linoleic acid, cis- 1309 OV-1/SE-30	linolenic acid OV-1/SE-30	lophenol 3215 OV-1	lophenone 3210 OV-1	lorazepam 2353 J&W Sci. SE-30	loxepine 2542 J&W Sci. SE-30		acid, diethyl e OV-1	malonic acid, diethyl ester 1035	malonic acid, dimethyl ester 0895	trile, 4-ch J&W SCI	ic acid, 3,4-dihydro	mandelic acid, 4-hydroxy, tri 1794 OV-1	mandelic acid, 4-hydroxy-3-me 1892 OV-1	mandelic acid, 4-methoxy, tri 1691 OV-1	mandelic acid, trimethylsilyl derivative 1469	maprotiline 2296 J&W Sci. SE-30	meclizine 3000 J&W Sci. SE-30	menth-4(8)-ene, p- 0998 SE-30	-en-1	n-2-c	7	I .	menthene, 1- 0985 SE-30 1019 SE-30	mepazine 2500 J&W Sci. SE-30	meperidine 1720 J&W Sci. SE-30

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SAMPLE TYPE	standard	standard	standard	standard standard	standard	standard standard	standard standard	standard standard	standard standard	standard	standard	standard	standard	standard	standard	standard standard standard	standard	ı standard	ı standard	standard	essential oil standard tap water standard
LEN CARRIER (m) GAS	15 helium	15 helium	15 helium	50 helium 50 helium		50 helium 50 helium	50 helium 50 helium	50 helium 50 helium	50 helium 50 helium	4 helium	15 helium	15 helium		6.1 nitrogen	6.1 nitrogen	15 helium 25 helium	15 helium	50 hydrogen	50 nitrogen	50 nitrogen	50 helium 50 helium 50 helium
ID (mm)	0.25	0.25	0.25	6.00	0.5	0.3	0.3	0.3	0.3	3.00	0.25	0.25		3.20	3.20	0.25	0.25	0.32	0.2	0.2	0.30 0.30 0.30
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	wall-coated open tubular	bonded phase bonded phase	bonded phase bonded phase	bonded phase bonded phase	bonded phase bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular		10%w/w on Chromosorb W HMDS (60-80mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)	wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase wall-coated open tubular bonded phase
COLUMN MATERIAL	quartz glass	quartz glass	quartz glass	nioi) quartz glass quartz glass	grass glass	quartz glass quartz glass	quartz glass quartz glass	quartz glass quartz glass	quartz glass quartz glass	glass	quartz glass	quartz glass	glass	stainless steel	stainless steel	quartz glass glass quartz glass	M	quartz glass	quartz glass	quartz glass	quartz glass quartz glass glass quartz glass
STATIONARY PHASE	SE-30	SE-30	SE-30	(1-propen-3-th101) OV-1 quart	SE-30 opy1 SE-30	y1 OV-1 OV-1	Py1 OV-1 OV-1	1 OV-1 OV-1	y1 ov-1 ov-1	1 0V-1	SE-30	SE-30	OV-1/SE-30	SE-30	SE-30	SE-30 OV-1/SE-30 Me silicone	SE-30	bis-(methylthio)	oro Me silicone	Me silicone	bromochlorolodo 
LITP COLUMN INDEX ORIGIN	mephenesin 1518 J&W Sci.	mephentermine 1236 J&W Sci.	mepivicaine 2025 Jaw Sci.	mercaptan, ally1 0575 SAC 0583 SAC	0778 SE- mercaptan, isopropyl 0654 SE-	mercaptan, n-butyl 0692 SAC O 0696 SAC O	mercaptan, n-propyl 0580 SAC OV 0596 SAC OV	mercaptan, pentyl 0795 SAC 0808 SAC	mercaptan, s-butyl 0647 SAC O 0681 SAC O	>	mescaline 1657 J&W Sci.	mesoridazine 3326 J&W Sci.	mestranol 2612	meth-1-ene, p- 1205	meth-2-ene, P- 0985	methadone 2121 J&W Sci. 2148 2194 HP					methane, bromoch. 0877 Hall 0883 Hall 0884 Supelco 0884 Hall

LIT REF	4 70 0 0 0 0 0	0 4	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		32 40 38	<b>ოოო</b> иო	40 83	38	4 K 4 K 6 K 6 K 6 K 6 K 6 K 6 K 6 K 6 K	. 04 . ww
SAMPLE TYPE	tap water standard essential oil standard standard standard	standard	standard standard standard	standard standard essential oil standard standard standard	standard standard standard	standard standard essential oil tap water standard	standard essential oil tap water		standard standard tap water standard essential oil standard standard	
LEN CARRIER (m) GAS	50 nitrogen 50 helium 50 helium 50 helium 50 helium		50 nitrogen 25 hydrogen 25 hydrogen	50 helium 50 helium 50 helium 50 helium 50 hydrogen 50 nitrogen	100 helium 50 nitrogen 2	50 helium 50 helium 50 helium 50 helium	50 nitrogen 50 helium		50 nitrogen 100 helium 50 nitrogen 50 helium 50 helium 60 belium	50 50
(mm)	0.2 0.30 0.30 0.30 0.30	0.2	0.2 0.31 0.31	0.30 0.30 0.30 0.30 0.32 0.32	0.5	0.30 0.30 0.30	0.2	0.2	0.2 0.30 0.30 0.30	
COLUMN TYPE	wall-coated open tubular wall-coated open tubular bonded phase bonded phase bonded phase		wall-coated open tubular bonded phase bonded phase	bonded phase bonded phase bonded phase bonded phase wall-coated open tubular bonded phase bonded phase wall-coated open tubular	wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase bonded phase bonded phase wall-coated open tubular bonded phase	wall-coated open tubular bonded phase wall-coated open tubular	-coated open 4/w on Gas-Ch	wall-coated open tubular wall-coated open tubular wall-coated open tubular wall-coated open tubular bonded phase bonded phase 15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase wall-coated open tubular bonded phase bonded phase
COLUMN MATERIAL	glass quartz glass quartz glass quartz glass quartz glass quartz glass	glas	quartz glass glass glass	quartz glass quartz glass quartz glass quartz glass quartz glass quartz glass	glass quartz glass	quartz glass quartz glass quartz glass glass quartz glass	quartz glass quartz glass glass	quartz glass	glas glas glas glas	quartz glass quartz glass quartz glass quartz glass
STATIONARY PHASE	chloro SP-2100 Me silicone OV-1 OV-1 OV-1	ich] Me	Me silicone OVI-1/SE-54 OVI-1/SE-54	ochloro OV-1 OV-1 OV-1 OV-1 SP-2100 OV-1 OV-1 Me silicone	ro SE-30 Me silicone SE-30	roiodo OV-1 OV-1 OV-1 SP-2100 OV-1	Me silicone 71 OV-1 SP-2100	Me silicone SE-30	Me silicone aloro SE-30 SP-2100 Me silicone OV-1 SE-30	ov-1 odo Me silicone mo ov-1 ov-1
COLUMN	_α mmmm		ш ш	a, dibromochloro Hall 0V-1 Hall 0V-1 Hall 0V-1 Supelco SP-21 Hall 0V-1 SAC 0V-1	e, dichloro		ΞS	e, lodo Me e, nitro SE e, tetrabromo		Hall O e, tetraiodo M e, tribromo Hall O Hall
LTP INDEX	methane 0678 0691 0693 0694 0696	methane, 0752 methane,	0680 0700 0700	methane 0753 0759 0762 0766 0768 0768 0768	methane 0515 0524 0524	methane 0779 0786 0787 0795	methane, 0904 methane, 1445	methane, 0518 methane, 0536	1054 methane 0646 0646 0655 0657 0667	0673 methane, 1862 methane, 0822 0822

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SAMPLE TYPE	essential oil standard standard	tap water standard tap water		standard	standard	standard		standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	essential oil standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 helium 50 hydrogen 50 helium	50 helium		100 helium				50 nitrogen	50 nitrogen	50 nitrogen	15 helium	2 25 nitrogen	15 helium	25 helium	15 helium	15 helium	15 helium	15 helium	50 helium 50 helium	15 helium	15 helium	15 helium	15 helium	15 helium	4 helium
OI (mm)	0.30 0.32 0.30	0:30	0.2	0.5	0.30	2.0	0.00	0.2	0.2	0.2	0.25	2.0	0.25	0.20	0.25	0.25	0.25	0.25	0.30	0.25	0.25	0.25	0.25	0.25	3.00
COLUMN TYPE		n tubular	open tubular	open tubular	n tubular	Chrom Q (100-120 mesh)	open tubular	n tubular	n tubular	open tubular	N'-(4-chloro-2-methylphenyl)-N,N-dimethyl (fundal, chlordimeform) DB-1 quartz glass bonded phase	w/w on Gas-Chrom Q (100-120 mesh) 1-coated open tubular	open tubular		open tubular	en tubular	an tubular	en tubular				en tubular		en tubular	nosorb W HP (80-100mesh)
8	bonded phase bonded phase bonded phase	wall-coated open tubular bonded phase	wall-coated ope	wall-coated ope	bonded phase	15% w/w on Gas-Chrom Q	bonded phase wall-coated ope	wall-coated open	wall-coated open	wall-coated ope	,N-dimethyl (fund bonded phase	15% w/w on Gas- wall-coated ope	wall-coated ope		wall-coated ope	wall-coated open	wall-coated open	wall-coated open	bonded phase bonded phase	bonded phase	bonded phase	wall-coated open tubular	bonded phase	wall-coated open tubular	3% w/w on Chromosorb
COLUMN MATERIAL			quartz glass		quartz glass		quartz glass glass	quartz glass	copicrin) quartz glass	quartz glass	-2-methylphenyl)-N, quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass quartz glass	g quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	glass
STATIONARY PHASE	(cont) DV-1 DV-1	SP-2100 OV-1	Me silicone Me silicone	ro SE-30	0V-1	Me silicone SE-30	OV-1 SP-2100	trichlorofluoro Me silicone	trichloronitro (chloropicrin) Me silicone quartz g	Me silicone	N'-(4-chloro DB-1	SE-30 SE-30	SE-30	Me silicone	SE-30	SE-30	e SE-30	SE-30	ketone OV-1 OV-1	oxygen analog DB-1	DB-1	SE-30	DB-1	SE-30	OV-1
×	methane, tribromo 0840 Hall 0852 SAC		<b>-</b>	methane, trichloro 0595	0603 Hall	6090 6090	III ()	methane, trichlo	ď	methane, triiodo 1243	methanimidamide, 1655	methanol 0384 0475 SGE	methapyrilene 1952 J&W Sci.	methaqualone 2197 HP	methdilazine 2421 J&W Sci.	methenamine 1191 J&W Sci.	methotrimeprazine 2490 J&W Sci.	methoxamine 1700 J&W Sci.	methyl isopropyl 0651 Hall 0651 Hall	methyl parathion 1747	methylphenidate 1702	methyprylon 1489 J&W Sci.	mobam 1873	morphine 2367 J&W Sci.	morpholine 0810

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SAMPLE TYPE	standard standard	essential oil	standard	standard	standard	standard	standard	standard	standard	standard cesontial oil		standard	standard	standard	gtandard	standard	tap water	standard	scandard	standard	standard	standard	tap water	standard	77 40 10 10	standard	standard	standard	standard	standard	in)	standard	standard	essential oil	standard	standard	standard		standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen 6.1 nitrogen	50 helium	15 helium	15 helium	15 helium	12	50 helium			50 helium				50 helium				25 hydrogen	oo nellum 100 helium					25 nitrogen	i) 25 budrogen	,	50 hydrogen	4 helium	2 nitrogen	50 nitrogen	ano (dieldri	A helium		50 helium	50 hydrogen		2 nitrogen 50 nitrogen	ano (endrin)	25 hydrogen		2 nitrogen
I QI (muu)	0.20	0.30	0.25	0.25	0.25	0.20	0.30	0.30	0.20	02.0	0.32	0.32		0.20	0.20	0.30		0.31	0.00	-	0.23	3.00	;	0.33 2	aldrii 0 22	7 7 7	0.32	3.00	Ŋ	0.2	dimeth	77.0	90.0	0.30	0.32	0.30	0.7	dimeth	0.22	?	ις
"		_																				(80-100mesh)			8-dimetnano (			_	(80-100mesh)	,	-exo-1,4:5,8-	1001.007					(80-100mesh)	-exo-1,4:5,8-	1400-1001		(80-100mesh)
COLUMN TYPE	wall-coated open tubular 10%w/w on Chromosorb W HMDS(60-80mesh)	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	ропред праве		-coated open	wall-coated open tubular	bonded phase	bonded phase	oben		wall-coated open tubular		wall-coated open tubular	bonded phase	bonded phase		wall-coated open tubular	romosorb W HP		tubular	,8-hexanydro-exo-1,4-endo-5,		bonded phase	w/w on Chromosorb W HP	ι۵	wall-coated open tubular	ပ္ပ	28 / Attention		bonded phase			3% w/w on Chromosorb W HP	1,4,4a,5,6,7,8,8a-octahydro	wall-coated open tubular 0.22 25 hydrogen		3% w/w on Chromosorb W HP
COLUMN MATERIAL	quartz glass stainless steel	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	merty alaga	,. O	Q,	Б	quartz glass	יסת יסת		<u>6</u>	quartz grass	,, 0	1	,	quartz glass	ים ול קור המים ול	dlass	glass		glass	-1,4,4,5,8	quartz grass glass	grees quartz qlass		quartz glass	Jlass	-6,7-ерожу	quartz glass	grass	quartz qlass		•	quartz glass	9-6,7-epoxy	quartz glass	ginata 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	guartz glass
STATIONARY PHASE	SE-30 SE-30	o 0V-1	SE-30	SE-30	SE-30	o Me silicone	0,17	ov -1	SE-30	ov-1	0V-1	ov-1	ov-101	ov-1	0V-1	OV-1	SP-2100	OV1-1/SE-54	0V-1	DE-30	)	OV-1	Me silicone	SE-30		OV-1/SE-30	OV-1	OV-1	SE-30	Me silicone	2, 3, 4, 10, 10-hexachloro	CF S11 SCB	OV-1 OV-1/SE-30		0V-1	ov-1	SE-30	,3,4,10,10-he	CP Sil 5CB	OV-1	SE-30
COLUMN		, dihydro	ine J&W Sci.	JEW Sci.	line J&W Sci.	, 2-nitro HP	ene.	Hall		ļ	Hall	SAC	Quadrex			наіі	Supelco	HP.	Hall	8	30		HP			CHROMPAK	SAC	<u>}</u>	PEC		- 1	CHROMPAK		Hall	SAC	Hall	PEC		=		PEC
LTP INDEX	myrcene 0983 0984	myrcenol, 1062 B	nalorphine 2510 J&	naloxone 2608	naphazoline 1958 J&W	naphthal, 1659 H	7				1155			1157	1157						1184	1186		1189	a]	1906					7		2100				2170	naphthalene,	2121	2165	

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LEN CARRIER (m) GAS SAMPLE TYPE	108 helium standard 50 nitrogen standard 50 helium standard 50 helium essential oil	tap water 100 helium standard 2 standard	50 nitrogen standard	50 nitrogen standard 50 standard	50 standard	108 helium standard		108 helium standard 50 mitrogen standard		50 standard	12 standard	50 standard	50 standard	50 standard	12 standard	12 standard	hydrogen	25 herrum cap water 25 hydrogen standard 25 hydrogen standard		helium		50 standard	50 nitrogen standard 108 helium standard 50 helium standard		neilum essential helium standard standard
(mm)	0.25 0.20 0.30	0.5	0.20	0.20	0.23	0.25	0.23	0.25	0.23	0.23	0.20	0.23	0.23	0.23	0.20	0.20	0.32	0.31	0	0.25	0.23	0.23	0.20		0.5
COLUMN TYPE	open	<pre>wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)</pre>	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	open tubular	Wall-coated open tubular	open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	bonded phase	bonded phase	bonded phase bonded phase	to the tribular	open tubular	open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular bonded phase	wall-cofted open tubular	open tubular open tubular
COLUMN MATERIAL	ro (tetralin) glass quartz glass quartz glass quartz glass	glass glass	quartz glass	quartz glass glass	glass	ָ ֓֞֞֞֞֞֞֞֞֞֞֞֞֞֞֞֞֞֩֞֞֞֞֩	quatiz grass glass	glass	5	glass	quartz glass	glass	glass	glass	quartz glass	quartz glass	quartz glass	glass glass	200	2 1 1	glass	glass	quartz glass glass quartz glass	0 0 0	
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	alene, 1,2,3,4-tetra Quadrex OV-101 SE-30 Hall OV-1 Hall OV-1	1144 Supelco SP-2100 1151 SE-30 1232 SE-30	ene,	naphthaiene, 1,2-aimethyi 1430 SE-30 1432 OV-1		naphthalene, 1,3-dimechyl 1391 Quadrex OV-101	-	naphtharene, 1,4 Calmethyr 1409 Quadrex CV-101									naphthalene, 1-chloro 1348 SAC OV-1	HB HB	alene, 1-et	Quadrex	alene, 1-is	1501 naphthalene, 1-methyl	₩.	Supelco	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

LIT REF	33	33	22	30 30	33		æ r.	)	8	2 6	?	2	80	33	o	, a	?	28	ţ	<b>x</b> 0	2 E	)	33	(	33	43		∞ ⋅	O1 0	n 1	n m	32	33	-	ע	,	ကျ	ഹന
SAMPLE TYPE	standard	standard	standard	standard . standard	standard		standard standard			standard		standard	ı ətandard	standard		standard		n standard			standard	\$ \$ \$ \$	standard		standard	tap water			standard	standard ton motor	cap water		standard	standard	standard		standard	tap water essential oil
LEN CARRIER (m) GAS		50	12	12 25 nitrogen	50		50 nitrogen			108 helium 50	<b>&gt;</b>	108 helium	50 nitrogen	20		oo microgen 50	) )	50 hydrogen		30 nicrogen		,	50	Ç.	20	50 helium			108 hellum 50 belium		50 helium			4 helium	12		50 helium	50 helium
I QI (mm)	0.23	0.23	0.20	0.33	0.23		0.20	) 1 •		0.25 1	)		0.20	0.23	0	0.0	) 1 •	0.32	ć	0.40			0.23	6	0.23	0.30			22.0	2	0.30	ıs.	0.23	3.00	0.20		0.30	0.30
COLUMN TYPE	tubu	wall-coated open tubular	bonded phase	bonded phase wall-coated open tubular	wall-coated open tubular	ı	wall-coated open tubular	i.	oben	wall-coated open tubular	; ;	wall-coated open tubular		wall-coated open tubular		wall-coated open tubular	1	bonded phase	!	wall-coated open tubular	open	1	wall-coated open tubular	1	wall-coated open tubular			oben	wall-coated open tubular bonded where	well-costed onen tubulen		wall-coated open tubular	H	3% w/w on Chromosorb W HP (80-100mesh)	bonded phase	•	bonded phase	wall-coated open tubular bonded phase
AT	glasø	glass	glas	quartz glass quartz glass	glass		quartz glass	d tags	quartz glass	glass		qlass	quartz glass	glass	-	quartz glass	1	quartz glass	ŕ	quartz glass	glass glass	1	glass	· ·	glass	quartz glass		quartz glass	glass martz alass	4	grass quartz glass		glass	glass	quartz qlass	1	quartz glass	grass quartz glass
22	naphthalene, 1-n-butyl 1555		alene, 1-nitro HP Me	1579 HP Me silicone 1586 SGE SE-30	naphthalene, 2,3,5-trimethyl	alene, 2,3,	1515 SE-30	alene, 2,3-	SE-30	1411 Quadrex OV-101	1 and 2.6-		SE-30		alene, 2,7-	1389 SE-30	alene, 2-chloro		alene, 2-et	SE-30		alene, 2-is		naphthalene, 2-isopropyl		naphthalene, z-methoxy 1410 OV-101	alene, 2-me	•	126/ Quadrex OV-101	Gundles CD-1	Hall OV-1	SE-30	OV-1	0V-1	naphthalene, 2-methyl-1-nitro 1590 HP Me silicone	lene, 2-me	OV-1	

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SAMPLE TYPE	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	tap water	standard standard	tap water essential oil			scandard	standard	standard	standard	standard	øtandard standard	standard	standard	tap water	standard	standard standard
LEN CARRIER (m) GAS	100 helium	50	50	12 25 nitrogen	12	50	50	50 nitrogen	4 helium	25 helium	108 helium 50 helium	50 helium			mnTTau F	4 helium	2 nitrogen	4 helium	15 helium	25 helium	7	25 hydrogen	25 helium		
ID (mm)	0.5	0.23	0.23	0.20	0.20	0.23	0.23	0.20	3.00		0.25	0.30	000		3.00	3.00	0.32	3.00	0.25	0.20	2.0	0.22			
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase wall-coated open tubular	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)		wall-coated open tubular bonded phase	wall-coated open tubular bonded phase	well-costed onen tuhuler	\$ 10 mm	ä	3% w/w on Chromosorb W HP (80-100mesh)	Chromosorb P AW DMCS (60-80 mesh)	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular		15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular		wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	to glass	glass	glass	quartz glass quartz glass	quartz glass	glass	glass	quartz glass	glass		glass quartz glass		96.		grass	glass		glass	quartz glass	quartz glass glass		quartz glass	14	metny. stainless steel byl	glass gtainless steel
COLUMN STATIONARY ORIGIN PHASE	2-methyltetrahydr SE-30	2-n-buty1 OV-1	2-n-propy1 OV-1	Z-nitro Me silicone SE-30	2-phenyl Me silicone	2-sec-butyl OV-1	Z-t-buty1 OV-1	SE-30	bromo isomer OV-1		decahydro rex OV-101 OV-1	lco SP-2100 OV-1	tetrachloro (TCN)	orc	1760 OV-1 naphthonitrile, 1-	0V-1	naphthoguinone, 1,4" 1427 SE-30	mide OV-1	W Sci. SE-30	Me silicone OV-1/SE-30	opane, 2- SE-30	trans OMPAK CP Sil 5CB		2,0,10,14,10-penta SE-30 2 6 10 14-tetramet	OV-1/SE-30 SE-30
LTP INDEX	naphthalene, 1208	naphthalene, 1564	naphthalene, 1465	naphthalene, 1610 HP 1631 SGE	naphthalene, 1935 HP	naphthalene, 1521	naphthalene, 1502	naphchalene, 1403	naphthalene, 1434	naphthalene, 1462 HP	naphthalene, 1043 Quad 1045 Hall	1045	naphtha	naphtha	1760 naphtho	1489	1427	nicotinamide 1475	nicotine 1315	nitrazepam 2740 HP 2750	nitropropane, 0676	nonachlor, 2067 CHF	nonadecane 1900 HP	2141	2020

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SAMPLE TYPE	standard tap water essential oil	standard	standard	standard	standard	standard	standard	standard	standard	standard			tap water	essential oil	standard		standard standard		standard	בי מלה מל הי מלה מלה	standard	standard	standard	standard	standard	tap water	standard
LEN CARRIER (m) GAS	50 helium 50 helium	50 nitrogen	50 nitrogen		108 helium	108 helium	108 helium	108 helium	108 helium	4 helium			mortan oo	50 helium	108 hellum 50 nitrogen		25 hydrogen 50 hydrogen			15 helinm	15 helium	15 helium	15 helium	7	4 helium	25 helium	50 nitrogen
I OII (mm)	0.30	0.2	0.2		0.25 ]	0.25	0.25 ]	0.25	0.25	3,00	0.30			0.30			0.22	3.00	0.25	0 25	0.25	0.25	0.25	2.0	3.00		0.2
										(80-100mesh)						dosulphan)	ı	(80-100mesh)						(100-120 mesh)	(80-100mesh)		
COLUMN TYPE	bonded phase wall-coated open tubular bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	w on Celite	on on one tubula		oben		wall-coated open tubular	cyclic sulphite, 5- (endosulphan)	wall-coated open tubular bonded phase	w on Chromosorb W HP	wall-coated open tubular	"costed onen tubular	open	wall-coated open tubular	wall-coated open tubular	Gas-Chrom Q	inoleate) w/w on Chromosorb W HP		wall-coated open tubular
ral.		wall-	wall-			wall-	wall-	wall-		1) 258w/w 38 w/w	wall-	-[	wall-	bonde	Wall	-hexachloro, cyc	wall- bonde	3% W/W	wall-	to a 1	wall-	wall-	wall-	158 W	(metnyi linoieate) 3% w/w on C		wall-
COLUMN MATERIAL		quartz glass	quartz glass	stainless steel		glass	glass	glass		(pelargonic acid)	grass quartz glass	h	glass	quartz glass	glass	yuar cz. y 1, 5, 6, 7, 7	quartz g	1	guartz glass		,, 0,	quartz glass	quartz glass	•	ester, 9,12° (1 glass		quartz glass
STATIONARY PHASE	OV-1 SP-2100 OV-1	Me silicone	Me silicone	thyl SE-30		ov-101	OV-101	OV-101	0V-101	acid, methyl ester () SE-30 OW-1	SE-30	, ,	SE-30 SP-2100	0V-1	OV-101	nol, 1,	g)	OV-1	SE-30	30	SE-30	mide SE-30	SE-30		2100 Ov-1	Me silicone	omo Me silicone
COLUMN	Hall Supelco Hall	1-bromo	1-chloro	2,6-dimethyl	2-methyl Quadrex	3-ethyl Quadrex	3-methyl Quadrex	4-methyl Quadrex	5-methyl Quadrex	cacid, m	, 1- SGE	1-	Supelco	Hall	Quadrex	ene-2,3-d	CHROMPAK	an	ridine J&W Sci.	norpropoxyphene	J&W Sci.	norpropoxypheneamide 2505 Jaw Sci. SE-3	yline Jaw Sci.	ne :	adienoic		ane, l-bromo Me
INDEX	nonanal 1084 1084 1084	nonane, 1238	nonane,	nonane,	nonane, 0964	nonane, 0993	nonane, 0970	nonane, 0955	nonane, 0960		nonanol,	nonene,	0884	0884	0887	norborn	2039	norharman	normeperidine 1738 J&W S	norprop	2370	norprop 2505	nortripyline 2174 J&W	oct-1-yne 0811	octadec 2100	octadecane 1800 HP	octadecane, 2180

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SAMPLE TYPE	standard	standard	standard	tap water	standard	standard	tap water standard	food	food standard	standard	standard	tap water	standard essential oil	standard	standard	standard	standard	standard	standard	standard	standard standard	standard	gtandard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen		25 helium				80 nitrogen	80 nitrogen 4 helium	4 helium	50 nitrogen	50 bolism	50 helium	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	108 helium	108 helium	6.1 nitrogen 108 helium	108 helium	108 helium	108 helium	108 helium	108 helium	108 helium
(mm)	0.2	0.2					3.00	0.28	$0.28 \\ 3.00$	3.00	0.20	0	0:30	0.2	0.2	0.2	0.2	0.2	0.25	0.25	3.20	0.25	0.25	0.25	0.25	0.25	0.25
	•						(80-100mesh)		(80-100mesh)	(80-100mesh)											(60-80mesh)						
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		25%w/w on Celite	) 25%w/w on Celite	3% w/w on Chromosorb W HP	wall-coated open tubular	wall-coated open tubular 3% w/w on Chromosorb W HP	oleate) 3% w/w on Chromosorb W HP	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	10%w/w on Chromosorb W HMDS (60-80mesh) wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	rtz glass	inless steel	( <b>þ</b> )		(methyl stearate		lass	lass (conf. del.	cis-9- (methyl o	quartz glass		quartz glass quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	glass	glass	stainless steel glass	glass	glass	glass	glass	glass	glass
MN STATIONARY SIN PHASE	1-chloro Me silicone	Me silicone		acid (stearic acid) Me silicone	acid, ethyl ester SE-30	acid, methyl ester, SE-30	icone	OV-101 g		acid, methyl este OV-1	7- SE-30	SP-2100	0V-1 0V-1	-dibromo Me silicone	1,8-dichloro Me silicone	omo Me silicone	loro Me ailicone	do Me silicone	chyl OV-101	101	Chadrex OV-101	Z, 7-dimethyl Quadrex OV-101	ayı cek OV-101	5,5-dimetnyi Quadrex OV-101	'y'. cex OV-101	cex ov-101	4,4-dimecnyi Quadrex OV-101
LTP COLUMN INDEX ORIGIN			octadecane, 2 1984	octadecanoic 2170 HP	octadecanoic 2175	octadecanoic 2098	2112 HP 2116		2149 2175	ic	octadiene, 1,7 0777	-	Hal Hal	octane, 1,8-d 1523	octane, 1,8-d 1330		octane, 1-chloro 1048							_			octane, 4,4-dim 0920 Quadrex

LIT REF	8	81	37	19	19	19	19	11	13	13	ശനന	3 8	13	13	13	4	4	23		19	19	23	23
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard standard	standard standard	standard	standard	tap water standard essential oil	standard standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	108 helium	108 helium	100				4 helium	25 nitrogen 50 hydrogen	6.1 nitrogen	6.1 nitrogen	50 helium 50 helium	108 helium 50 nitrogen 2	6.1 nitrogen	6.1 nitrogen	6.1 nitrogen			15 helium 15 helium	4 helium			15 helium	15 helium
Of (mm)	0.25	0.25	0.27				3.00	0.30	3.20	3.20	0.30	0.25 0.20 2.0	3.20	3.20	3.20			0.25	3.00			0.25	0.25
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite 3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular bonded phase	10%w/w on Chromosorb W HMDS (60-80mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)	wall-coated open tubular bonded phase bonded phase	wall-coated open tubular wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	10%w/w on Chromosorb W HMDS(60-80mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)			ass wall-coated open tubular 4-dichloro-5-isopropoxyphenyl)-1,3,4- (oxadiazon) ass bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	25%w/w on Celite	25%w/w on Celite	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	glass	glass		l ester			(methyl caprylate)	quartz glass quartz glass	40	stainless steel	glass quartz glass quartz glass	glass quartz glass	stainless steel	stainless steel	stainless steel	glass	glass	00 quartz glass 5-tert-butyl-3-(2,4-dichlo quartz glass	glass			quartz glass	quartz glass
N STATIONARY N PHASE	1 x 0V-101	ут ж ov-101	OV-101	2-keto, methyl SE-30	allyl ester SE-30	ethyl ester SE-30	ester	SE-30 OV-1	3, 7-dimethyl-1 $SE-30$	3,7-dimethy $1-3SE-30$	o SP-2100 OV-1 OV-1	x OV-101 SE-30 SE-30	7-dimethyL-1 SE-30	7-dimethy1-2 SE-30	3,/-dimethyl-3 SE-30	OV-1/SE-30	OV-1/SE-30	i. SE-30  -one, 5-tert-1   DB-1	dicyclohexyl 0V-1	diethyl ester SE-30	Imetnyi ester SE-30	i. SE-30	i. SE-30
COLUMN	4-ethyl Quadrex	4-metnyl Quadrex	n- PEC	acid,	acid,	acid,	acid,	1- SGE			, 4- Supelco Hall Hall	1- Quadrex	3,7-di	3, 7-du	3, /-dl.	0]		drine J&W Sci. 51-2(3H)-	acid, d		cia,	JEW Sci.	J&W Sci.
LTP INDEX	octane, 0961		octane, 0800	octanoic acid, 1200	octanoic 1262	octanoic 1181	octanoic 1109 1130	`	octanol, 1190	octanol, 1091	e e	octene, 0786 0789 0790			octene, 0922	oestradiol 2659	0estrio1 2970	orphenadrine 1915 J&W Sci. SE-3 oxadiazol-2(3H)-one, 2158 DB-1	oxalic a	oxalic a 0948	0837	2810	2271 J

LIT REF	1	23	23	23	47	4	4.9 8.8	38	28 15	15	15	80	æ	80	æ	80	46	40	38	40	т	40	40	40	40	40
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	food	standard	standard	standard	standard	ı standard	ı standard	ı standard	ı standard	atandard
LEN CARRIER (m) GAS	4 helium	15 helium	15 helium	15 helium	25 helium		15 helium 50 hydrogen	2	50 hydrogen			50 nitrogen	80 nitrogen	50 nitrogen	7	50 nitrogen	4 helium	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen				
OI (mm)	3.00	0.25	0.25	0.25	0.20		0.25	2.0	0.32			0.20	0.20	0.20	0.20	0.20	0.28	0.2	2.0	0.2	3.00	0.2	0.2	0.2	0.2	0.2
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular			bonded phase bonded phase	15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	glass	quartz glass	quartz glass	quartz glass	quartz glass	glass	quartz glass quartz glass		sthyl (pristane) quartz glass stainless steel	stainless steel	stainless steel	quartz glass	quartz glass	quartz glass	quartz glass	3- quartz glass	glass	-hexafluoro quartz glass		quartz glass	ine) glass	quartz glass	quartz glass	quartz glass	quartz glass	and to the con
STATIONARY PHASE	(PPO)	SE-30	SE-30	SE-30	Me silicone	OV-1/SE-30	n analog DB-1 OV-1	SE-30	6,10,14-tetramethyl OV-1 quart SE-30 stain	2, 6, 10-trimethyl SE-30	3,7,11-trimethy; SE-30	- SE-30		-dimethyl-1,3- SE-30	4-methyl-1,3- SE-30	trans-1-methyl-1,3 SE-30	- ov-101	4-dione, 1,1,1,5,5,5-hexafluoro Me silicone quartz gla	SE-30	4-dibromo Me silicone	amino (cadaverine) OV-1 gla	bromo Me silicone	chloro Me silicone	o Me silicone	-bromo-4-methyl Me silicone	ro Me ailicope
LTP COLUMN INDEX ORIGIN	oxazole, 2,5-diphenyl 2050 OV-1	oxycodone 2453 J&W Sci.	oxymetalozine 2123 J&W Sci.	oxymorphone 2462 J&W Sci.	papaverine 2818 HP	paracetanol 1687	parathion oxygen 1901 1915 SAC	penta-2,4-dione 0843	7	pentadecane, 2,6 1650	pentadecane, 3,7 1658		1,4				pentadione, 2,3-0675	•	pentanal 0679	pentane, 1,4-dik 1103	pentane, 1,5-diamino 1035 0V-1			-	-	pentane, 1-chloro

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LIT	40	37 37	2	37	E E	8	OI FO	ហ	37	7	37		40	2 5	37	37	8	ç	) F	40	2	32	c	37	37	37	8	ហ	) m	
SAMPLE TYPE	standard	standard standard	standard	standard	standard standard	standard	standard standard		essential oil standard	standard	standard		standard	standard	standard	standard	standard		scandard	standard	standard	standard standard	4.00	standard	standard	standard	standard	tap water	standard essential oil	
ID LEN CARRIER (mm) (m) GAS	0.2 50 nitrogen	0.25 108 helium 0.27 100	0.25 108 helium	5 1	0.2 17 0.2 17	0.25 108 helium	0.25 108 helium	)	0.30 50 helium 0.27 100	0.25 108 helium	17		0.2 50 nitrogen		7 ]	0.2 17	0.25 108 helium	Ü	0.2 SU mitrogen	0.2 50 nitrogen	5 108	0.5 100 helium 0.27 100		7 100	0.2 17		0.25 108 helium			
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	Wall-coated open tubular	bonded phase wall-coated open tubular		wall-costed onen tubular	oben	wall-coated open tuburar	wall-coated open tubular	oben	wall-coated open tubular	coated open	wall-coated open tubular	•	wall-coated open tubular	wall-coated open tubular	uedo	wall-coated open tubular wall-coated open tubular	; ;	wall-coated open tubular wall-coated open tubular	oben	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	
COLUMN MATERIAL	quartz glass	<del></del>	glasa	886	borosilicate glass borosilicate glass		,	quartz glass glass	grantz glass goda glass	· !	grass borosilicate glass	soda glass	quartz glass	qlавв	lass	borosilicate glass borosilicate qlass			quartz glass	quartz glass	qlass	glass ands alses	1	glass goda glass		borosilicate glass borosilicate glass	glass	,	quartz glass quartz glass	
N STATIONARY N PHASE	lo Me silicone	1-tetramethyl OV-101 OV-101	rimethyl OV-101	nethyl OV-101 OV-101	OV-1	trimethyl OV-101	crimethyl OV-101	OV-1 SP-2100	OV-1 OV-101	ã.		OV-101	Z,4-albromo Me silicone	E E		OV~1 SR-30	<u>s</u>	^	Me silicone	Z-bromo-z,4-dimetnyi Me silicone	:hyl ex OV-101	SE-30	3,3-dimethyl	ex OV-101 OV-101	0V-1	SE-30 OV-1	hy1 ex OV-101	<u> </u>	0V-1 0V-1	
LITP COLUMN INDEX ORIGIN	pentane, 1-iodo 0912	9 OH	pentane, 2,2,4-t 0686 Quadrex			, <sub>1</sub> ,	, , ,	0744 Hall		٠ ؞ ٔ			pentane, 2,4-c 1003	pentane, 2,4-di		0632 PEC	, n	ō			pentane, 2-methyl 0562 Ouadrex		05/0 FEC pentane, 3,3-c	0646 Quadrex		0658 PEC 0671 PEC	, O	ຸ ດ	0973 Hall 0973 Hall	

N CARRIER SAMPLE TYPE  THE SERVICE TYPE	8 helium standard 0 standard	8 helium standard	18 helium standard 10 helium standard	0 standard	tap water 50 helium standard	helium	6 standard	25 nitrogen standard 2 standard	25 nitrogen standard 25 nitrogen standard	50 hydrogen standard	tap water	50 helium standard	tap water	50 nellum essential oll	50 helium essential oil		50 standard		50 hydrogen standard	50 helium essential oil	cap water 50 helium standard		1.5 nitrogen standard	15 helium standard	25 nitrogen standard	25 nitrogen standard	50 nitrogen standard	50 nitrogen standard	
ID LEN (mm) (m)	0.25 108 0.27 100	0.25 108	0.25 108 0.5 100	0.27 100	0.30		3.6	0.30 2	0.30	0.32		0.30		06.0	0.30		0.27		0.32	0.30	0		2.4 1	0.25	0.30	0.30	0.20	0.20	
COLUMN TYPE	Wall-coated open tubular Wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	phase	10%w/w on Celite 560 AW(60-80mesh)	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	bonded phase	wall-coated open tubular	ketone) bonded phase	open tubular	bonded phase		Waii-coated open tuburar		15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase		wall-coated open tubular bonded bhase	as-Chrom Q (100-120 mesh)	Chromosorb W DCMS (100-120 mesh)	wall-coated open tubular	•				
COLUMN MATERIAL	glass soda glass	glass	glass glass	soda glass	glass	artz	aluminium aluminium	quartz glass	quartz glass quartz glass	quartz glass	glass	yl-3-, (di-t-butyl	glass	quartz glass	quartz glass	glass	glass	glass	quartz glass	quartz glass	glass martz glass	)   	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	
STATIONARY PHASE	-2-methyl OV-101 OV-101	3-ethyl-3-methyl juadrex OV-101	1 OV-101 SE-30	OV-101	2,2,4-trin SP-2100		2-propenyl es SE-30	SE-30 SE-30	SE-30 SE-30	y1-2- ov-1	Y1-z-SP-2100	2,2,4,4-tetramethyl	SP-2100	0V-1	OV-1	SP-2100 OV-101	OV-101	OV-101 SE-30	ov-1	4-methy1-2-1	SP-2100 OV-1	SE-30	dimethyl SE-30	SE-30	SE-30	SE-30	SE-30	1-1- SE-30	
LTP COLUMN INDEX ORIGIN	e, 3-ethyl Quadrex PEC	pentane, 3-ethyl- 0764 Quadrex	pentane, 3-methyl 0578 Quadrex 0584	pentane, n- 0500 PEC	'n		cid,	Ü		pentanol, 2-methyl-2- 0723 SAC OV-1	pentanol, 4-methy1-z- 0748 Supelco SP-2	one,	0955 Supelco	0955 Hall	ne, 2- Hall	0639 Supelco	0662	0662 0671	SAC	pentanone, 4-met 0720 Hall	0720 Supelco	0724 nail	de,	02		1 02		pentene, 2-methyl-1- 0589 SE-3	

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standard	standard	standard standard	standard	standard	standard	standard standard	standard standard	standard standard				standard	tap water	standard	tap water	standard	standard	standard	standard	standard	standard	standard	standard	standard
50 nitrogen	50 nitrogen	25 helium	25 hydrogen	25 hydrogen	50 hydrogen	25 helium	1.5 argon 1.5 argon	0 81				12	25 helium	50 nitrogen	25 helium	12	4 helium	15 helium	15 helium	15 helium	15 helium	12	12	15 helium
0.20	0.20	0.20	0.22	0.22	0.32	0.20	4.00	0.20	6	0.33	0.20	0.20		0.20		0.20	3.00	0.25	0.25	0.25	0.25	0.20	0.20	0.25
wall-coated open tubular	wall-coated open tubular		wall-coated open tubular	wall-coated open tubular	bonded phase		10% w/w on Diatoport S (80-100mesh) 10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular bonded phase		oben	uedo	bonded phase		wall-coated open tubular		bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	bonded phase	wall-coated open tubular
quartz glass	quartz glass			quartz glass	quartz glass	glass quartz glass	יולו מפווימנוים	quartz glass quartz glass	ı	88	quartz glass	quartz glass		quartz glass		quartz glass	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass
	ontene, 3-methyl-1- 0561 SE-30	OV-1/SE-30 Me silicone	ermethrin, cis 2615 CHROMPAK CP Sil 5CB	srmethrin, trans 2637 CHROMPAK CP Sil 5CB	arylene 2814 SAC OV-1	nenacetin OV-1/SE-30 1675 Me silicone	nehaceturic acid, trimetmyrs: 1847 OV-1 1862 OV-1	SE- Me	HP Me silicone OV-1/SE-30						nenanthrene, 9-chloro	onanthrene-9-carboxaldenyde 2147 HP Me silicone	nenazine 1703 OV-1	nenazopyridine 2217 Jaw Sci. SE-30	nencyclidine 1860 Jaw Sci. SE-30	nendimetrazine 1431 J&W Sci. SE-30	1265 Jaw Sci. SE-30			2109 Jaw Sci. SE-30
	, 2-methy1-2- SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard	hyl-2- SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard hyl-1- SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard	hyl-2-SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard hyl-1-SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard CV-1/SE-30 glass standard Me silicone quartz glass	hyl-2- SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard hyl-1- SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard  OV-1/SE-30 glass We silicone quartz glass AK CP Sil 5CB quartz glass wall-coated open tubular 0.22 25 hydrogen standard  AK CP Sil 5CB quartz glass	2-methyl-2- 3-methyl-2- 3-methyl-2- 3-methyl-2- 3-methyl-2- 3-methyl-2- 3-methyl-1- 5E-30  quartz glass  wall-coated open tubular  ov-1/SE-30  quartz glass  wall-coated open tubular  in, cis in, trans CHROMPAK CP Sil 5CB  quartz glass  wall-coated open tubular  0.20  50 nitrogen standard  standard  0.20  5 hydrogen standard  0.22  5 hydrogen standard  0.22  5 hydrogen standard  0.22  5 hydrogen standard	2-methyl-2- 3-methyl-2- 3-methyl-2- SE-30 quartz glass wall-coated open tubular 0.20 50 nitrogen standard oitone OV-1/SE-30 glass wall-coated open tubular 0.20 50 nitrogen standard  UP Me silicone quartz glass wall-coated open tubular 0.22 25 hydrogen standard in, cis chemometry coated open tubular 0.22 25 hydrogen standard in, trans SHROMPAK CP Sil 5CB quartz glass wall-coated open tubular 0.22 25 hydrogen standard SAC OV-1 quartz glass bonded phase 0.32 50 hydrogen standard	wall-coated open tubular  0.20 25 helium standard  0.22 25 hydrogen standard  0.32 26 hydrogen standard  0.32 50 hydrogen standard  standard  standard  0.20 25 helium standard	ethyl-2- SE-30         quartz glass         wall-coated open tubular         0.20         50 nitrogen standard           ethyl-1-2- SE-30         quartz glass         wall-coated open tubular         0.20         50 nitrogen standard           ne SE-30         quartz glass         wall-coated open tubular         0.20         25 hgrogen standard           Me silicone trans         quartz glass         wall-coated open tubular         0.22         25 hydrogen standard           OV-1/SE-30         glass         wall-coated open tubular         0.22         25 hydrogen standard           OV-1/SE-30         glass         bonded phase         0.32         25 hydrogen standard           OV-1/SE-30         glass         bonded phase         0.32         25 helium standard           OV-1/SE-30         glass         conded phase         0.32         25 helium standard           OV-1/SE-30         glass         conded phase         0.20         25 helium standard           OV-1         trimethylsilyl derivative         0.00         25 helium standard           OV-1         trimethylsilyl derivative         0.00         25 helium standard           OV-1         trimethylsilyl derivative         0.00         25 helium standard           OV-1         trimethylsilyl derivative	wall-coated open tubular  bonded phase  10% w/w on Diatoport S (80-100mesh)  10% w/w on Diatoport S (80-100mesh)  wall-coated open tubular  0.20 55 helium standard  0.22 25 hydrogen standard  0.22 25 hydrogen standard  0.20 25 helium standard  0.20 25 helium standard  0.20 25 hitrogen standard  0.20 25 helium standard	wall-coated open tubular  bonded phase  10% w/w on Diatoport S (80-100mesh)  10% w/w on Diatoport S (80-100mesh)  wall-coated open tubular  10% w/w on Diatoport S (80-100mesh)  4.00 1.5 argon  standard  3tandard  3tandard  3tandard  4.00 1.5 argon  3tandard  4.00 1.5 argon  3tandard  4.00 1.5 argon  3tandard  3tandard  4.00 1.5 argon  4.00 1.5 argon	ass         wall-coated open tubular         0.20         50 nitrogen standard           ass         wall-coated open tubular         0.20         50 nitrogen standard           ass         wall-coated open tubular         0.22         25 hydrogen standard           ass         wall-coated open tubular         0.22         25 hydrogen standard           ass         bonded phase         0.32         50 hydrogen standard           ative         10% w/w on Diatoport S (80-100mesh)         4.00         1.5 argon standard           ass         wall-coated open tubular         0.20         25 helium standard           ass         wall-coated open tubular         0.20         50 nitrogen standard           ass         wall-coated open tubular         0.20         50 nitrogen standard           ass         wall-coated open tubular         0.20         25 helium tap water           ass         wall-coated open tubular         0.20         25 helium tap water           ass         wall-coated open tubular         0.33         25 helium standard	### ### ### ### #### #### ############	### ### ##############################	### ### ### ### ### #### #### ### ######	### ### ##############################	### ### ##############################	### ### ##############################	### ### ##############################	### ### ### #### #####################	### ### ##############################	### ### #### #########################	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	### ### ##############################

LIT REF	23	23	4 4 7	38 28	66	28	28	34	28	34	28	25	9 9 4		5	34	9.6	5,4	ი ი ი 4	•	7	28	28	r	28	ო	34	34	34	34
SAMPLE TYPE	standard	standard	standard standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard			standard		standard	standard standard	7	stalldatu	standard	standard	o called a	standard	essential oil	standard	standard	standard	standard
LEN CARRIER (m) GAS	15 helium	15 helium	25 helium		.1 helium	50 hydrogen	50 hydrogen	۰.	50 hydrogen	6.	50 hydrogen		25 hydrogen .9	σ	`	σ.	50 hydrogen	) LO	5 hydrogen 9	σ	'n	50 hydrogen	50 hydrogen		on hydrogen	50 helium	6.	6.	6.	6.
ID LEN	0.25 ]	0.25	0.20		S.	0.32	0.32	.0 2	0.32	.0 2			2.0 2.	٠		.0	3 3 6		0.31 2.02.0			0.32	.32	4	32	.30	.0 2	.0 2	.0 2	2.0 2.
- <b>1</b> 1			0	00-120 mesh)		0	0	(80-100 mesh) 2	0	(80-100 mesh) 2	0		(80-100 mesh) 2	(80-100 meah)	7 (1190111 001 001	(80-100 mesh) 2		•	(80~100 mesh)	(80-100 meah)	7 (1169111)	0	0	•	Þ	0	(80-100 mesh) 2	(80-100 mesh) 2	(80-100 mesh) 2	(80-100 mesh) 2
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular		15% w/w on Gas-Chrom Q bonded phase		bonded phase	bonded phase	3% on Chromosorb W HMDS	bonded phase	3% on Chromosorb W HMDS	bonded phase		bonded phase 3% on Chromosorb W HMDS	5		3% on Chromosorb W HMDS	honded the		bonded phase 3% on Chromosorb W HMDS	3% on Chromosoph W HMDS	i crocomorno no	bonded phase	bonded phase		bonded phase	bonded phase	3% on Chromosorb W HMDS			
COLUMN MATERIAL	quartz glass	quartz glass	glass quartz glass	quartz glass	988	quartz glass	quartz glass	glass	quartz glass	glass	martz dlass	, ,	glass glass	ر م	9.445	glass	marts diaga	,	glass qlass	0 0 0	91 ass	quartz glass	quartz glass	,	quartz glass	quartz glass	glass	glass	glass	glass
N STATIONARY N PHASE	i. SE-30	i. se-30	OV-1/SE-30 Me ailicone	SE-30 OV-1	SE-30	0V-1	2,3,5-trichloro SAC OV-1	2, 3, 5-trimethyl SE-30	2,3,6-trichloro SAC OV-1	nethyl SE-30	Z,4,5-trichloro SaC OV-1	OV1-1/SE-54	OV1-1/SE-54 SE-30	2,4,6-trichloro	2,4,6-trimethyl	SE-30	shloro OV-1	OV1-1/SE-54	OV1-1/SE-54 SE-30	4-dimethyl	4-dimethyl (m-xylenol)	₹	OV-1 OV-1/SE-30	2,5-dimethyl (2,5-xylenol)	SAC $0V-1$ 2. $6-d^{\dagger}-t-butvl-methvl$	ov-1	SE-30	SE-30	SE-30	Z, e-dimethoxy-4-propyi SE-30
COLUMN	dine Jaw Sci.	razine J&W Sci	bitone	SAC		SAC	2,3,5-t SAC	2, 3, 5-1	2,3,6-t SAC	2,3-dimethyl SE-	2,4,5-t SAC	HP	HP	2,4,6-t	2,4,6-t	•	2,4-dichloro	HP	НР	2,4-din	2,4-din	SAC OV.	SAC	2,5-din	SAC 2.6-di-	Hall OV-	SE-3	17 O OTH	2, v - 0.1	, o - aıı
LTP INDEX	pheniramine 1779 J&W	phenmetrazine 1409 J&W S	e H	phenol 0926 0959							phenol,		1355		_		phenol,		1164						1125					phenol, 1624

LIT REF	0 W 0 W W W W 44	34	28	33	28	34	46	34	34	34	4	34	23	78	23	49	28	28	34	34	34	39 34	28 34	34
SAMPLE TYPE	standard standard standard standard standard	standard	standard	standard	standard	standard	food	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard standard	standard
ID LEN CARRIER (mm) (m) GAS	0.30 24 helium 0.30 25 helium 0.20 50 helium 0.30 30 helium 0.32 50 hydrogen 2.0 2.9	2.0 2.9	0.32 50 hydrogen	3.18 3.1 helium	.32	2.0 2.9	0.28 80 nitrogen	2.0 2.9	2.0 2.9	2.0 2.9		2.0 2.9	15		5 2 nitrogen	0.25 15 helium	0.32 50 hydrogen	0.32 50 hydrogen	2.0 2.9	2.0 2.9	2.0 2.9	3.18 3.1 helium 2.0 2.9	0.32 50 hydrogen 2.0 2.9	2.0 2.9
COLUMN TYPE	wall-coated open tubular wall-coated open tubular wall-coated open tubular wall-coated open tubular bonded phase 3% on Chromosorb W HMDS (80-100 mesh)	on Chromosorb W HMDS (80-100 mesh)	bonded phase	Supelcoport (100-200 mesh)		3% on Chromosorb W HMDS (80-100 mesh)	wall-coated open tubular	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)		3% on Chromosorb W HMDS (80-100 mesh)	ated open tubular	onded phase onded phase	3% w/w on Chromosorb W HP (80-100mesh)	bonded phase	bonded phase	bonded phase	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)	Supelcoport (100-200 mesh) 3% on Chromosorb W HMDS (80-100 mesh)	bonded phase 3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)
COLUMN MATERIAL	glass glass quartz glass glass quartz glass	glass	quartz glass	stainless steel	quartz glass	glass	glass	glass	glass	glass	glass	glass	ro (dinoseb) quartz glass		quartz glass	ro (premerye) quartz glass	quartz glass	enol) quartz glass	glass	glass	glass	stainless steel glass	quartz glass glass	glass
COLUMN STATIONARY ORIGIN PHASE	othyl 0V-1 0V-1 0V-1 0V-1 0F-30	2-amino SE-30	2-amino-4-chloro SAC OV-1	2-bromo HP SE-30	2-chloro SAC OV-1 2-:achronul-5-methvl	SE-30	2-methoxy OV-101	2-methoxy-4-propeny1 SE-30	-methoxy	2-methyl (o-cresol) SE-30	2-methyl-4, 6-dinitro OV-1/SE-30	2-nitro SE-30	ec-but Sci.	SAC OV-1 SAC OV-1	PEC SE-30	2-sec-buty1-4,0-dinitro (premer DB-1 quartz gl		3,4-dimethyl (3,4-xylenol) SAC OV-1 quar	3,5-dichloro SE-30	3,5-dimethyl SE-30	3-amino SE-30	3-bromo HP SE-30 SE-30	3-chloro SAC OV-1 SE-30	3-ethyl SE-30
LTP	ı		_			pneno1, 1271	phenol, 1077	phenol, 1367	phenol, 1392	phenol, 1035	phenol, 1617	phenol, 1095	phenol, 1695	1771	1802	phenol, 1800	phenol, 1589	phenol, 1167	phenol, 1391	phenol, 1163	phenol, 1335	phenol, 1262 1270	phenol, 1173 1194	phenol, 1160

LIT REF	34	е 6	34	34	34	34	34	34	34	34	28 34	28	34	34	39 34	34	6 80 80 4 80 80	8 2 2 8 5 4	55	23	23	46	23	23
IER SAMPLE TYPE	standard	um standard	standard	standard	standard	standard	standard	standard	standard	ım standard standard	ogen standard standard	ogen standard	standard	standard	um standard standard	standard	standard yen standard ogen standard	ogen standard ogen standard standard	standard ogen standard	ım standard	ım standard	ogen food	ım standard	ım standard
GAS GAS	•	helium	0	6	6		o.	•	o.	belium	hydrogen	50 hydrogen	•	o,	helium	_	) hydrogen hydrogen	) hydrogen 5 hydrogen	5 hydrogen	5 helium	5 helium	) nitrogen	helium	helium
LEN (m)	2.9	8 3.1	2.	8	2	2.9	2.	2.9	2.	8 3.1 2.9	2 50 2.9		2.9	2.	8 3.1 2.9	2.9	2.9 1 25 1 25	2 50 1 25	8	-	1	8 80	5 15	5 15
(mm)	2.0	3.18	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.18	0.32	0.32	2.0	2.0	3.18	2.0	2.0 0.31 0.31	0.32	0.31	0.25	0.25	0.28	0.25	0.25
COLUMN TYPE	3% on Chromogorb W HMDS (80-100 mesh)	Supelcoport (100-200 mesh)	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HWDS (80-100 mesh)	Supelcoport (100-200 mesh) 3% on Chromosorb W HMDS (80-100 mesh)	bonded phase 3% on Chromosorb W HMDS (80-100 mesh)	bonded phase	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)	Supelcoport (100-200 mesh) 3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh)	3% on Chromosorb W HMDS (80-100 mesh) bonded phase bonded phase	bonded phase bonded phase	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular					
COLUMN MATERIAL	glass	stainless steel	glass	glass	glass	glass	/ glass	glass	glass	stainless steel glass	quartz glass glass	quartz glass	glass	glass	stainless steel glass	glass	glass glass glass	guartz glass glass glass	glass glass	quartz glass	-30 quartz glass	glass	quartz glass	quartz glass
STATIONARY PHASE	Y SE-30	SE-30	> ~	(m-cresol) SE-30	4-chloro SE-30	SE-30	-2, 6-dimethoxy SE-30	-2-methoxy SE-30	SE-30	SE-30 SE-30	OV-1 SE-30	4-cnioro-3-metnyi SAC OV-1	SE-30	Y SE-30	SE-30 SE-30	SE-30	(p-cresol) SE-30 OV1-1/SE-54 OV1-1/SE-54	oro OV-1 OV1-1/SE-54 OV-1/SE-30	OV-1/SE-30 OV1-1/SE-54	SE-30		OV-101	SE-30	SE-30
COLUMN		3~10d0 BP		ď	m	4	4-acetyl	4-acetyl				4-chloro SAC						pentachloro SAC OV HP OV	HP	phenoxypenzamide 2205 J&W Sci.	pnenternine 1138 J&W Sci. SE phenylacetaldehyda	Transparent and a me Louisian	1287 Jaw Sci. SE-30	pnenyicoloxamune 1915 J&W Sci.
LTP INDEX	phenol, 1368	phenol, 1369	phenol, 1211	phenol, 1065	phenol, 1283	phenol, 1578	phenol, 1849	phenol, 1531	phenol, 1314	phenol, 1256 1274	pnenol, 1171 1192	pheno1, 1260	phenol, 1162	phenol, 1334	phenol, 1343 1398	phenol, 1210	phenol, 1059 1075 1078	phenol, 1715 1726 1749	1754	phenoxy 2205	phencernine 1138 J&W	1019	1287	pneny 1915

LIT REF	23	49	41	41	41	49	41	41	49	49	4. 4. 2. 0.	49	49	49	49	49	r.	49		47	47	53	49	49	н	28	4	7	41	
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard		standard	standard	standard	standard	standard	standard	standard		standard standard	standard	standard standard	
LEN CARRIER (m) GAS	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium	15 helium 15 helium	15 helium		5		15 helium	2 mitroden	15 helium	Z isomer) 4 helium	25 helium	25 helium	1somets) 2 nitrogen	15 helium	15 helium	4 helium		15 helium 4 helium	4 helium	15 helium 4 helium	
I QI (mm)	0.25	0.25	0.32	0.32	0.32	0.25	0.32	0.32	0.25	0.25	0.25	0.25	0.25	tophos	0.25	0.25	LC)			0.20				0.25	3.00	0.32	0.32 3.00	3.00	0.32 3.00	
COLUMN TYPE	wall-coated open tubular	ester (dyfonate, fonofos) bonded phase	ester (Sarin) wall-coated open tubular	phosphonofuloridic acid, methyl-, 2-methylcylcohexyl ester 1211 Jaw SCI DB-1 quartz glass wall-coated open tubular	ubular	yl o-methyl phenyl ester (phosvel) bonded phase	wall-coated open tubular	<pre>ver (rabun) wall-coated open tubular cotton (orthons scarbs)</pre>	bonded phase	o-methyl isopropyl ester (zytron) bonded phase	(methamidophos, Monitor, Tamaron) honded phase	dimethyl protect (phosdrin, alpha)	dimethyl ester (phosdrin, beta) bonded phase	dimethyl ester (azodrin, monocro	ester (gardona)	<pre>dimethyl ester (dibrom, naled) bonded phase</pre>	lorvos)	(manuscr an) :	2-chloro-1-(2,4,5-trichlorophenyl)ethenyl dimethyl ester (tetrachlorvinphos 0V-1	Me silicone quartz glass		Chromosorb W HP (80-100mesh)	ester (phosphamudon	2-chloro-2-diethylcarbamoyl-1-methylvinyi dimethyi ester (phosphamidon DB-1 quartz glass bonded phase	3% w/w on Chromosorb W HP (80-100mesh)		wall-coated open tubular 3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular 3% w/w on Chromosorb W HP (80-100mesh)	
MATERIAL	glass	anyl ethy glass	nethyleth glass	sthylcyl Jass	ois(1-me glass	lichlorop glass		glass	glass	lorophenyl glass	Ä	yen-2-yl)	yrass pen-2-yl alass	ylcarban	5-trichl	Ioroethy glass	_	glass	ichlorop	glass	glass	glass	arbamoyı- glass	rbamoyl- glass	ter	glass	glass		glass	
COLUMN	quartz	o-ethyl s-phenyl ethyl quartz glass	/l-, l-m quartz	71-, 2-m quartz	, S-[2-() quartz	no-2,5-d quartz	quartz	quartz	N	o-2,4-dichl quartz	-dimethy	rboxypro	quartz rboxypro	-2- (meth	-1-(2,4, quartz	2,2-dich		quartz	2,4,5-tr glass	quartz 2 4-dich	quartz	ני	nethylca quartz	ıethylca quartz	exyl) es glass	uartz		estër glass	uartz lass	
STATIONARY PHASE		cacid, o-ethy DB-1	phosphonofluoridic acid, methyl-, 1-methylethyl 0792 J&W SCI DB-1 quartz glass	ic acid, meth DB-1	acid, methyl-, S-[2-(DB-1	acid, o-4-bromo-2,5-c DB-1 quartz	cid, morpholino-, dimethyl DB-1 quartz glass	phosphoramidocyanidic acid, dimethyl- 1078 J&W SCI DB-1 quartz	phosphoramidothioic acid, n-acelyi, 1/1440 guart:	phosphoramidothioic acid, o-2 1942 DB-1	phosphoramidothioic acid, 0,8-dimethy	(1-methoxycarboxypro	(1-methoxycarboxypropen-2-yl)	ED -1-methyl-2-(methylcarbamoyl)vinyl, DD-1	(Z)-2-chloro-1-(2,4, DB-1	1,2-dibromo-2,2-dichloroethyl DR-1 quartz glass	2,2-dichlorovinyl di	SE-30 DB-1	2-chloro-1-( OV-1	Me silicone	Me silicone	2-chloro-2-diethyl SE-30 quait;	2-chloro-2-d DB-1	2-chloro-2-d DB-1	tri(2-ethylhexyl) ester OV-1 glass	ov-1	DB-1 OV-1	tricresyl es OV-1	triethyl ester DB-1 OV-1	
COLUMN	nidol J&W Sci.	phosphonodithioic acid, 1736 DB-1	ofluoridi J&W SCI	nofuloridi J&W SCI	phosphonothioic a 1664 J&W SCI	phosphonothioic acid, 2495 DB-1	phosphoramidic acid, 1296 J&W SCI DB-1	amidocyar J&W SCI	amidothic	amidothic	amidothic	phosphoric acid,	ic acid,	ic acid,	ic acid,	phosphoric acid,	ic acid,	74 C	phosphoric acid, 2084	HP 52.2	HP HP	ric acid, PEC		ric acid,	phosphoric acid, 2463	phosphoric actu, 1614 SAC	JEW SCI	phosphoric acid, 2695	ric acid, Jaw SCI	
LIP INDEX	phenyramidol 1932 J&W	phosphon 1736	phosphon 0792	phosphon 1211	phosphon 1664	phosphon 2495	phosphor 1296	phosphor 1078	phosphor 1440	phosphor	phosphor	phosphor	1392 phosphoric	phosphoric	phosphoric	phosphor	0	1220	phosphor 2084	2112	phosphoric 2053 HP	phosphoric 1850 PEC	phosphoric 1767	phosphoric 1837	phosphor 2463	phosphor 1614	1616	phosphor 2695	phosphoric 1091 Jaw 1109	

LIT		-	-		-	-	H	-	7	9	49	28	₹ .	٠,	4	٦;	28	:	٦٠	η Δ. υ	28	47	49	r.	4 6	-	4 ;	4	49	53	יין ני רין ני	3
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard		standard	standard	standard )		standard standard		standard	standard			standard	atandard		standard	standard	scandard	standard	standard	standard	
LEN CARRIER (m) GAS	4	4 helium	4 helium	4 helium	4 helium	4 helium	4	4 helium	4 helium	15 helium	15	phos 50			.25 15 helium (azinphos-methyl)	4 helium	50 hydrogen 25 helium		4 helium	2 nitrogen	20 2	25			15	4 helium	ם מייים מייים	7	25 15 helium star	N	4 helium 2 nitrogen	
(mm)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.25	0.25	(azin 0.32	07.0	20.0	_	3.00	0.20		3.00	ī.	0.32	0.20	0.25	ស	0.25	3.00	6	11)	0.25	. 2	3.00 5.00	)
TYPE	W HP (80-100mesh)	W HP (80-100mesh)	W HP (80-100mesh)	W HP (80-100mesh)	W HP (80-100mesh)	W HP (80-100mesh)		W HP (80-100mesh)	W HP (80-100mesh)	Ruelene)	ester (disyston sulfoxide)	<pre>-y1)methy1] ester</pre>	up (80-100moah)	ä	) -yl)methyl] ester	W HP (80-100mesh)		hio	W HP (80-100mesh)	W HP (80-100mesh)	i			er (dimethoate) W HP (80-100mesh)		W HP (80-100mesh)		hyl ester (delnav	methvilo O-dimeth		W HP (80-100mesh) 3.00 W HP (80-100mesh) 3.00 W HP (80-100mesh) 5	
COLUMN T	3% w/w on Chromosorb	3% w/w on Chromosorb	3% w/w on Chromosorb	3% w/w on Chromogorb	3% w/w on Chromosorb	Chromosorb	W/w on Chromosorb	3% w/w on Chromosorb		methyl methyl (crufomate, bonded phase	sulfinyl) methyl) ester (dis	S-[(4-oxo-1,2,3-benzotriazin-3(4H)-y1)methyl]; glass	(phorate)	(thimet)	glass bonded phase S-[(4-oxo-1,2,3-benzotriazin-3(4H)	3% w/w on Chromosorb W	bonded phase	thoxyethyl ester (malathion)	3% w/w on Chromosorb W	3% w/w on Chromogorb W	p v	•		S-{Z-(methylamino)-Z-oxoethyl] ester calass 3% w/w on Chromosorb W	bonded phase	3% w/w on Chromosorb		1) 0,0,0',0'-tetramethyl ester (delnav	C F	quartz glass 3% W/w on Chromosorb W HP	38 w/w on Chromosorb W HP 38 w/w on Chromosorb W HP	
COLUMN MATERIAL	Ψ	ester glass	ester glass	er glass	ester qlass	ester glass	tris(2,3-dichloropropyl) ester OV-1 qlass		ester 3	4-tert-butyl-2chlorophenyl metl 8-1 quartz glass	o,o-diethyl s-(ethylsulfi) martz glass	O, O-diethyl S-[(4-oxo-1, guartz glass	cone quartz grass 0,0-diethyl S-ethylthiomethyl ester	02	quartz glass O, O-dimethyl S-[(4-oxo-1,		quartz glass quartz qlass	02	glass	grass quartz qlass				OO-dimethyi S-{Z-(methylo quartz qlass			glass	٥	۳.	quartz glass	glass glass quartz glass	
STATIONARY	triisobutyl OV-1	щ	-	trioctyl ester OV-1	triphenyl es OV-1	tripropyl es	tris(2,3-dic	tris(2-chloroethyl) OV-1	tris(butoxyethyl) OV-1 glass		c acid o,o-di	acid, V-1	ᆏ			0V-1	OV-1 Me silicone		OV-1	SE-30	ov-1	Me silicone		c acid, 00-dii SE-30	DB-1	0V-1	OV-1/SE-30	3,8,	) -s			
	ll .	ซ		phosphoric acid, 2445	phosphoric acid, 2363	phosphoric acid,	phosphoric acid, 2307		phosphoric acid, 2363	phosphoroamidate,	orodithioi	Ö	phosphorodithioic acid,	phosphorodithioic acid,	1688 DB-1 phosphorodithioic acid,	2430	2464 SAC 2507 HP	2	1900	1917 PEC		1930 HP	1938	phosphorodithioic 1690 PEC	1707	1720	1725 1733 UD	ž	1714 DB-1	2092 PEC	2255 0V-1 2310 PEC SE-30	

LIT	49	49	49	49		49	49	49	49	49	•	<b>1,</b>	49	50	47	ć	87	53	53	,	ო ო	n	53		28	₹ 9	43	;	*	r	₽ -	28	53	7) 7'	<b>-</b>	49
SAMPLE TYPE	standard	standard	standard	standard	cide)	standard	standard	<b>Btandard</b>	standard	standard	77 17 17 17 17 17 17 17 17 17 17 17 17 1	standard one)		standard	standard		standard	standard	standard	,	standard		standard	standard	standard	standard	standard standard	standard	40	scandard	standard	standard	standard	Scandard	standard	standard
LEN CARRIER (m) GAS		15 helium	15 helium	dioxathion) 0.25 15 helium		15 helium	15 helium		(gutnion) 15 helium	15 helium	16 14.1			z nicrogen	25 helium	(coumaphos)	on nyarogen	2 nitrogen	2 nitrogen	i	50 helium 50 helium	3	2 nitrogen	4 helium	20		25.5	4		(u	4 helium	50	2 nitrogen	} '	4 helium	15 helium
OI (mm)	0.25	0.25	0.25	0.25	-dimethyl	0.25	0.25	0.25	0.25	0.25	6	hyl e	0.25	inhoe.	0.20		0.32	. 5	ут) 5		0.30		ល		0	6	0.20			(diazinon)			2 5		3.00	0.25
Ю II			;	ester (deinav 1,	ò	(torak)	o o-diethul ester (		o, o-almetnyl	(trithion)	(methyl trithion)	methyl o, o-diethyl ester		W MF (80-100mesn) 5 Z nic	Tage (breen	yran-7-yl) ester	2	HP (80-100mesh)	(chlorpyritos methyl) W HP (80-100mesh)			(iodofenphos)	W HP (80-100mesh)	W HP (80-100mesh)	•			HP (80-100mesh)		ester	HP (80-100mesh)		HP (80-100mesh)		HP (80-100mesh)	
COLUMN TYPE	<u>B</u>	ester (imidan) shase	ecnoprophos)		-2-oxol, 3, 4-thiadiazol-3-ylmethyl	se iethyl ester			-3-7тшө	ester (	ester	bonded phase	0 1	ass 3% W/w on Chromosoff W HP 6	Yt o, carmeti	thyl 0-(3-chloro-4-methyl-2-oxo-2H-1-benzopyran-7-yl)	quartz glass hvl S-2-(ethvlthio)ethvl ester (disulfoton)	38 W/w on Chromosorb W HP	_	ethyl ester,	99	ester	orb	orb	89	į,	D Q	on Chromosorb W	(parathion-ethyl)	-methylethyl)-4-pyrimidinyl]	w/w on Chromosorb W		romosorb W	orophenyl ester (ronnel)	on Chromosorb W HP	89 6
	ethylthioethyl ester	phthallmidomethyl este	u	1 o,o,o',o'-tetramethyi bonded phase	y-2-0x01, 3, 4-	ass bonded phase thalimidoethyl o,o-diethyl	ass bonded phase	bonded phase	2, 3-benzocriazi bonded phase	<pre>lthiomethyl o,o-diethyl ass bonded phase</pre>	>-	bonded phase	bonded phase	38 W/W on	. py <del>.</del> -	1-methyl-2-ox	bonded pna io)ethvleste	38 W/W on	5,6-trichloro-2-pyridyl ester ass 3% w/w on Chromosork	chlorophenyl) 00-dimethyl	bonded phase	0,0-di	3% w/w on	9 89 3 80	bonded phase	honda hona		38 W/W	ester	- (1-methyleth	38 W/W on	bonded phase	3% w/w on Ch	oropheny	3% W/W on	bonded phase
JMN MATERIAL	8-2 z 91	glass	ropyı ass	-dioxane-2,3-diy1 quartz qlass	dro-5-methoxy	cz glass -1-phthalimi			dihydro-4-oxo-1,2 quartz glass	lorophenylthlome quartz qlass	chenylthiome	quartz grass 8-6-chloro-2.3-dihvdro-2	z glass	z glass	nino-o-meciny. z glass	)- (3-chloro-	z glass 3-2-(ethvith:	z glass	ė, β	, 5-dichloropl	z glass	co-4-iodophenyl	z glass	-4-nitrophenyi 3	z glass	7	z glass	,	-4-nitrophenyl	-[6-methyl-2-(1	m m			)-2,4,5-trichl		z glass
NARY GECOLUMN	o, o-diethyl g	o,o-dimethyi quartz	ethyi q	s, s'-p-dioxane- quartz ql	a-2, 3-dihydro-5	quartz gl s-2-chloro-1-ph	quartz gl	quartz	s-3,4-dihydro-4 quartz gl	<pre>8-4-chloropheny quartz ql</pre>	a-4-chloropheny	quar 9-6-chloro	quartz	SE-30 quartz gl	cone quari	acid, 0,0-diethyl	quar 0.0-diethvl	quartz	O,O-dimethyl O quartz	0- (4-bromo-2,5-di	quartz	quarus 91 -5,5-dichloro-4-	quartz	OU-dietnyl U-4-ni glass		SE-30 glass	i silicone quartz		00-diethyl 0-4	at.	-30 glass qlass	quartz	quartz	00-dimethyl 0-2,4	glass -30 glass	
STATIONARY PHASE	υD	c acid, DB-1	c acid, DB-1	c acid, DB-1	c acid,	DB-1 c acid,	DB-1	DB-1	c acid, DB-1	cacid, DB-1	c acid,	UB-1 c acid.	DB-1	SE-30	Acia, U,z-are Me silicone	acid, 0,	0V-1 acid. 0.	0	acid, 0, SE-30		0V-1		~	acid, 00 0V-1		OV-1/SE	Me sili		acid, 00-die	acid, 00	OV-1/SE-30 OV-1	00-1	SE-30		OV-1 OV-1/SE-30	DB-1
COLUMN	phosphorodithioi	phosphorodithioi 2375	phosphorodithioic acid, 1629 DB-1	phosphorodíthíoíc acid, 1142 DB-1	phosphorodithioic acid,	2012 DB-1 phosphorodithioic acid,	2570 DB-1	101111111111111111111111111111111111111	phosphorodithioic acid, 2462 DB-1	phosphorodithioic acid, 2277 DB-1	phosphorodithioic acid,	218/ phosphorodithioic acid.				ioic	2654 SAC		D	ioic	Hall	ย		phosphorothicie	SAC		HP		υ	ט		SAC	PEC	rothioic		
LTP	phospho 1783	phospho. 2375	phospho 1629	phospho 1142	oudsoud	2012 phospho	2570	2551 2551	phospho 2462	phospho 2277	phospho	2187	2476	2488	phospho 1919	phospho	2654	1776	phosphorothioi	phospho	1971	phosphorothioi	2150	phospho 1935	1941	1942	1981	2040	phosphorothioi	phosphorothici	1758	1766	1769	oudsoud	1880	1897

LIT		40.	-	49	28	4.4	27	27	Ħ	27	27	п	27	27	27	44	28	28 28	3 ⊶	27	-	•	4	-	•	m	w 4	· [	27
SAMPLE TYPE	standard	standard standard	grandard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	tap water	atan	standard		standard	standard	4 4 4 .	standard standard	standard			essential oil standard		
LEN CARRIER (m) GAS	4 helium	15 helium			50 hydrogen	4 helium	42 helium	42 helium	4 helium	42 helium	42 helium	4 helium	42 helium	42 helium	42 helium	25 helium		50 hydrogen 50 hydrogen		42 helium	4 helium			4 belium		50 helium	nerium	4 helium	
11D (mm)	3.00	0.25	3.00	0.25	0.32	3.00	0.30	0.30	3.00	0.30	0:30	3.00	0.30	0.30	0.30		0.32	0.32	3.00	0.30	3.00	ć	3.00	3.00	) ) !	0.30	0.30	3.00	0.30
	(80-100mesh)		1) (80-100mesh)	(u		(80-100mesh)			(80-100mesh)			(80-100mesh)							(80-100mesh)		(80-100mesh)	1001		(80-100mesh)				(80-100mesh)	
COLUMN TYPE	ester (parathion-methyl) 3% w/w on Chromosorb W HP	bonded phase	ester (demeton-S-methy	dyl ester (dursba ase	bonded phase	romosorb W HP	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP	wall-coated open tubular	wall-coated open tubular		•		bonded phase bonded phase	ىم	wall-coated open tubular	3% w/w on Chromosorb W HP	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	W/W ON CHICHOSOLD W DE	3% w/w on Chromosorb W HP		bonded phase	bollded pliabe	3% w/w on Chromosorb W HP	wall-coated open tubular
COLUMN MATERIAL	1 1	Çi i	licone quartz glass S-2-ethylthioethyl 00-dimethyl glass	-3, g	ester quartz qlass		er glass	er glass	ester glass	glass	glass	cyl ester glass	glass	er glass	ester glass	) ester	Б,	quartz glass martz glass	ภ	glass	ס		glass	glass			5	glass	glass glass
N STATIONARY N PHASE	ige :		acid,		butyl benzyl es	OV-1/SE-30 OV-1	butyl ethyl ester SE-30 gl	hexyl est 10		nonyl est 30	butyl octyl ester SE-30 gla	nexyltr 	eat	decyl octyl ester SE-30 al	decyl pentyl es	di (2-ethylhexyl) ester	ov-1	00-1		SE-30	ov-1	diallyl ester	3-30	dibenzyl ester	1 ester	0V-1	/SE-30	OV-1	
×	orothioi		1905 HP phosphorothioic	orothioi	phthalic acid,		phthalic acid, 1768	phthalic acid, 2124	Ö			υ	υ	phthalic acid,	ic acid,	ic acid,		2505 SAC			ב ב	phthalic acid,	1698	phthalic acid, 2690	÷	1903 Hall	1911 Hall	1924	1938 1940

LIT REF	55 55	27	ਜਜ	27	27	4.1	28	ne	co r	n	4 -	27	2.7	2.7	27	27	-1	2.7	27	4	m	m r	?	<b>-</b> !	55	1 7	1	4	27	•	27	1
SAMPLE TYPE	standard standard	standard	standard standard	standard	standard	standard standard	standard	standard	standard	essential oil	standard	standard	standard	atandard	standard	standard	standard	standard	standard	scandard		essential oil	standard	standard	standard	stalldatu	standard	standard	standard	•	standard standard	standard
LEN CARRIER (m) GAS	25 hydrogen 25 hydrogen	42 helium	4 helium 4 helium	42 helium	42 helium	4 helium	50 hydrogen		50 helium	50 helium	4 belinm			50 nitrogen		42 helium		50	50 hydrogen			50 helium	4		25 hydrogen	эо иучтоучи	4 helium		50 hydrogen		50 hydrogen	4 helium
(mm)	0.31	0.30	3.00	0.30	0:30	3.00	0.32	0.30	0.30	0.30	0	0.30	0.30	0.30	0.30	0.30	9.00	0.30	0.30	2	0.30	0.30	3.00	3.00	0.31		3,00		0.30		0.30	3.00
			(80-100mesh) (80-100mesh)			(80-100mesh)					100m01	(meamont-ool				1400000	(oremnor-og)						(80-100mesh)	(80-100mesh)			(80-100mesh)					(80-100mesh)
COLUMN TYPE	į	wall-coated open tubular	3% w/w on Chromosorb W HP 3% w/w on Chromosorb W HP	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP		bonded phase bonded phase	bonded phase	wall-coated open tubular bonded phase			wall-coated open tubular	religing coordinates	oben	wall-coated open tubular	3% W/W on Chromosorb W hr	wall-coated open tubular	oben	wall-coated open tubular			3% w/w on Chromosorb W HP	on Chromosorb W	bonded phase	wall-coated open tubular	3% w/w on Chromosorb W HP		wall-coated open tubular	•	wall-coated open tubular	3% w/w on Chromosorb W HP
COLUMN MATERIAL	. 6	ester glass	ester glass glass	glass	glass	ester glass glass	gJ	quartz glass	. g	glass martz glass	, ,	glass	ylass glass		glass glass	glass	glass	glass	glass	glass	uartz	N	glass glass	glass	glass	glass	glass	er glass	ester glass	ester	glass glass	ester glass
		dicycloheptyl e SE-30	exyl es	-		yethyl SE-30	diethyl ester OV-1	OV-1	ov-1	SP-2100	OV-1/SE-30	ov-1		diheptyl ester	OV-101	SE-30		dinexyl ester	ov-101	SE-30 dijashitul ester		ov-1	OV1-1/SE-54 OV-1	0V-1	OV1-1/SE-54	OV-101		diisooctyl ester OV-1/SE-30 g	diisopentyl est OV-101	diisopropyl est	OV-1/SE-30 OV-101	dimethoxyethyl OV-1
LTP COLUMN INDEX ORIGIN	phthalic acid, 0 1955 HP	ic acid,	ic acid,		c acid,	c acid,	ic acid, SAC	1550 Hall		1559 Supelco		1568		ic acid,	2494	2497	:	phthalic acid,	2306	, C	Hall		1862 HP	1868	1871 HP	4	g acid,	phthalic acid, 2525	phthalic acid,	phthalic acid,	1633 1758	phthalic acid, 1980

LIT REF	1 55 27 55	1 27	28 1 27 27 27	22 2 2 2 2 2 2 4 4 4 4 4 4 4 4 4 4 4 4	г	1 27 27 27	27	27	27	1 4	27	27	27	35 44	49	28 42	28	19
SAMPLE TYPE	standard standard standard standard	standard standard	standard standard standard standard standard	standard standard standard standard	standard	standard standard standard standard	standard	standard	standard	standard standard	standard	standard	standard	standard tap water	standard	standard standard	standard	standard
LEN CARRIER (m) GAS	4 helium 25 hydrogen 50 nitrogen 25 hydrogen	4 helium 42 helium	50 hydrogen 4 helium 50 hydrogen 42 helium 50 hydrogen	50 nitrogen 50 hydrogen 42 helium 4 helium	4 helium	4 helium 50 hydrogen 50 nitrogen 42 helium	42 helium	42 helium		4 helium	42 helium	~	42 helium	50 hydrogen 25 helium	15 helium	50 hydrogen 1 argon	50 hydrogen	
a (m)	3.00 0.31 0.30	3.00	0.32 0.30 0.30 0.30	0.30 0.30 0.30	3.00	3.00 0.30 0.30 0.30	0.30	0.30	0.30	3.00	0.30	0.30	0.30	0.3	0.25	0.32	0.32	
	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)				(80-100mesh)						HP (silanised 80-100 mesh)		
COLUMN TYPE	3% w/w on Chromosorb W HP bonded phase wall-coated open tubular bonded phase	3% w/w on Chromosorb W HP wall-coated open tubular	bonded phase 3% w/w on Chromosorb W HP wall-coated open tubular wall-coated open tubular wall-coated open tubular	-coated open tubular -coated open tubular -coated open tubular /w on Chromosorb W HP	on Chromosorb W HP	/w on Chromosorb W HP -coated open tubular -coated open tubular -coated open tubular	ated open tubular		oben	on Chromosorb W HP	coated open tubular	ed open	coated open tubular	ated open tubular	phase		phase	on Celite
	3% w/w bonded wall-co	3% w/w wall-co	bonded phase 3% w/w on Cl wall-coated wall-coated wall-coated	wall-coated wall-coated wall-coated	38 W/W	3% w/w on Ch wall-coated wall-coated	wall-coated	wall-coated	wall-coated	38 w/w	wall-co	ŧ	wall-co	wall-coat	ponded	bonded phase Chromosorb W	bonded	258w/w
COLUMN MATERIAL	glass glass glass glass	glass glass	quartz glass glass glass glass	glass glass glass glass	glass	glass glass glass glass	ter glass ter	glass glass glass	grass er glass	oxyl ester glass glass	ester glass	ster glass ester	glass	glass	quartz glass	ne) quartz glass pyrex glass	quartz glass	
	ter 54 54			n n		ដ	9 6	2 W	gr ester gl	:lohex} 9] 10 g]		מ מ			5	t dan da	т. Б	10
STATIONARY PHASE	7 8 18		dioctyl ester OV-1 OV-1 OV-101 SE-30 OV-101	<b>.</b>		dipropyl es 0V-1 0V-101 0V-101 SE-30	heptyl hexyl SE-30	neptyi nonyi SE-30 heptyl pentyl	sE-30 hexyl octyl SE-30	isobutylcyclohexyl ester OV-1 glass OV-1/SE-30 glass	methyl undecyl SE-30	nonyi propyi SE-30 pentyl propyl		OV-1 Me silicone	DB-1	(5-mecnylpyridine) OV-1 OV-101 Pyr	(4-mecmyrpyrrame) OV-1 quar	GImernyı esu SE-30
COLUMN	acid, HP	acid,	acid,	acid,	acid,	acid	acid,	acia,	acid,	acid,	acid,	acid,	•			ra Ta	AC 4.	acia, di
LTP	1 -	phthalic 2649 2876	phthalic 2506 8 2519 2519 2682 2685 2860	phthalic 2120 2121 2121 2122 2127 2140	phthalic 2550	phthalic 1743 1756 1756 1756	phthalic 2404	phthalic 2687 phthalic	2310 phthalic 2497	phthalic 2159 2174	phthalic 2389	phthallo 2325 phthallo	1942	pnycane 1811 1812	pictoram 1908	picoline, be 0832 SAC 0841	prestine, 0832 S	pimelic 1313

										23	38	46	40	40	40	40	40	40	40
SAMPLE TYPE  an standard  standard	en standard standard	standard standard	standard standard		en standard standard	standard standard	standard	standard	standard	standard	standard	n food	en standard						
	1 nitrogen 4 helium	5 helium 5 helium	15 helium 15 helium	50 hydrogen	ou nydrogen 15 helium	5 helium 5 helium	5 helium		15 helium	5 helium	8	) nitrogen	) nitrogen	50 nitrogen	) nitrogen	) nitrogen	50 nitrogen	) nitrogen	50 nitrogen
	9	0.25 15				25 15 20 25	25 15			0.25 15		0.28 80	2 50		2 50	2 50		2 50	
		0.25	0.25	0.3	0.25	0.25	0.25		0	0		0	0.2	0.2	0.2	0.2	0.2	0.2	0.2
COLUMN TYPE ====================================	10%w/w on Chromosorb W HMDS (60-80mesh) 3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	uedo	Wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular							
COLUMN MATERIAL stainless steel glass	ștainless steel glass	quartz glass quartz glass	quartz glass quartz glass	glass	glass quartz glass	quartz glass quartz glass	quartz glass	glass	quartz glass	quartz glass		glass loro	quartz glass						
STATIONARY PHASE  SE-30  aa- OV-101	SE-30 OV-1	. SE-30	. SE-30		OV-1 SE-30	SE-30 Me silicone	. SE-30	OV-1/SE-30	. SE-30	. SE-30	SE-30 hy1	7-101 ,3,3-heptach	Me silicone	ŭ	Me silicone		Me silicone		cone
LTP COLUMN INDEX ORIGIN ====== pinane, (+) cis- 1002 pinene, (+) -gamma- 0926 Quadrex O pinene, (-) -beta- 0965 Quadrex O pinene, (-) -beta-	<u>.</u>	piperinciare 2316 J&W Sci. pipradrol 2105 J&W Sci.	pramokine 2248 J&W Sci. prilocaine 1800 J&W Sci.	pristane 1709 pristane, nor-	1652 procainamide 2175 J&W Sci.	procaine 1978 J&W Sci. 2049 HP	prochlorperazine 2921 J&W Sci.	progencerons 2793 promarine	2266 J&W Sci.	2234 Jaw Sci.	. 0480 si propanal, 2-methyl					1008 1 1 2-4	-	•	propane, 1,2,3-1 1148

LIT	w <b>2</b> w 2 w 2 w 2 w 2 w 2 w 2 w 2 w 2 w 2 w	40 55 55	5 3 40	40	40 53 33	40	40	40	40	40 38	28 38	40	40	40	40	ഗനന	40	40	40	40	40
SAMPLE TYPE	essential oil tap water standard standard	standard standard standard	tap water essential oil standard	standard	essential oil standard tap water standard	standard	standard	standard	standard	standard standard	standard standard	standard	standard	standard	standard	tap water standard essential oil	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 helium 50 helium 50 nitrogen	50 nitrogen 25 hydrogen 25 hydrogen	50 helium 50 nitrogen	50 nitrogen	50 helium 50 helium 50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen 2	50 hydrogen 2	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 helium 50 helium	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen
ID (mm)	0.30 0.30	0.2 0.31 0.31	0.30	0.2	0.30 0.30	0.2	0.2	0.2	0.2	0.2	0.32	0.2	0.2	0.2	0.2	0.30	0.2	0.2	0.2	0.2	0.2
COLUMN TYPE	bonded phase wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular bonded phase bonded phase	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh)	bonded phase 15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass glass quartz glass quartz glass	quartz glass glass glass	glass quartz glass quartz glass	quartz glass	quartz glass quartz glass glass quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	glass quartz glass quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass
LIP COLUMN STATIONARY INDEX ORIGIN PHASE	Hall Supe		propane, 1,2-dichloro 0666 Supelco SP-2100 0679 Hall OV-1		Hall Hall Supe		propane, 1-bromo-3-chioro 0841 Me silicone		٠,		Ø	7 7	propane, 2,2-dichioro 0604 Me silicone propane 2 2-dimethul-1 3-dic	0875 2-brown	propane, 2 brome 0565 Me silicone propane 2-brome-1-chlore	$\alpha = x$			propane, z chioro z mechyt 0538 Me silicone propane 2-iodo		propane, z-roco-z-mechyr 0698 Me silicone

LIT REF	1	40	40	46	20	53	18	18	21 20	20	20	21	20	7 7	19	21	2	;	21.	, ,	61	6	18	38 10	38 12	38
er Sample type	n standard	yen standard	yen standard	hen food	yen standard	gen standard	standard	standard	standard gen standard		yen standard		yen standard	Brandard	standard	standard	standard		standard	standard	standard	standard	standard	standard gen standard	standard gen standard nen food	
CARRIER GAS	 helium	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen			argon nitrogen				nitrogen	argon		argon	ardon		argon	argon	<b>n</b>			nitrogen	nitrogen nitrogen	
LEN (m)	4	50	50	80	2.4	8	3.6	3.6	1.5		2.4	1.5	2.4			1.5	1.5						3.6	25	2 25 80	
ID (mm)	3.00	0.2	0.2	0.28	5.50	ιC			4.00	5.50	5.50	4.00	5.50	4.00		4.00	4.00	• •	4.00	4.00				2.0	2.0	2.0
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh)	_	wall-coated open tubular	wall-coated open tubular	1 derivative 13% w/w on Chromosorb W AW	(mecoprop)  3% w/w on Chromosorb W HP (80-100mesh)	(allyl isobutyrate) 10%w/w on Celite 560 AW(60-80mesh)	108w/w on Celite 560 AW(60-80mesh)	trimethylsilyl derlyative 10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW	derivati	ilyl derivative 13% w/w on Chromosorb W AW	% w/w on Diatoport S	M/M %		N	), trimethylsilyl derivative 10% w/w on Diatoport S (80-100mesh)	trimethylsilyl derivative 10% w/w on Diatoport S (80-100mesh)	derivative	10% w/w on Diatoport S (80-100mesh)	trimethylailyl derivati	ı	25%w/w on Celite	o	15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh) wall-coated open tubular wall-coated open tubular	saa-Ch open
COLUMN MATERIAL	lorophenyl) (prolan)		quartz glass	d) glass	-dihydroxyphenyl, trimethylsilyl SE-30	phenoxy glass	enyl ester uminium			-	henyl), trimethylsilyl		trimethylsilyl derivative 13			ĕ		yl), trimethylsilyl		OV-1 OV-1	Li Li		aluminium	quartz glass	quartz glass	grant quartz glass
STATIONARY PHASE	2-nitro-1,1-bis(4-chlorophenyl)	3-chloro-1,2-dibromo Me silicone	loro Me silicone	(propionic acid) OV-101	-dihydroxyphe SE-30	2-(4-chloro-2 SE-30	2-methy1, 2-p SE-30	2-propenyl ester SE-30	3(4-methoxyphenyl), OV-1 SE-30	3-(2-methoxyphenyl), SE-30	3-(4-hydroxyphenyl),		nyl, 0	OV-1	SE-30	beta-(3-hydro: OV-1	beta-(3-hydroxyphenyl)	beta-(3-indoly1),	0V-1	beta- (4-hydro:	cinnamyl ester	ethyl ester SE-30	vinyl ester SE-30	SE-30 SE-30	SE-30 SE-30 OV-101	2-methyl-1- SE-30 SE-30
LTP COLUMN INDEX ORIGIN	propane, 2-nitro	ò	octacl	acid	propanoic acid, 1946	propanoic acid, 1740 PEC	propanoic acid, 0815		propanoic acid, 1630 1637	propanoic acid,	propanoic acid,	1753	propanoic acid, 1398	1405		propanoic acid, 1871	propanoic acid,	propanoic acid,	1971	propanoic acid,	propanoic acid,	propanoic acid,	propanoic acid,	propanol, 1- 0530 0561 SGE	propanol, 2- 0480 0515 SGE	51, SG

LIT	38	38	40	40	40	10 38	38	40	14	14 60	14	40	40	40	14	14	14	14	14	14	40	40	40	40	40	40
LEN CAFRIER SAMPLE TYPE (m) GAS SAMPLE TYPE	2 25 nitrogen standard	2 standard	50 nitrogen standard	50 nitrogen standard	50 nitrogen standard	25 nitrogen standard 2 standard	2 standard	50 nitrogen standard	25 helium standard	25 helium standard 50 nitrogen	25 helium standard	50 nitrogen standard	50 nitrogen standard	50 nitrogen standard	25 helium standard	25 helium standard	25 helium standard	25 helium standard	25 helium standard	25 helium standard	50 nitrogen standard	50 nitrogen standard	50 nitrogen standard	50 nitrogen standard	50 nitrogen standard	50 nitrogen standard
TO (mm)	2.0	2.0	0.2	0.2	0.2	0.30	2.0	0.2	0.50	0.50	0.50	0.2	0.2	0.2	0.50	0.50	0.50	0.50	0.50	0.50	0.2	0.2	0.2	0.2	0.2	0.2
COLUMN TYPE (	15% w/w on Gas-Chrom Q (100-120 mesh) 2 wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh) 2	wall-coated open tubular 0	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 15% w/w on Gas-Chrom Q (100-120 mesh) 2	15% w/w on Gas-Chrom Q (100-120 mesh) 2	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 0	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 0	wall-coated open tubular 0	wall-coated open tubular	wall-coated open tubular $0$	wall-coated open tubular 0	wall-coated open tubular 0	wall-coated open tubular 0	wall-coated open tubular 0	wall-coated open tubular 0	wall-coated open tubular	wall-coated open tubular 0	wall-coated open tubular 0	wall-coated open tubular
COLUMN MATERIAL	quartz glass		quartz glass	quartz glass	quartz glass	quartz glass		quartz glass	glass	glass quartz glass	glass	quartz glass	quartz glass	quartz glass	glass	glass	glass	glass	glass	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass
INDEX ORIGIN PHASE		propanone (acetone) 0475 SE-30	1,1,3-trichloro-2- Me silicone	bromo-2- Me silicone	one, chloro-Z- Me silicone	-ol, Z- SGE SE-30 SE-30		Me silicone	1-(Z-methylphenyl)-1-SE-30	1-(3-methylphenyl)-1- SE-30 Ogawaltd OV-101	1-(4-methylphenyl)-1-SE-30	1-chioro-Z-metnyi-i- Me silicone	2,3-dibromo Me silicone	Z,3-dichloro Me silicone	Z-(Z-metnyiphenyi) -1- SE-30	, Z-(3-methylphenyl)-1- SE-30	$z = (s - t_{\text{Max}}) - t_{\text{Max}}$ $z = (s - t_{\text{Max}}) - t_{\text{Max}}$ $z = (s - t_{\text{Max}}) - t_{\text{Max}}$	, 2-(4-metnylphenyl)-1- SE-30 2-(4-minnlubenyl)-1-	2-(4-Vinyiphenyi)-i- SE-30 2-mothul-3-phenyi-1-	Z-macnyr-3-phenyr-r SE-30	Me silicone	Me silicone		Me silicone	Me silicone	icone

LIT	40	40	40	40	40	18	18	18	18	18	38	18	80	18	38	18	18	<b>0</b>	18	18	18	49	28	38	53	53	23	23	23
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	atandard	standard	standard	standard	standard	standard	standard	standard	scandard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	3.6	3.6	3.6	3.6	ب	2	9.	8	3.6	2	9.	9.0	٧	9.	3.6	3.6	15 helium	50 hydrogen	7	2 nitrogen	2 nitrogen	15 helium	15 helium	15 helium
- "						m	m	m	m	m	0.	m	c		٥.	m	ش	>	w	n	ĸ	0.25	0.32	٥.	ις	5 5	0.25	0.25	0.25
COLUMN TYPE (mm)	wall-coated open tubular 0.2	wall-coated open tubular 0.2	wall-coated open tubular 0.2	wall-coated open tubular 0.2	wall-coated open tubular 0.2	2	methacrylate) 10%w/w on Celite 560 AW(60-80mesh)	<pre>(ethyl methacrylate) m 10%w/w on Celite 560 AW(60-80mesh)</pre>	methacrylate) 10%w/w on Celite 560 AW(60-80mesh)	methacrylate)	Gas-Chrom Q (100-120 mesh) 2	methacrylate) 10%w/w on Celite 560 AW(60-80mesh)	me	Selite 560 AW (60-80mesh)	sh) 2	10%w/w on Celite 560 AW(60-80mesh)		15% w/w on Gas-Chrom Q (100-120 mesh) 2.0	10%w/w on Celite 560 AW(60-80mesh)	10%w/w on Celite 560 AW(60-80mesh)		(devrinol) bonded phase	bonded phase 0	15% w/w on Gas-Chrom Q (100-120 mesh) 2.0	(dichlorprop) 3% w/w on Chromosorb W HP	rophenyl)benzamido)-, isopropyl ester (flampropisopropyl) glass 3% w/w on Chromosorb W HP (80-100mesh) 5	wall-coated open tubular 0.3	wall-coated open tubular 0.3	wall-coated open tubular 0.3
COLUMN MATERIAL	quartz glass	ro . quartz glass	quartz glass			methylpro	butyl ester (butyl maluminium	ethyl ester (ethyl mo aluminium	hexyl ester (hexyl me aluminium	methyl ester (methyl	arnmurann	pentyl ester (pentyl aluminium	propyl ester (propyl	aluminium	(butyl acrylate)	aluminium	(ethyl acrylate) aluminium	(hexyl acrylate)	alumini	(methyl alumini	<pre>c (pentyl acrylate) aluminium</pre>	(RS)-N, N-diethyl-2-(l-naphthyloxy) DB-1 quartz glass	oro (propanil) quartz glass		2-(2,4-dichlorophenoxyl) ester SE-30 quartz glass	oro-4-flourophenyl) quartz glass	quartz glass	quartz glass	quartz glass
IONA	hloro-1- Me silicone	trans-1,2,3-trichloro Me silicone	trans-1,3-dichloro Me silicone	trans-1-bromo-1- Me silicone	trans-1-chloro-1 Me silicone	2-methyl, 2-	у1,	2-methyl, et SE-30	2-methyl, he SE-30	у1,	SE-30	у1,	y1,	SE-30	butyl ester SE-30	SE-30	ethyl ester SE-30	SE-30	D _	methyl ester SE-30	pentyl ester SE-30	S)-N,N-dieth DB-1	3',4'-dichloro	1 SE-30	2-(2,4-dich] SE-30	2-(N-(3-chloro-4-flou SE-30 quartz	SE-30	SE-30	SE-30
. ×			propene, trans-1, 0743	0	propene, trans-l-	oic acid,	oic acid,	propenoic acid, 2 0756	propenoic acid, 2	oic acid,	0677	oic acid,	oic acid,	0856	propenoic acid, 1		oic acid,	Ţ.	acıu,	propenoic acid, 1 0569	マ	propionamide, (R: 2100	propionanilide, 3	propionate, ethyl	nic acid, PEC	id,	propoxycaine 2307 J&W Sci.	propoxyphene 2165 J&W Sci.	propranolol 2111 Jaw Sci.

LIT	38	10	40	40	23	4.2	31	54	60 46	5.4	4	09	,	00	9	9		09	37	0.40	69	;	9	09	9	3	09	09	9	Š	9 4	:	09	09	09
R SAMPLE TYPE	standard	en standard	en standard	en standard	standard	standard			en standard en food		, , , , , , , , , , , , , , , , , , ,			en standard	en standard	en standard			en standard		ue		ue	ue		:	ne	ue	ue	70 S			en standard	en standard	ue
LEN CARRIER (m) GAS	7	25 nitrogen	50 nitrogen	50 nitrogen	15 helium	1 argon			30 nitrogen 80 nitrogen		80 mitrogen		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	oo urcroden	50 nitrogen	50 nitrogen		50 nitrogen		mafortan oo	50 nitrogen		50 nitrogen	50 nítrogen	50 mitroden		50 nitrogen	50 nitrogen	50 nitrogen	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			50 nitrogen	50 nitrogen	50 nitrogen
I QI (mm)	2.0	0.30	0.2	0.2	0.25	8	0.22	0.22	0.22	0.22	80	0.22		77.0	0.22	0.22		0.22	0.22	0.7.0	0.22		0.22	0.22	0 22	1	0.22	0.22	0.22	000	0.28	4	0.22	0.22	0.22
COLUMN TYPE	15% w/w on Gas-Chrom Q (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	Chromosorb W HP (silanised 80-100 mesh)	open tubular	an .	wall-coated open tubular	oben	sell-costed ones tubuler	oben	9	waii-coated open tubutar	wall-coated open tubular	wall-coated open tubular		oben	wall-coated open tubular	open	wall-coated open tubular	•	wall-coated open tubular	wall-coated open tubular	wall-coated onen tubular		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated onen tuhular	uedo		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL		quartz glass	quartz glass	quartz glass	quartz glass	nurex alass	guartz glass	glas	quartz glass	quartz glass		grantz glass	,	quartz grass	quartz glass	l quartz qlass		glas	N	grass ethvlbutvl)	quartz qlass	sthylpentyl)	quartz glass	utyl quartz qlass	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	quartz glass	quartz glass	71 quartz glass	marty alass	i i		quartz giass vl	quartz glass	quartz glass
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	_	propyn-1-ol, 2- 0546 SGE SE-30	propyne, 3-bromo-1- 0631 Me silicone	propyne, 3-chloro-1- 0545 Me silicone	protriptyline 2207 J&W Sci. SE-30	pyrazine ocoć OV-101	Ogawaltd	Ogawaltd	0710 OgawaLtd OV-101	õ	De .	yawaLtd	ě	1032 Ogawaltd OV-101	1065 Ogawaltd OV-101	pyrazine, 2,3-diethyl-5-methyl 1137 Ogawaltd OV-101	ž	0897 OgawaLtd OV-101	Ogawaltd	U901 OV-101 OV-101 Blass over of the control of the	1306 Odawaltd OV~101	Ψ	1377 Ogawaltd OV-101	<pre>pyrazine, 2, 3-dimethyl-5-isobutyl 1200 OgawaLtd OV-101</pre>	pyrazine, 2,3-dimethyl-5-isopentyl	w		1352 Ogawaltd OV-101	- Or	pyrazine, 2,5-dimethyl		9	1059 Ogawaitd OV-101 Dvrazine, 2.5-dimethvl-3-propvl	1142 OgawaLtd OV-101	Pytazine, 2,3-uimetiyi-3-etiyi 1066 OgawaLtd OV-101

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LIT REF	60 31	09	09	60 54 54	54 54	54 60 54	09	60 54 54	09	60 31	31 60	60 31	9	09	60 31	54 54	09	09	09	09
SAMPLE TYPE	standard standard		standard	standard standard	standard standard	standard standard		standard standard		standard standard	standard standard	standard standard	standard	standard	standard standard	standard standard	standard	standard	standard	
LEN CARRIER (m) GAS	50 nitrogen 50 nitrogen		50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen
ID Li (mm) (1	0.22		0.22	0.22	0.22	0.22 0.22 0.22	0.22	0.22 0.22 0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22 0.22 0.22	0.22	0.22	0.22	0.22
COLUMN TYPE	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular	bonded phase wall-coated open tubular	bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass quartz glass	uartz	quartz glass	quartz glass quartz glass quartz qlass		quartz glass quartz glass quartz glass				quartz glass quartz glass	yl quartz glass quartz glass	quartz glass quartz glass	quartz glass	quartz glass	quartz glass quartz glass	quartz glass quartz glass quartz glass	quartz glass	quartz glass	quartz glass	- (z-mernyıburyı) quartz glass
COLUMN STATIONARY ORIGIN PHASE	ogawaltd OV-101 Ogawaltd OV-101	<pre>pyrazine, 2,6-dimethyl-3-ethyl 1064 OgawaLtd OV-101 quarazine, 2,6-dimethyl-3-propyl</pre>	OgawaLtd OV-101	pyrazine, 2-(1-methylbuty1) 1133 Ogawaltd OV-101 1133 Ogawaltd OV-101 1471 Orawaltd OV-101	pyrazine, 2-(1-methylpropyl) 1040 Ogawaltd OV-101 1394 Ogawaltd OV-101	thylbutyl) OV-101 OV-101 OV-101	thylbutyl) OV-101	pyrazine, 2-(2-methylpentyl) 1240 ogawaltd OV-101 1240 ogawaltd OV-101 1606 ogawaltd OV-101	pyrazine, 2-(ethylpropy1) 1121 Ogawaltd OV-101	,, 2-acetyl Ogawaltd OV-101 Ogawaltd OV-101	pyrazine, 2-acetyl-3,5-dimethyl 1153 OgawaLtd OV-101 1153 OgawaLtd OV-101	<pre>pyrazine, 2-acetyl-3-ethyl 1138</pre>	pyrazine, 2-acetyl-3-methyl 1061 Ogawaltd OV-101 pyrazine 2-acetyl-5-methyl	1093 Ogawaltd OV-101	Ogawaltd OV-101	, 2-butyl Ogawaltd OV-101 Ogawaltd OV-101 Ogawaltd OV-101	pyrazine, 2-butyl-3-methyl 1121 Ogawaltd OV-101	ogawalitd OV-101	Pyrazine, 2-chloro-3-methyl 0951 Ogawaltd OV-101	, Z-chloro-3-metnyl-3-{Z-metnylburyl) Ogawalitd OV-101 quartz glass
LTP CO INDEX OR	0101	pyrazine, 2 1064 Oga	1151 Oga	pyrazine, 2 1133 Oga 1133 Oga 1471 Oga	pyrazine, 2 1040 Oga 1394 Oga	` <u>`</u> `Ö'Ö'Ö	် <sub>ခွ</sub> ်	pyrazine, 2 1240 Oga 1240 Oga 1606 Oga	pyrazine, 2 1121 Oga	pyrazine, 2 0993 Oga 0993 Oga	pyrazine, 2 1153 Oga 1153 Oga	pyrazine, 2 1138 Oga 1138 Oga	pyrazine, 2 1061 Oga	1093 098	Pytazine, 1088 Oga 1089 Oga	pyrazine, 2-butyl 1088 Ogawaltd 1088 Ogawaltd 1474 Ogawaltd	pyrazine, 2 1121 Oge	pyrazine, 2 1044 Oga		pyrazine, 2 1371 Oga

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CARRIER SAMPLE TYPE	nitrogen	nitrogen	nitrogen	nitrogen nitrogen etandard			nitrogen standard	nitrogen standard	nitrogen	nitrogen	nitrogen standard	nitrogen	nitrogen standard	nitroden standard			nitrogen standard	nitrogen standard	nitrogen standard	nitrogen standard	nitrogen standard	nitrogen nitrogen standard			nitrogen	nitrogen	nitrogen	nitrogen	nitrogen	nitrogen standard nitrogen standard	
LEN (m)	50	20	20	50	20	20	20	20	20	50	50	50	50	50	50	2	20	50	50	20	20	20	50	) )	20	50	20	50	50	50	
O (E)	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	77.0	0.22	0.22	0.22	0.22	0.22	0.22	0.22		0.22	0.22	0.22	0.22	0.22	0.22	
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		uedo	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase	wall-coated open tubular	nedo	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	•	wall-coated open tubular wall-coated open tubular	wall-coated open tubular		<pre>wall-coated open tubular '1)</pre>	, wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase wall-coated open tubular	
COLUMN MATERIAL	-(2-methylpentyl) quartz glass	-3-methyl quartz glass	r-s-mernyı quartz glass	quartz glass	glas		glas	quartz glass	quartz glass	quartz glass	l quartz glass	r-s-mernyr quartz glass	quartz glass	guartz glass	glas		quartz glass	quartz glass	quartz glass			quartz glass quartz qlass	quartz	1-5-(2-methybutyl	quartz glass  -5-(2methylpenty	quartz glass	quartz glass	opyl-3-methyl quartz glass	quartz qlass		
LIP COLUMN STATIONARY INDEX ORIGIN PHASE	2-chloro-3-methyl-5	pyrazine, 2-chloro-5-isobutyl- 1264 Ogawaltd OV-101	pyrazine, 2-chioro-5-1sopropyl-3-metnyl 1173 Ogawaltd OV-101 quartz gl	်ဝင်		pyrazine, 2-ethoxy-3-ethyl 1101 OqawaLtd OV-101	1101 Ogawaltd OV-101		1415 Ogawaltd OV-101	pyrazine, z-etmoxy-5 isobucyi 1314 Ogawalita OV-101		Pyrazine, Z-ethoxy-5-19opropy3-mechyl 1230 Ogawaltd OV-101 quartz gl	pyrazine, 2-ethoxy-5-methy1 1047 Ogawaltd OV-101	pyrazine, 2-ethyl 0894 Ogawalid OV-101	Ogawaltd	Ogawaltd ne, 2-ethyl	1037 Ogawaltd OV-101		pyrazine, 2-ethyl-5-methyl 0980 Oqawaltd OV-101	0980 Ogawaltd OV-101	z etny. Jawaltd	1148 Ogawaltd OV-101 1635 Ogawaltd OV-101	ne, 2-ethyl	ā	1602 OgawaLtd OV~101 quartz glas nurazine, 2-ethulthio-3-methul-5-(2methul	1686 Ogawaltd OV-101		pyrazine, 2-ethylthio-5-isopropyl-3-methy 1418 OgawaLtd OV-101	pyrazine, 2-hexyl 1293 OqawaLtd OV-101	1293 Ogawaltd OV-101 1668 Ogawaltd OV-101	

LIT REF	54 60 54	09	60 28	60 54 54	54 60 54	43 28 31	31 60	60 54 54	60 31	60 54 54 54	09	09	09	60 54 54	09
SAMPLE TYPE	standard standard	e q	n standard n standard	n n standard n standard	n standard n n standard	tap water n standard n standard	n standard n standard	n standard n standard n standard	n standard n standard	n standard n standard n food n standard	<b>u</b> u	n standard n	a a	n n standard n standard	n øtandard
LEN CARRIER (m) GAS	nitro nitro nitro	50 nitrogen 50 nitrogen	50 nitrogen 50 hydrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 helium 50 hydrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen 80 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen	50 nitrogen 50 nitrogen 50 nitrogen	50 nitrogen
(mm)	0.22 0.22 0.22	0.22	0.22	0.22	0.22	0.30 0.32 0.22	0.22	0.22 0.22 0.22	0.22	0.22 0.22 0.28 0.28	0.22	0.22	0.22	0.22 0.22 0.22	0.22
COLUMN TYPE	bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase	wall-coated open tubular bonded phase wall-coated open tubular	bonded phase wall-coated open tubular wall-coated open tubular	bonded phase wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	<pre>wall-coated open tubular wall-coated open tubular</pre>	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	gla gla gla	6-trimethyl quartz glass quartz glass	, quartz glass quartz glass	quartz glass quartz glass quartz glass	quartz glass quartz glass quartz glass	y quartz glass quartz glass quartz glass	thio quartz glass quartz glass	quartz glass quartz glass quartz glass	quartz glass quartz glass	quartz glass quartz glass glass quartz glass	quartz glass quartz glass		.bucyı)~3~occyı quartz glass quartz glass	quartz glass quartz glass quartz glass	quartz glass
COLUMN STATIONARY ORIGIN PHASE	2-isobutyl Jawalitd OV-101 Jawalitd OV-101 Jawalitd OV-101	2-isobuty1-3,5,6-tr; awaltd OV-101 awaltd OV-101	,, 2-isobutyl-3-methoxy OgawaLtd OV-101 SAC OV-1		2-18opropyl JawaLtd OV-101 JawaLtd OV-101 JawaLtd OV-101		b, 2-isopropyl-3-methylthio Ogawaltd OV-101 Ogawaltd OV-101 quar	, 2-methoxy Ogawaltd OV-101 Ogawaltd OV-101 Ogawaltd OV-101		y, Z-methy, Ogawaltd OV-101 Ogawaltd OV-101 Oyawaltd OV-101 Ogawaltd OV-101	Pyrazine, c mernyr occyr 1586 Ogawaitd OV-101 Pyrazine, 2-methyl-3-phenoxy 1465 Ogawaitd OV-101	2-methyl-3-pr awaltd OV-101 2-methyl-5-(2 awaltd OV-101	y, Z-metnyı-o-(Z-metnyıburyı) Ogawalıtd OV-101 quartz Ogawalıtd OV-101 quartz - 2-methvithio		Ō
LIP	Pyrazine, 1043 0 1043 0 1406 0	Pyrazine, 1250 Oc 1263 Oc	pyrazine, 1078 Og 1160 SA	pyrazine, 1157 C 1157 C 1530 C	pyrazine, 0949 Oc 0969 Oc 1316 Oc	pyrazinė, 1040 1076 SI 1078 Og	pyrazine, 1273 Og 1273 Og	pyrazine, 0877 Og 0877 Og 1306 Og	Pyrazine, 0954 Og 0954 Og	Pyrazine, 0801 Og 0801 Og 0806 1235 Og	Pyrazine, 1586 Og Pyrazine, 1465 Og	pyrazine, 1072 Og pyrazine, 1923 Og	Pyrazine, 1962 Og 1985 Og	1076 0 1076 0 1076 0 1600 0	0 6960 0 6960

tubular	169
oben	pade
wall-coated	
glass	
quartz	

LIT REF	09	60 54 54	54 54 54	54 60 54	60 54 54	31	09	09	09	09	09	09	09	09	09	09	09	09	09	09	09	09
SAMPLE TYPE		standard standard	standard standard	standard standard	standard standard	standard	standard standard	standard		standard								·	,			
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen 50 nitrogen st 50 nitrogen st	50 nitrogen st 50 nitrogen 50 nitrogen st	50 nitrogen at 50 nitrogen 50 nitrogen at	50 nitrogen 50 nitrogen st 50 nitrogen st	50 nitrogen a	50 nitrogen si 50 nitrogen si	50 nitrogen s	50 nitrogen	50 nitrogen a	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen
(mm)	0.22	0.22 0.22 0.22	0.22	0.22	0.22 0.22 0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular	bonded phase wall-coated open tubular wall-coated open tubular	bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular bonded phase wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	(methylthio) ss wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	<pre>,, wall-coated open tubular +hiol</pre>	wall-coated open tubular	wall-coated open tubular	(runs) wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass	quartz glass quartz glass quartz glass				quartz glass	quartz glass yl quartz qlass			thio) quartz glass	thio) quartz glass -5-72-methylbutul)	pyrazine, 3-metnyi-z-metnoxy 3 (z.metnyi-z-ry) 1362 ogawaltd OV-101 1252 - 2-methyi-2-methyi-apthylpentyl)	quartz glass	pyrazine, 3-methyl-5-(2-methylbucyl)-2-(wecmylcun, 1552 Ogawalid Ov-101 quartz glass	ylbucyl/2-puemoky quartz glass	pyrazine, 3-methy1-3-(2-methy1penry1)-2-(pheny1cuit) 2064 OgawaLtd OV-101 quartz glass wal	guartz glass	<pre>pyrazine, 5-1sobuty1-3-metny1-2-(metny1th10) 1446 OgawaLtd OV-101 quartz glass</pre>	1-2-(phenylthio) quartz glass	quartz glass	1-2-pnenoxy quartz glass	pyrazine, 5-1sopropy1-3-metny1-2-(metny1tnio) 1362 ogawaLtd OV-101 quartz glass
N STATIONARY IN PHASE	e, 2-octyl OgawaLtd OV-101	', 2-pentyl Ogawaltd OV-101 Ogawaltd OV-101 Ogawaltd OV-101	td OV-101 td OV-101 td OV-101 td OV-101	Ogawaltd OV-101 Ogawaltd OV-101 Ogawaltd OV-101 Ogawaltd OV-101	', 2-propyl Ogawaltd OV-101 Ogawaltd OV-101 Ogawaltd OV-101	pyrazine, 2-vinyl 0907 OgawaLtd OV-101 quartz	Pyrazine, Joury 2,5 cm. 1184 Ogawaltd Ov-101 pyrazine, 3-butyl-2,6-dimethyl 1196 Ogawaltd Ov-101	pyrazine, 3-ethyl-2-methoxy 1037 OqawaLtd OV-101	pyrazine, 3-methyl 5-(2-methylpentyl)-2- 1638 Ogawalid OV-101 quartz gla	pyrazine, 3-methyl-2-(methylthlo) 1151 OgawaLtd OV-101 que	pyrazine, 3-methyl-2-(phenylthio) 1658 OgawaLtd OV-101 qua	; 3-methy1-2-methoxy-3 (z methy1) Ogawaltd Oy-101 3-methovy-5-(9-methy1)	Ltd OV-101	etny1-5-(z-metn Ltd OV-101	etny1-3-(2-metm Ltd OV-101	<pre>ethy1-5-(z-meth Ltd OV-101</pre>	pyrazine, 5-butyl-z,3-dimetnyi 1254 Ogawaltd OV-101	ogawaLtd OV-101	pyrazine, 5-isobutyl-3-methyl-2-(phenylt 1882 Ogawaltd OV-101 quartz gla	pyrazine, 5-isobuty1-5-metny1-z-metny0x 1257 OgawaLtd OV-101 quartz gli	pyrazine, 5-1sobuty1-3-methy1-z-phenoxy 1706 OgawaLtd OV-101 quartz gla	sopropy1~3-mern Ltd OV-101
LIP COLUMN INDEX ORIGIN	pyrazine, 2-octyl 1495 OgawaLtd	pyrazine, 2-pentyl 1192 Ogawaltd O 1192 Ogawaltd O 1575 Ogawaltd O	pyrazine, 2-phenoxy 1415 Ogawaltd OV-101 1415 Ogawaltd OV-101 2104 Ogawaltd OV-101	pyrazine, 2-phenylthio 1606 Ogawaltd OV-103 1606 Ogawaltd OV-103 2400 Ogawaltd OV-103	pyrazine, 2-propyl 0986 Ogawaltd OV-101 0986 Ogawaltd OV-101 1374 Ogawaltd OV-101	pyrazine, 2-vi 0907 Ogawal	Pytazine, Joury 1, 2, 3 1184 Ogawaltd OV-101 pyrazine, 3-butyl-2,6-d	pyrazine, 3-ethyl-2-met 1037 OqawaLtd OV-101	pyrazine, 3-me 1638 OgawaI	pyrazine, 3-me 1151 Ogawal	pyrazine, 3-me 1658 Ogawal	pyrazine, 3-me 1362 Ogawal	pyrazine, 3-me 1444 Ogawal	pyrazine, 3-m 1552 Ogawal	pyrazine, 3-m 1807 Ogawal	pyrazine, 3-m 2064 Ogawal	pyrazine, 5-bu 1254 Ogawal	Pyrazine, 5-1: 1446 Ogawal	pyrazine, 5-i 1882 Ogawal	pyrazine, 5-19 1257 Ogawal	pyrazine, 5-11 1706 Ogawal	pyrazine, 5-1 1362 Ogawa

LIT REF ===	09	09	09	09	09	09	09	09	09	09	09	60 42	09	60 46	9	<b>п</b> н (	2 8 2 8	56	56	56		4 2 4 6 2 8 8 8	28	58	28
SAMPLE TYPE				standard								standard standard		standard food	air	essential oil standard	standard standard	standard	standard	standard	standard	standard standard food standard	standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen	50 nitrogen 1 argon	50 nitrogen	50 nitrogen 80 nitrogen	50 helium		50 nitrogen 50 hydrogen	12	12	12	4 helium	1 argon 50 hydrogen 80 nitrogen 2	20 nitrogen	20 nitrogen	20 nitrogen
ID (mm)	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.30	3.00	0.20	0.20	0.20	0.20	3.00	0.32	0.23	0.23	0.23
												80-100 mesh)				(80-100mesh)					(80-100mesh)	80-120 mesh)			
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular Chromosorb W HP (silanised	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	bonded phase	bonded phase 3% w/w on Chromosorb W HP	wall-coated open tubular bonded phase	bonded phase	bonded phase	bonded phase	3% w/w on Chromosorb W HP	Chromosorb W HP (silanised 80-100 mesh bonded phase wall-coated open tubular 15% w/m on Gaa-Chrom O (100-120 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	1-2-(phenylthio) quartz glass	L-2-methoxy quartz glass	L-2-phenoxy quartz glass	nio) quartz glass	əthyl quartz glass	o-3-methyl quartz glass	7-3-methyl quartz glass	thio-3-methyl quartz glass	quartz glass	l-2-(phenyithio) quartz glass	1-2-phenoxy quartz glass	quartz glass pyrex glass	quartz glass	quartz glass glass	quartz glass	quartz glass glass	quartz glass quartz glass	g	quartz glass	quartz glass	glass	pyrex glass quartz glass glass	glass	glass	glass
COLUMN STATIONARY ORIGIN PHASE	5-isopropyl-3-methyl	e, 5-isopropyl-3-methyl-2-methox OqawaLtd OV-101 quartz gl	pyrazine, 5-isopropyl-3-methyl-2-phenox 1620 OgawaLtd OV-101	pyrazine, 5-methyl-2-(methylthio) 1163 OgawaLtd OV-101 qua	pyrazine, 5-sec-butly-2,3-dimethyl 1194 OgawaLtd OV-101	pyrazine, 5-sec-butyl-2-chloro-3-methyl 1256 OgawaLtd OV-101	<pre>pyrazine, 5-sec-buty1-2-ethoxy-3-methy1 1306 OgawaLtd OV-101</pre>	pyrazine, 5-sec-butyl-2-ethylthio-3-met 1494 Ogawaltd OV-101 quartz gl	Pyrazine, 5-sec-buryi-3-metnyi-z-(metny 1441 OgawaLtd OV-101 quartz gl		, 5-sec-butyl-3-methyl-2-phenox OgawaLtd OV-101	chloro gawaLtd OV-101 OV-101	o, sec-butyl OgawaLtd OV-101	, tetramethyl OgawaLtd OV-101 OV-101	, 4-chloro Hall OV-1	Hall OV-1 OV-1	SE-30 OV-1	P Me silicone	cyclopenta(cd) HP Me silicone	methyl HP Me silicone	nd ne OV-1	OV-101 OV-101 OV-101			2,4,6-trimethy1 OV-101
LTP CINDEX C	pyrazine, 1806 Oc	pyrazine, 1170 Oc	pyrazine, 1620 oc	pyrazine, 1163 Oc	pyrazine, 1194 Oc	pyrazine, 1256 Og	pyrazine, 1306 Oc	pyrazine, 1494 Oc	pyrazine, 1441 Oc	pyrazine, 1874 Og	pyrazine, 1694 O	pyrazine, 0861 O 0895	pyrazine, 1040 O	Pyrazine, 1067 Oc 1068	pyrazole, 0867 Ha	pyrene 1385 H 1983				pyrene, me 2231 HP	pyribenzamine 1980	ø	0745	pyridine, 0940	pyridine, 0982

LIT	58	58	58	42	28	58	58	42	28	42	58	23	49	49	-	21	21	c	70 70	21	20	20	20	21	21	20	21
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard		standard		standard	standard	standard	standard	standard	standard standard	standard standard
LEN CARRIER (m) GAS	20 nitrogen	20 nitrogen	20 nitrogen	1 argon	20 nitrogen	20 nitrogen	20 nitrogen	1 argon	20 nitrogen	1 argon	20 nitrogen	15 helium	15 helium	d) 15 helium	4 helium	.5 argon	.5 argon		2.4 nitrogen	1.5 argon	.4 nitrogen	.4 nitrogen	.4 nitrogen	.5 argon	.5 argon	.4 nitrogen .5 argon	.5 argon 4 nitrogen
(mm) (i	0.23	0.23	0.23	∾.	0.23	0.23	0.23	8	0.23	8	0.23	0.25	0.25	methylated) 0.25 15	3.00	4.00 1	4.00 1		5.50 2		5.50 2	5.50 2	5.50 2	4.00 1	4.00 1	5.50 2 4.00 1	4.00 1 5.50 2
COLUMN TYPE	Wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	Chromosorb W HP (silanised 80-100 mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	Chromosorb W HP (silanised 80-100 mesh)	wall-coated open tubular	Chromosorb W HP (silanised 80-100 mesh)	wall-coated open tubular	wall-coated open tub	<pre>-6-methyl-2, 4(1H, 3H) - (terbacil) bonded phase</pre>	-5-, methylated (a-rest	3% w/w on Chromosorb W HP (80-100mesh)	trimethylsilyl derivative 10% w/w on Diatoport S (80-100mesh)	trimethylsilyl derivative 108 w/w on Diatoport S (80-100mesh)	:	13% W/w on Chromosorb W AW	10% w/w on Diatoport S		<pre>1y1 derivative 13% w/w on Chromosorb W AW</pre>	derivative 13% w/w on Chromosorb W AW	1/M 80	trimethylsilyl derivative 10% w/w on Diatoport S (80-100mesh)	<pre>derivative 13% w/w on Chromosorb W AW 10% w/w on Diatoport S (80-100mesh)</pre>	e 10% w/w on Diatoport S (80-100mesh) 13% w/w on Chromosorb W AW
COLUMN MATERIAL	glass	glass	glass	pyrex glass	glass	glass	glass	pyrex glass	glass	pyrex glass	glass	quartz glass	thylethyl glass	-alpha- (4 glass	G ] 288	enyl lactone, tri		trimethylsilyl				tr	trimethylsilyl	יסי	trime	trimethylsilyl	ylsilyl derivative
LTP COLUMN STATIONARY INDEX ORIGIN	, 2,4-dimethy1 OV-101	2,5-dimethyl OV-101	2, 6-dimethyl OV-101		2-methyl $OV-101$		3,5-dimethyl OV-101	3-chloro OV-101	3-methy1 OV-101	pyridine, 4-cyano 0955 OV-101	4-methyl $OV-101$	Pyrilamine 2200 J&W Sci. SE-30	inedione,	ethano	idine 017-1	c acid, 2,5-dihydroxyphe	c acid, 2-h	sacid, 2-m		1950 5E-30 1954 OV-1	pyruvic acid, 3,4-dihydroxyphenyl, 2209	pyruvic acid, 3,4-dimethoxyphenyl, 2130	pyruvic acid, 3-hydroxyphenyl, 2000	c acid,	acid,	pyruvic acid, 4-hydroxyphenyl, 2051 SE-30 2061 OV-1	pyruvic acid, phenyl, trimethylsilyl 1702 1705 SE-30

LIT	23	23	58 1	58	58	58	58	58	1	58	58	58	44	56	19	19	41 19 4	19	19	-	7	-	1 4
SAMPLE TYPE	standard standard	standard standard	standard standard	standard standard	standard	standard standard	standard	standard	standard	standard	standard	standard	tap water	standard	standard	standard	standard standard standard	standard	standard	standard	standard	standard	standard standard
LEN CARRIER (m) GAS	15 helium 25 helium	15 helium 25 helium	20 nitrogen 4 helium	20 nitrogen 4 helium	20 nitrogen	20 nitrogen 4 helium	20 nitrogen	20 nitrogen	4 helium	20 nitrogen	20 nitrogen	20 nitrogen	25 helium	12			15 helium			4 helium	4 helium	4 helium	4 helium
ID (mm)	0.25	0.25	0.23	0.23	0.23	0.23	0.23	0.23	3.00	0.23	0.23	0,23		0.20			0.32			ы) 3.00	ы) 3.00	ы) 3.00	h) 3.00
			(80-100mesh)	(80-100mesh)		(80-100mesh)			(80-100mesh)											(80-100mesh)	(80-100mesh)	(80-100mesh)	(80-100mesh)
COLUMN TYPE	open tubular	open tubular	wall-coated open tubular 3% w/w on Chromosorb W HP	ed open tubular Chromosorb W HP	open tubular	wall-coated open tubular 3% w/w on Chromosorb W HP	l open tubular	l open tubular	Chromosorb W HP	l open tubular	l open tubular	l open tubular		9	elite.	Celite	ed open tubular Celite	Celite	Celite	Chromosorb W HP	Chromosorb W HP	Chromosorb W HP	w/w on Chromosorb W HP
	wall-coated	wall-coated	wall-coated 3% w/w on Ch	wall-coated 3% w/w on Ch	wall-coated	wall-coated 3% w/w on Cl	wall-coated	wall-coated	38 w/w on C	wall-coated	wall-coated	wall-coated		bonded phase	25%w/w on Celite	258w/w on C	wall-coated 25%w/w on Ce	25%w/w on C	258w/w on C	3% w/w on (	38 w/w on C	3% w/w on (	3% w/w on (
COLUMN MATERIAL	quartz glass quartz glass	quartz glass quartz glass	glass glass	glass glass	glass	glass glass	glass	glass	glass	glass	glass	glass		quartz glass			quartz glass qlass	1		ester glass	glass	ester glase	glass glass
STATIONARY PHASE	SE-30 Me silicone	SE-30 Me silicone	OV-101 OV-1			thyl -101 -1	-101	1 V-101	V-1	-101	-101		2,6-di-tert-butyl P Me silicone	ø	ethyl ester SE-30	D D	methyl ester DB-1 SE-30 OV-1/SE-30	ster	pentyl ester SE-30	(2-ethy ov-1	H	yethyl es	dibutyl ester OV-1 OV-1/SE-30
LTP COLUMN INDEX ORIGIN	quinidine 2745 J&W Sci. 2807 HP	a J&W Sci HP	quinoline 1227 1247		quinoline, 2,6-d 1399	7	7	4				quinoline, 8-methyl 1304 OV	quinone, 2,6-di- 1440 HP	HP	salicylic acid, 1261		salicylic acid, 1163 J&W SCI 1181 1193	acid,	ic acid,		acid,	acid,	sebacic acid, d: 2137 2137
, "Al	quii 22	quii 2	qui 1	qui 1	qui.	dan 1	qui	qui.	qui 1	age T	qui 1	qui	qui	retene 2187	sal 1	gal 1	168 11	1 60 L	39] 1	seb 2	seb 2	seb 2	3eE 2

LIT REF	1			Ħ	• •	4.7	49	25	25	25.	25	25	25	25	25	25	25	25	25.0	25.5	İ	1 25	c u	C 7	1	23	J.	14	32	38	14	>	
SAMPLE TYPE	standard	standard	standard	atandard	,	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard		standard standard	444	standard	standard	standard standard	tap water	standard	standard		standard		
) LEN CARRIER h) (m) GAS	00 4 helium	00 4 helium	00 4 helium	00 4 helium	,	20 25 helium	25 15 helium 20 25 helium	00 3.0	.00 3.0	.00 3.0	n	.00 3.0	.00 3.0		00 3.0					0.8.00		.00 4 helium .00 3.0	,	.00 3.0	.00 4 helium	25 15 helium 20 25 helium		0 25	5 100 helium	200	50 25 helium	) }	
COLUMN TYPE (mm)	3% w/w on Chromosorb W HP (80-100mesh) 3.00	3% w/w on Chromosorb W HP (80-100mesh) 3.00	3% w/w on Chromogorb W HP (80-100mesh) 3.00		c (meamont-on) an w	0.2	bonded phase 0.2	1% w/w on Gas-Chrom Q (100-120mesh) 3.0	1% w/w on Gas~Chrom Q (100-120mesh) 3.0	w/w on Gas-Chrom Q (100-120mesh) 3	18 w/w on Gas-Chrom Q (100-120mesh) 3.0	1% w/w on Gas-Chrom Q (100-120mesh) 3.0	1% w/w on Gas-Chrom Q (100-120mesh) 3.0	(100-120mesh)	w/w on Gas-Chrom Q	w/w on Gas-Chrom Q (100-120mesh)	w/w on Gas-Chrom Q (100-120mesh)	% w/w on Gas-Chrom Q (100-120mesh)	% w/w on Gas-Chrom Q (100-120mesh)	1% w/w on Gas-Chrom Q (100~120mesn) 3.00	0 n/n on one onton K 100 trousen)	3% w/w on Chromosorb W HP (80-100mesh) 3.0 1% w/w on Gas-Chrom O (100-120mesh) 3.0		1% w/w on Gas-Chrom Q (100-120mesh) 3.0	3% w/w on Chromosorb W HP (80-100mesh) 3.0	wall-coated open tubular 0.25	wall-coated open tubular	open tubular 0.	tubular 0.	"Coated open cuburar w/w on Gas-Chrom Q (100-120 mesh) 2.	wall-coated open tubular 0.5		
COLUMN MATERIAL	ester glass	qlass	ָּהָ מַּ	c cot f	glass	quartz glass	quartz glass quartz glass	glass	glass	glass glass	glass	glass	glass	glass	glasa	glass	מ מייני	glass	glass	glass	grass	glass	1	glasa	glass	quartz glass quartz glass	กาลรูย	glass	!	quartz glass	7	geste diam	
COLUMN STATIONARY ORIGIN PHASE	diethoxyethyl OV-1	l, diethyl ester OV-1	din	l, dioctyl ester		Me silicone	DB-1 Me silicone	ov-1	OV-1	OV-1/SE-30 OV-1	ov-1	alpha- OV-1	e, alpha- OV-1	OV-1	0V-1	0V-1	ne 007-1			0V-1		0V-1		OV-1	trans- OV-1	Sci. SE-30 Me silicone	(vinylbenzene)		SE-30	SE-30	-dime	5-dimethvl	T CITIZETION O
	Bebacic acid,	sebacic acid,	sebacic acid,	1645 sebacic acid,	2782 gecobarbitone	1786 HP	simazine 1711 1722 HP	sitostenone 3215	sitosterol 3105	3193	3290	spinasterol, 3270	spinasterone 3295	stigmastanol	32.90	3300	stigmastanone	33.15	3325	3395	3405 of ignosterol	3234 3234	stigmasterone	3355	atilbene, tr 1755	strychnine 3058 J&W 3063 HP	styrene, (vi		0876	0880 0886	styrene, 2,4 1080	1083 atvrene: 2.5	ì

LIT REF	8 14	14 14 8	ఐ	1.9	19	19	32	41	26	26	323	26	26	32 36	26	26	26	ოო	32	32	32	32	32
SAMPLE TYPE	standard standard	standard standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard standard standard	standard	standard	standard standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 nitrogen 25 helium	25 helium 25 helium 50 nitrogen	50 nitrogen				100 helium	15 helium	1.8 nitrogen	1.8 nitrogen	50 helium 100 helium 50 helium	1.8 nitrogen	1.8 nitrogen	100 helium 1.5 nitrogen	1.8 nitrogen	1.8 nitrogen	1.8 nitrogen	50 helium 50 helium	100 helium	100 helium	100 helium	100 helium	100 helium
(mm)	0.20	0.50 0.50 0.20	0.20				0.5	0.32	(80-100mesh) 2.00	(80-100mesh) 2.00	0.3 0.5 0.3	(80-100mesh) 2.00	(80-100mesh) 2.00	0.5 lesh) 2.4	(80-100mesh) 2.00	(80-100mesh) 2.00	(80-100mesh) 2.00	0.3	0.5	0.5	0.5	0.5	0.5
COLUMN TYPE	wall-coated open tubular wall-coated open tubular	wall-coated open tubular wall-coated open tubular wall-coated open tubular	wall-coated open tubular	25%w/w on Celite	25%w/w on Celite	25%w/w on Celite	wall-coated open tubular	wall-coated open tubular	5% on Chromaton N AW HMDS (8	5% on Chromaton N AW HMDS (8	bonded phase wall-coated open tubular bonded phase	5% on Chromaton N AW HMDS (8	5% on Chromaton N AW HMDS (8	wall-coated open tubular Chromosorb W DCMS (100-120 mesh)	5% on Chromaton N AW HMDS (8	5% on Chromaton N AW HMDS (8	5% on Chromaton N AW HMDS (8	bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
COLUMN MATERIAL	quartz glass glass	glass glass quartz glass	quartz glass				glass	(Mustard) quartz glass	glass	glass	ane) quartz glass glass quartz glass	glase	glass	omethane) glass glass	glass	glass	glass	quartz glass quartz glass	glass	glass	glass	glass	glass
ILTP COLUMN STATIONARY INDEX ORIGIN PHASE	, 2,6-dimethyl SE-30 SE-30	styrene, alpha-methyl 0963 SE-30 0964 SE-30 0968 SE-30	e, beta-methyl SE-30		succinic acid, diethyl ester 1139 SE-30	succinic acid, dimethyl ester 1002 SE-30	sulphide, benzylmethyl 1147 SE-30	<pre>sulphide, bis(2-chloroethyl) 1124 J&amp;W SCI DB-1</pre>	sulphide, dibutyl 1057 SE-30			sulphide, diheptyl $_{ m SE-30}$		sulphide, dimethyl (methylthiomethane) 0505 SE-30 glass 0509 SE-30 glass				A A				sulphide, methylpentyl 0910 SE-30	sulphide, methylphenyl 1068 SE-30

LIT	32	ოო	41	41	49	49	49	27	27	27	27		27 27	27	27	2.7	27	27	-		1.0			27	27	2.7	27	2.7		27	2.7	30
SAMPLE TYPE	standard	essential oil essential oil	standard	standard	standard	standard	standard	standard	standard	standard	standard standard		standard standard	standard	standard	atandard	standard	standard	standard		standard		standard	standard		atandard		standard		standard	standard	standard standard
LEN CARRIER (m) GAS	100 helium	50 helium 50 helium	15 helium	15 helium	15 helium	15 helium	15 helium	42 helium	42 helium		42 helium 4 helium		50 hydrogen 42 helium	50 hydrogen	42 helium	50 hydrogen		42 helium	4 belium		4 helium		4 helium	50 hydrogen	42	50 bydrogen	42	42 helium		42 helium	42 helium	4 helium 25 nitrogen
OI (mm)	0.5	0.30	0.32	0.32	0.25	0.25	0.25	0.30	0.30	0.30	3.00		0.30	0.30	0.30	30	0.30	0.30	3.00	) •	3.00		3.00	0.30	0.30	0.30	0.30	0.30		0.30	0.30	3.00
											(80-100meab)	/							(80-100meah)	(	(80-100mesh)		(80-100mesh)									(80-100mesh)
COLUMN TYPE	wall-coated open tubular	bonded phase bonded phase	wall-coated open tubular	wall-coated open tubular	bonded phase	bonded phase	bonded phase	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	open tubular		wall-coated open tubular wall-coated open tubular		open	religing and postson-flori	oben		3% w/w on Chromosorb W HP	THE WATER CONTROL TO MAN	3% w/w on Chromosorb W HP	wall-coated open tubural		wall-coated open tubular	oben	reludut meno betechnist	coated open tubul	wall-coated open tubular	4	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP wall-coated open tubular
COLUMN MATERIAL	glass	quartz glass quartz glass		quartz glass	quartz glass		quartz glass	ester glass	ester glass	cer qlass	glass	2 2 2	glass	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	glass glass	: :	glass glass	glass	ester	grass ter	glass	glass For 2.3.5.6-tetrachloro	9 , 9	ter Alaga	glass	er	glass	Vl ester ester	yl ester	glass	glass	glass quartz glass
STATIONARY PHASE	۰ 0		B-1	ethyl DB-1	analog DB-1	sulfoxide l	sulfoxide L	acid, butyl octyl e SE-30 gl	acid, decyl ethyl e SE-30	acid, dibutyl ester		OV-1 ocid diethvlester		ptyl es	OV~101 SE-30	xyl est	OV-101 g		sobutyl	ov~1 acid, dimethyl ester	7-1	OV-101 glas	9	acid, dipentyl ester		opyl es	SE-30	:yl pent	hyl unde		acia, nonyi propy SE-30	4 OV-1 SE-30
LTP COLUMN INDEX ORIGIN	sulphide, meth	sulphonamide, 1710 Hall	ne, di J£W	sulphoxide, dim	supracide oxygen	system thiol in 1706		thalic	thalic	terephthalic a	2060	2066 + 2 2 2 2 2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4		thalic	2661 2665	thalic	2460	2469	thalic				rerephrhalic	thalic	2261	chalic	1850	thalic	thalic		terephthalic a	terphenyl, l, 4 2208 2208 SGE

LIT	30		13	4	23	44	ഹനന	44	40	3 5 40	15	15	15	15	19	19	4	8	36	23	47	53
SAMPLE TYPE	standard	standard standard standard	standard	standard	standard	tap water	tap water standard essential oil	tap water	standard	essential oil tap water standard	standard	standard	standard	standard	food standard	standard standard	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	25 nitrogen	4 helium 4 helium 4 helium	6.1 nitrogen		15 helium	25 helium	50 helium 50 helium	25 helium	50 nitrogen	50 helium 50 nitrogen					80 nitrogen			108 helium	1.5 nitrogen	15 helium	25 helium	2 nitrogen
ID L	0.33	3.00 3.00 3.00	3.20 6		0.25		0.30		0.2	0.30					0.28			0.25	2.4	0.25	0.20	χ,
COLUMN TYPE	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh) 3% w/w on Chromosorb W HP (80-100mesh) 3% w/w on Chromosorb W HP (80-100mesh)	10%w/w on Chromosorb W HMDS (60-80mesh)		wall-coated open tubular		wall-coated open tubular bonded phase bonded phase		wall-coated open tubular	bonded phase wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular 25%w/w on Celite	icace) 25%w/w on Celite	state)	wall-coated open tubular	Chromosorb W DCMS (100-120 mesh)	wall-coated open tubular		dimethyl-1,3,5- (dazomet) glass 3% w/w on Chromosorb W HP (80-100mesh)
COLUMN MATERIAL	quartz glass	glass glass glass	stainless steel	glass	quartz glass		glass quartz glass quartz glass		quartz glass	quartz glass glass quartz glass	stainless steel	stainless steel	stainless steel	stainless steel		eer, (methyl myristate) 25%	yrass glass	glass	glass	quartz glass		
N STATIONARY N PHASE	tro-p- SE-30	ed isomers) OV-1 OV-1 OV-1	ha- SE-30	OV-1/SE-30	i. SE-30	Me silicone	o SP-2100 OV-1 OV-1	Me silicone	Me silicone	1-chloro CV-1 co SP-2100 Me silicone	2, 6, 10-trimethyl SE-30	2-methyl SE-30	3,7,11-trimethyl SE-30		acid, ethyl ester OV-101 SE-30	acid, methyl ester, SE-30	aci	× 0V-101	dimetnyi SE-30	i. SE-30	Me silicone	thiadiazine-2-thione, tetrahydro-3,5- 1676 PEC SE-30 quartz
	<u> </u>	terpineol (mixed 1127 1170 1183	terpineol, alpha- 1205	testosterone 2620	tetracaine 2197 J&W Sci	tetracosane 2400 HP	tetradecanal 1593 Supelco 1593 Hall 1593 Hall			tetradecane, 1- 1662 Hall 1662 Supelco 1674	tetradecane, 2, 1555	ecane,		tetradecane, 3 1469		ecanoic	tetradecanoic 1859	tetradecene, 1- 1389 Quadrex	tetrasulphide, dimetnyl 1202 SE-30	thenyldiamine 1963 J&W Sci.	theophylline 1962 HP	thiadiazine-2- 1676 PEC

LIT REF	28	-	23	49	49	49	m	323	32	32 32	32	32	32	32	32	32	23	23	25	25	49	28	28	28	28	28
SAMPLE TYPE	standard standard	standard	standard	standard	standard	standard	standard	standard standard	stạndard	standard standard	standard tap water	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
ID LEN CARRIER (mm) (m) GAS	0.32 50 hydrogen 3.00 4 helium	3.00 4 helium	0.25 15 helium	0.25 15 helium	0.25 15 helium	0.25 15 helium	3 50	0.3 50 hellum 0.5 100 hellum	0.5 100 helium	0.5 100 helium 0.5 100 helium	0.5 100 helium	0.5 100 helium	0.5 100 helium	0.5 100 helium	0.5 100 helium	0.5 100 helium	0.25 15 helium	0.25 15 helium	3.00 3.0	3.00 3.0	0.25 15 helium	0.32 50 hydrogen	0.32 50 hydrogen	0.32 50 hydrogen	0.32 50 hydrogen	0.32 50 hydrogen
COLUMN TYPE	bonded phase 3% w/w on Chromosorb W HP (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	1-coated open tubular	ester (avauen 11, utaliate) ided phase	bonded phase	bonded phase	phase	bonded phase wall-coated open tubular	tubular	wall-coated open tubular	wall-coated open tubular wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	1% w/w on Gas-Chrom Q (100-120mesh)	1% w/w on Gas-Chrom Q (100-120mesh)	bonded phase	bonded phase	bonded phase	bonded phase	bonded phase	bonded phase				
COLUMN MATERIAL	quartz glass glass	glass	quartz glass wal	duartz glass	quartz glass	quartz glass	glas	quartz glass glass	glass	glass glass	glass glass	glass	glass	glass	glass	glass	quartz glass	quartz glass	glass	glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass
LIP COLUMN STATIONARY INDEX ORIGIN PHASE	thianaphthene 1161 SAC OV-1 1200 OV-1	thianthrene 1901 OV-1	thiethylperazine 3210 Jaw Sci. SE-30		thiodan 1 2087 DB-1	thiodan 11 2187 DB-1	ene SAC	0647 SAC OV-1 0650 SE-30			Ο.					thiophene, 3-methylthio 1060 SE-30	thioridazine 3080 J&W Sci. SE-30	thonzylamine 2172 Jaw Sci. SE-30	tigogenin 3260 OV-1	tigogenone 3295 OV-1	2159 DB-1	ເກ	Ω	columns, 2 currors tologis 2 chlorodenitro		(C)

LIT REF	28	28	28	ιΩ	28	28	28	1 34	28	28	28	28	28	28	28 49	49	1	28	4. 0	4	ď	7	53	49	78	7°	<del>, - 1</del>
SAMPLE TYPE	standard	standard	standard	tap water	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard standard	standard	standard	standard	standard	standard	7. co	standard	standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	50 hydrogen	50 hydrogen	50 hydrogen		50 hydrogen	50 hydrogen	50 hydrogen	4 helium 2.9	50 hydrogen	50 hydrogen	50 hydrogen	50 hydrogen	50 hydrogen	50 hydrogen	50 hydrogen 15 helium	15 helium	4 helium	50 hydrogen	15 helium	ctrol) 15 helium		4		15 helium	50 hydrogen	CT	4 helium
OID (mm)	0.32	0.32	0.32		0.32	0.32	0.32	3.00	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.25	3.00	0.32	0.25	x, Fol 0.25	33	3.00	20.5	0.25	0.32		3.00
COLUMN TYPE	bonded phase	bonded phase	bonded phase	wall-coated open tubular	bonded phase	bonded phase	. bonded phase	3% w/w on Chromosorb W HP (80-100mesh) 3% on Chromosorb W HMDS (80-100 mesh)	bonded phase	bonded phase	bonded phase	bonded phase	bonded phase		alpha,alpha,alpha-trifluoro-2,6-dinitro-N,N-dipropyi-p- (trifluralin) OV-1 quartz glass bonded phase DB-1 quartz glass bonded phase	bonded phase	3% w/w on Chromosorb W HP (80-100mesh)	chloride) hondad nhasa	file. - (sumitol) phase	lethylamino)-6-ethylamino-1,3,5- (cyanazine, Bladex, Fortrol) glass bonded phase	-methylethyl)-1,3,5- (atrazine)	comosorb W HP				ded phase (simazine)	3% w/w on Chromosorb W HP (80-100mesh)
COLUMN MATERIAL	quartz glass	quartz glass	quartz glass	glass	5	(benzai chioride) quartz glass	chloride) quartz glass	& & & &	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	quartz glass	rifluoro-2,6-dın: quartz glass quartz glass	partz	s) qlass	anuric	amino) glass	·l-methylethylamin quartz qlass	1-N'-(1	quartz glass qlass		quartz glass quartz glass	quartz glass	glass iethyl-1,	glass
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	4-chloro SAC OV-1	4-chloro-Z-nitro SAC OV-1	4-chloro-3-mitro	4-isobutyl Supelco SP-2100	6-chloro-2-nitro SAC OV-1	chioro	alpha-chloro (benzyl SAC OV-1	utylated hydroxy 18c OV-1 SE-30	Z-chloro-p-	3-chioro-o- c OV-1	4-chloro-o-	5-chioro-o- C OV-1	c contoro-m-		toluidine, alpha,alpha,alpha-t 1660 SAC OV-1 1668 DB-1	torak oxygen analog 2482 DB-1	triacetin (glyceryl triacetate)	ne, 2,4,6-trichloro-1,3	- (sec-butylamino) -4 DB-1	triazine, 2-chloro-4-(1-cyano-1-methy	ne-2,4-diamine, 2-chloro	1699 SAC OV~1 1705 OV-1	PEC SE-30	-	ne-2,4-diamine, 6-chloro SAC OV-1	1735 UB-1 quartz triazine-2,4-diamine, 6-chloro-N,N'-d	

LIT	4	49	53	4	. 4.	-	1	7	12	12	10	12	12	12	10	10	10	12	10	10	12	12	10	-	12	12	10
SAMPLE TYPE	standard	standard	standard standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
CARRIER GAS		helium	nitrogen			4 helium	4 helium	4 helium	nitrogen	nitrogen	) nitrogen	nitrogen	o nitrogen	initrogen	5 nitrogen	5 nitrogen	5 nitrogen	5 nitrogen	5 nitrogen	5 nitrogen	5 nitrogen	5 nitrogen	25 nitrogen	4 helium	25 nitrogen	5 nitrogen	25 nitrogen standard
(m)		5 15	5 2						0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25	0 25				10 25	
OI (mm)		0.25	<u>-</u>			3.00		3.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	3.00	0.30	0.30	0.30
COLUMN TYPE			-ethyl-6-(methylfnio)-1,3,3-, (terbucryne) 3% w/w on Chromosorb W HP (80-100mesh)	<pre>1) -6-(methylthio)-1,3,5-, (ametryne)</pre>	/SE-30 glass N-methyl-N'-(1-methylethyl)-6-(methylthio)-1,3,5-, (desmetryne)	71)-1,3,5- (Dyrene) 3% w/w on Chromosorb W HP (80-100mesh)	-1,3,5- (anilazine) 3% w/w on Chromosorb W HP	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular
LTP COLUMN STATIONARY COLUMN MATERIAL INDEX ORIGIN PHASE COLUMN MATERIAL	ne-2,4-diamine, N,N'-bis(1-met)	glass	ne-2,4-diamine, N-(1,1-dimethylethyl)-N' PEC SE-30 quartz glass	OV-1/SE-30 ne-2,4-diamine, N-ethyl	OV-1, ne-2,4-diamine,	1795 OV-1/SE-30 glass triazine-2-amine, 4, 6-dichloro-N-(2-chlorophenyl)-1,3,5-	-dichlorc		tribromoacetic acid, 1,1-dimethylpropyl ester 1428 SGE SE-30 quartz glass	noacetic SGE	noacetic acid, 1-methyl-3-buter SGE SE-30 quartz	tribromoacetic acid, 1-methylbutyl ester 1458 SGE SE-30 quartz glass	noacetic acid, 1-methylpropyl e SGE SE-30 quartz	tribromoacetic acid, 2-methylpropyl ester 1387 SGE SE-30 quartz glass	tribromoacetic acid, 2-propenyl ester 1308 SGE SE-30 quartz glass	tribromoacetic acid, 2-propynyl ester 1322 SGE SE-30 quartz glass	tribromoacetic acid, 3-butenyl ester 1405 SGE SE-30 quartz glass	3-methylbutyl es 30 quartz	4-pentenyl ester	tribromoacetic acid, cis-3-hexenyi ester 1629 SGE SE-30 quartz glass	tribromoacetic acid, dimethylethyl ester 1297 SGE SE-30 quartz glass	Ø.	tribromoacetic acid, trans-3-hexenyl ester 1623 SGE SE-30 quartz glass	tributyrin (glyceryl tributyrate) 1552 OV-1 glass	SE-30 quartz glas		trichloroacetig acid, 1-metnyi-3-butenyi ester 1157 SGE SE-30 quartz glass

LIT REF	12	12	12	10	10	10	12	10	10	12	12	10	44	Ŋ	rt t	•	40	15	15	2	23	23	23	ოო	23	1	56	23
SAMPLE TYPE	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	tap water	standard	tap water		standard	standard	standard	standard	standard	standard	standard	standard essential oil	standard	standard	standard	ßtandard
LEN CARRIER (m) GAS	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 nitrogen	25 helium	50 helium	50 belium		50 nitrogen			108 helium	15 helium	15 helium	15 helium	50 helium 50 helium	15 helium	4 helium	12	15 helium
OI (mm)	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30		0.30	0.30	<b>)</b>	0.2			0.25	0.25	0.25	0.25	0.30	0.25	(80-100mesh) 3.00	0.20	0.25
COLUMN TYPE	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular		bonded phase	wall-coated open tubular bonded phase		wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase bonded phase	wall-coated open tubular	3% w/w on Chromosorb W HP	bonded phase	wall-coated open tubular
COLUMN MATERIAL	Φ		Z-methylpropyl ester quartz glass	z-propenyi ester ) quartz glass	nyl ester quartz glass		duartz glass	4-pentenyl ester (quartz glass	quartz glass		יס עו	-hexenyl ester quartz glass		quartz qlass		, ,	quartz glass	stainless steel	stainless steel	glass	quartz glass	quartz glass	quartz glass	,J, (Palaluenyus) quartz glass quartz glass	quartz glass	glass	quartz glass	quartz glass
STATIONARY PHASE	acid, 1-methylbutyl SE-30 quart:			ac1d, SE-3(	acid, SE-3(	acid, SE-3(		•		_	acid, metnyle SE-30	acıd, trans-3-hexenyl SE-30 quartz	Me silicone	ov-1	SP-2100 OV-1		Me silicone	SE-30	3, /, 11-trimetnyi SE-30	OV-101	SE-30	SE-30	SE-30	ov-1	SE-30	OV-1	Me silicone	SE-30
LTP COLUMN INDEX ORIGIN												acetic GE	tricosane 2300 HP	tridecanal 1492 Hall		ē	1658 tridecane 2 6 1		tridecane, 3,7,1 1480	tridecene, 1- 1289 Quadrex	trifluroperizine 2641 J&W Sci.	trihexyphenidyl 2211 J&W Sci.	trimethoprim 2514 J&W Sci.	11040 Hall OV-1 quartz 1040 Hall OV-1	tripelennamine 1949 J&W Sci.	tripnenylamine 2055	triphenylene 2405 HP	triprolidine 2224 Jaw Sci.

LIT	-	41	32	3.33 3.00 3.00 3.00	<del>, -</del>	2.1	-	21	ī,	40	40	15	15	61	28 19	ις	11	32	49	2.8 4.9	53	4	49	19
SAMPLE TYPE	standard	standard	standard	tap water standard standard	standard	standard	standard	standard	tap water	standard	standard	standard	standard standard	standard	standard v standard	tap water	standard	standard standard	standard	standard standard	standard	standard	standard	standard
LEN CARRIER (m) GAS	4 helium	15 helium	100 helium	2 1.5 nitrogen	4 helium	1.5 argon	4 helium	1.5 argon		50 nitrogen	50 nitrogen		108 helium	108 helium	50 hydrogen		25 nitrogen	100 helium 108 helium	15 helium	50 hydrogen 15 helium	2 nitrogen		15 helium	
OI (MI)	3.00	0.32	0.5		3.00	4.00	3.00	4.00		0.2	0.2	•	0.25	0.25	0.32		0.30	0.5	0.25	0.32	ស		0.25	
COLUMN TYPE	3% w/w on Chromosorb W HP (80-100mesh)	wall-coated open tubular	wall-coated open tubular	15% w/w on Gas-Chrom Q (100-120 mesh) Chromosorb W DCMS (100-120 mesh)	3% w/w on Chromosorb W HP (80-100mesh)	10% w/w on Diatoport S (80-100mesh)	3% w/w on Chromosorb W HP (80-100mesh)	10% w/w on Diatoport S (80-100mesh)	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	wall-coated open tubular	bonded phase 25%w/w on Celite	wall-coated open tubular	wall-coated open tubular		J-Y1) (notaton, notes, netwan) bonded phase (limpon)	bonded phase bonded phase		1 (chloroxuron)	bonded phase	25%w/w on Celite
COLUMN MATERIAL	glass	ı, quartz glass		quartz grass glass	7	/ısııyı derivacive	glass	silyi derivative	glass	quartz glass	quartz glass	stainless steel	stainless steel glass	glass	quartz glass	glass	quartz glass	glass glass	quartz glass	quartz glass quartz glass	(1) - 1 - mec.noxy - 1 - me quartz glass Himethyl (monuron)		quartz glass	
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	OV-1	UĮ.	Cisuipnide, dimerny. 0948 SE-30			an, N-acetyl, OV-1	OV-1	tyrosine, N-acetyl, trimethylsilyl 2129 OV-1	b, 10-dimethy SP-2100		undecane, 1-cniolo 1364 Me silicone undecane 2 & 10-trimathul		-	undecane, z-metny: 1165 Quadrex OV-101	OV-1 SE-30	undecanol 1288 Supelco SP-2100	1350 SGE SE-30			3 SAC OV-1 quartz glass OV-1 quartz glass OV-1 quartz glass	) 2-(4-blomo-3-chiolognemy1) 1 "mennoxy-1-metny1)  NB PEC SE-30 quartz glass 3% 3-(n-chloropheny1)-1 1-dimethy1 (monuton)			34 SE-30
IN	tripty 2224	1562	0948 0948	0948 0954 0972	tryptar 1750	tryptoj 2400	tyramine 1405	tyrosin 2129	undecad 1430	1449	1364	1275	undecal 1215 1216	unde 11	1408	unde 12	13.	1088	1941	1903 1927	1408	1100	1895 1895	0884

182
age

LIT	19	38	-	23	
SAMPLE TYPE	standard	standard	standard	standard	
LEN CARRIER (m) GAS		2	4 helium	0.25 15 helium	
ID (mm)		2.0	3.00	0.25	
COLUMN TYPE	25%w/w on Celite	15% w/w on Gas-Chrom Q (100-120 mesh) 2.0	3% w/w on Chromosorb W HP (80-100mesh) 3.00	wall-coated open tubular	
COLUMN MATERIAL			glass	quartz glass	
LTP COLUMN STATIONARY INDEX ORIGIN PHASE	hyl ester SE-30	SE-30	xanthine, 3-isobutyl-1-methyl 2150 OV-1	SE-30	
COLUMN	acid, met	trile	a, 3-isobu	zolamine 2193 J&W Sci. SE-30	
LTP	valeric 0808	valeroni 0745	xanthine 2150	zolamine 2193	

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