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October 26, 2004

8EHQ-1004-15980

[redacted]

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Office of Pollution, Prevention and Toxics
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460
Attention: Section 8(e) Coordinator

Re: **TSCA Section 8(e) Submissions**

Dear Sir/Madam:

3M Company ("3M") requests that EPA place the attached studies in the TSCA Section 8(e) docket. We have included a master index for these studies identifying the study title, test substance and CAS number. A Confidential Business Information (CBI) version of this index and the studies also is being submitted today pursuant to EPA procedures. 3M has not provided CBI substantiation with this submission, but would be willing to do so at the Agency's request.

3M has concluded that data in these studies may not be, strictly speaking, "corroborative" of previously reported or published information as defined in EPA's reporting guidance or otherwise potentially may warrant 8(e) submission based on EPA's reporting guidance.

3M appreciates EPA's attention to this matter. Please contact the undersigned if you have any questions or require further information regarding this submission.

Very truly yours,

8EHQ-05-15980

Katherine E. Reed (9.7.)

Dr. Katherine E. Reed, Ph.D
Staff Vice President
Environmental Technology and Safety Services
(651) 778-4331
kereed@mmm.com

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Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Component	CAS Information
Aquatic Toxicity Data Sheet: 48hr *Daphnia Magna*	1,4-dioxane; heptadecafluoro-1-octanesulfonic acid; linear n-ethyl perfluorooctanesulfonamide; n-ethylperfluorooctanesulfonamidoethyl alcohol; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; polyethylene glycol; water	1,4-dioxane (123-91-1); heptadecafluoro-1-octanesulfonic acid (1763-23-1); linear n-ethyl perfluorooctanesulfonamide (4151-50-2); n-ethylperfluorooctanesulfonamidoethyl alcohol (1691-99-2); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (29117-08-6); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-79-3); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-81-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (56372-23-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-80-6); polyethylene glycol (25322-68-3); water (7732-18-5)
Multigeneration Daphnid Life Cycle Test	1,4-dioxane; heptadecafluoro-1-octanesulfonic acid; linear n-ethyl perfluorooctanesulfonamide; n-ethylperfluorooctanesulfonamidoethyl alcohol; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; polyethylene glycol; water	1,4-dioxane (123-91-1); heptadecafluoro-1-octanesulfonic acid (1763-23-1); linear n-ethyl perfluorooctanesulfonamide (4151-50-2); n-ethylperfluorooctanesulfonamidoethyl alcohol (1691-99-2); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (29117-08-6); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-79-3); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-81-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (56372-23-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-80-6); polyethylene glycol (25322-68-3); water (7732-18-5)
Aquatic Invertebrate Testing - Alkyltins LR 8024-1	Alkyltins: dibutyltin laurate and dibutyltin-di(2 ethylhexoate)	Dibutyltin laurate (CAS 77-58-7); Dibutyltin-di(2 ethylhexoate) (CAS 2781-10-4)
Aquatic Invertebrate Testing - Decosheen Material (LR-8052)	Decosheen Ribbon Materials and pigments: Decosheen Blue in Green Ceres Blue ZV; Decosheen Gold Paste Pigment; Decosheen Royal Blue, Solvent Blue	Decosheen Blue in Green [redacted] ZV (CAS 61814-09-3); Decosheen Royal Blue, Solvent Blue [redacted]-6); Decosheen Gold Paste Pigment (CAS Number U[redacted]
R Scratch Remover (Fathead Minnow)	55-65% Water; 20-30% Stoddard Solvent; 1-5% Sodium Silicate; 1-5% Potassium Hydroxide; 0.1-3% Nonylphenoxypoly(oxyethylene)ethanol	Water (CAS 7732-18-5); [redacted] Solvent (CAS 8052-41-3); Sodium Silicate (CAS 1344-09-8); Potassium Hydroxide (CAS 1310-58-3); Nonylphenoxypoly(oxyethylene)ethanol (CAS 9016-45-9)
S Scratch Remover (Fathead Minnow)	60-70% Water; 20-30% Stoddard Solvent; 1-5% Sodium Silicate; 0.1-3% Turgitol NP-33	Water (CAS 7732-18-5); Stoddard Solvent (CAS 8052-41-3); Sodium Silicate (CAS 1344-09-8); Turgitol NP-33 (CAS 9016-45-9)
Octanol Water Partition Coefficient	N-methylperfluorooctane sulfonamidoethanol	CAS 24448-09-7

Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Information	CAS Information
CoCl2.6H2O as Co2+ Toxicity to Microtox Reagent	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Activated Sludge Respiration Inhibition Test on CoCl2.6H2O as Co ion	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Acute Toxicity of CoCl2.6H20 as Co ion to Daphnia magna under Static Exposure Conditions	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Acute Toxicity of CoCl2.6H20 as Co ion to Fathead Minnow under Static Exposure Conditions	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Freshwater Algae Growth Inhibition Test	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Daphnia magna 21-Day Chronic Reproduction Study	N-ethylperfluorooctane sulfonamidoethanol	CAS 1691-99-2
Plant Growth Effects of [ ]	[ ]	[ ]
Final Report (*Daphnia* and Microtox)	Monomethyl ether of hydroquinone	CAS 150-76-5
Microtox Test Results	2 Ethylhexyl Acrylate; Isooctyl Acrylate Monomer; 2-Methylbutyl acrylate; Methyl isoamyl acrylate; Isooctyl Acrylate	2 Ethylhexyl Acrylate (CAS 103-11-7); Isooctyl Acrylate Monomer (CAS 29590-42-9) 2-Methylbutyl acrylate (CAS 44914-03-6); Methyl isoamyl acrylate (CAS 18993-92-1); Isooctyl Acrylate (CAS 29590-42-9)
Phytotoxicity Test Results	[ ]	[]

Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Description	CAS Information
Plant Toxicity Comparison, Young Seedling Growth	[ ]	[ ]
Ceriodaphnia dubia Survival and Reproduction exposed to Opequon Creek Water Spiked with BETZ 1110 Polymer (November 4, 1987 sample) for seven days under static renewal conditions	BETZ 1110: Non-3M Product - Chemical composition not provided to 3M by manufacturer	MSDS provided by manufacturer states product is "not hazardous" and not "considered to be a carcinogen"
Ceriodaphnia dubia Survival and Reproduction exposed to Opequon Creek Water Spiked with Betz 1138 Polymer (November 4, 1987 sample) for seven days under static renewal conditions	BETZ 1138: Non-3M Product - Chemical composition not provided to 3M by manufacturer	MSDS provided by manufacturer states product is "not hazardous" and not "considered to be a carcinogen"
Toxicity of 1,6 - Hexanediol Diacrylate to *Daphnia magna*	1,6 Hexanediol diacrylate	CAS 13048-33-4
Daphnia magna Chronic Bioassay Under Static Renewal Conditions	Methyl isoamyl acrylate	CAS 18993-92-1
Estimating the Chronic Toxicity of Nalclear 7177 to *Ceriodaphnia* Survival and Reproduction Using Short-Term Tests	Nalclear 7177 wastewater treatment acrylamide/acrylate polymer - Chemical composition not provided to 3M by manufacturer	CAS Information not provided to 3M by manufacturer
Acute Toxicity of Isooctyl Acrylate to *Daphnia magna*	Isooctyl Acrylate Monomer	CAS 29590-42-9
Static Acute Toxicity of [ ] to the Daphnid, *Daphnia magna*	Tolyltriazole	CAS 29385-43-1
Static Acute Toxicity of [ ] to the Alga, *Selenastrum capricornutum*	Tolyltriazole	CAS 29385-43-1
Static Acute Toxicity of [ ] to the Daphnid, *Daphnia magna*	[ ]	[ ]
Static Acute Toxicity of [ ] to the Fathead Minnow, *Pimephales promelas*	[ ]	[ ]
Static Acute Toxicity of [ ] to the Daphnid, *Daphnia magna*	water; propylene-tetrafluoroethylene polymer; tert-butyl alcohol	water (7732-18-5); propylene-tetrafluoroethylene polymer (27029-05-6); tert-butyl alcohol (75-65-0)

Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Information	CAS Information
Isooctyl acrylate: Fish, Acute Toxicity Test	Isooctyl Acrylate Monomer	CAS 29590-42-9
Isooctyl Acrylate: *Daphnia sp.* Acute Immobilization Test	Isooctyl Acrylate Monomer	CAS 29590-42-9
Isooctyl Acrylate: Alga, Growth Inhibition Test	Isooctyl Acrylate Monomer	CAS 29590-42-9
Isooctyl Acrylate: *Daphnia sp*. Reproduction Test	Isooctyl Acrylate Monomer	CAS 29590-42-9
Acute Toxicity of [ ] to the mysid, *Mysidopsis bahia*	[ ]	[ ]
Final Report (Microtox)	[ ]	[ ]
Determination of the Partition Coefficient (N-Octanol/Water) of T-5896 by High Performance Liquid Chromatography (HPLC)	N-methyl perfluorooctane sulfonamido ethanol; N-methyl perfluorooctane sulfonamidethyl acrylate	N-methyl perfluorooctane sulfonamido ethanol (CAS 25268-77-3); N-methyl perfluorooctane sulfonamidethyl acrylate (CAS 24448-09-7)
OECD Activated Sludge Respiration Inhibition Test Results	N-Dodecyltrimethylammonium chloride	CAS = 112-00-5
Final Report (Fish Acute Toxicity)	Mirataine CB (30% Cocamidopropyl betaine = Amides, coco, N-(3-(dimethylamino)propyl), alkylation products with chloroacetic acid, sodium salts, 70% Water and Inerts); Mirataine COB (30% Coco/Oleamidopropyl Betaine = 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., inner salt)	Cocamidopropyl betaine (CAS 70851-07-9); Coco/Oleamidopropyl Betaine (CAS 61789-40-0)
A Flow-Through Life-Cycle Toxicity Test With the Saltwater Mysid (*Mysidopsis bahia*)	Perfluorooctane sulfonate	CAS 1763-23-1
Lithium: Alga, Acute toxicity Tests	Lithium Chloride	CAS 7447-41-8
An Early Life-Stage Toxicity Test With the Fathead Minnow (*Pimephales promelas*)	Perfluorooctane sulfonate	CAS 1763-23-1
Lithium: Fish, Acute toxicity Tests	Lithium Chloride	CAS 7447-41-8
Lithium: *Daphnia*, Acute toxicity Tests	Lithium Chloride	CAS 7447-41-8
Summary of Toxicity Testing on OSCI and OSF	Octane sulfonyl chloride and Octane sulfonyl fluoride	Octane sulfonyl fluoride (CAS 7795-95-1), Octane sulfonyl chloride (CAS 4063-63-5)
Toxicity to Microtox Test	Lauryldimethylamineoxide	CAS 1643-20-5

Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Information	CAS Information
Ecotoxicological Testing of CoCl2.6H2O as Co2+ ion (Seed Germination and Root Elongation)	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1

REPORT

DETERMINATION OF THE PARTITION COEFFICIENT (N-OCTANOL/WATER) OF T-5896 BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

NOTOX Project 121264
NOTOX substance 36774

STATEMENT OF GLP COMPLIANCE

NOTOX B.V., 's-Hertogenbosch, The Netherlands

The study described in this report was conducted in compliance with the most recent edition of:

The OECD Principles of Good Laboratory Practice

which are essentially in conformity with:

The United States Food and Drug Administration. Title 21 Code of Federal Regulations Part 58.

The United States Environmental Protection Agency (FIFRA). Title 40 Code of Federal Regulations Part 160.

The United States Environmental Protection Agency (TSCA). Title 40 Code of Federal Regulations Part 792.

Study Director: Drs. R. de Vries

.....

Date:

QUALITY ASSURANCE STATEMENT

NOTOX B.V., 's-Hertogenbosch, The Netherlands.

Study procedures were subject to periodic inspections and general non study specific processes were also inspected at periodic intervals.

This report was audited by the NOTOX Quality Assurance Unit and the methods and results accurately reflect the raw data.

DATES OF QAU INSPECTIONS/ AUDITS	REPORTING DATES
25 March 1994	25 March 1994
28 March 1994	28 March 1994
21 April 1994	21 April 1994

Quality Assurance Manager C.J. Mitchell B.Sc.

Date: 09-06-94.

REPORT APPROVAL

STUDY DIRECTOR: Drs. R. de Vries

.....

Date: June 9. 1994

MANAGEMENT: J.A.M.W. van Helvoirt
Section head Physico Chemistry

pp.

.....

Dr. Ilona C. Enninga
Technical Director

Date: 09/06/1994

PREFACE

Sponsor	3M Belgium - Chemical EBC Canadastraat 11 B-2070 ZWIJNDRECHT Belgium
Study Monitor	Mr. R.H. Cox
Testing Facility	NOTOX B.V. Hambakenwetering 3 5231 DD 's-Hertogenbosch The Netherlands
Study Director	Drs. R. de Vries
Study plan	Start: 30 March 1994 Completed: 08 April 1994

TEST SUBSTANCE

Identification	T-5896
Description	White solid
Batch	L 13163
Purity	100%
Storage conditions	At room temperature in the dark
Stability under storage conditions	Stable
Expiry date	January 01, 1996

PURPOSE AND PRINCIPLE

The purpose of the study was to determine the partition coefficient of the test substance between n-octanol and water.

The partition coefficient (n-octanol/water) (P_{OW}) is defined as the ratio of the equilibrium concentrations in a two phase system consisting of n-octanol and water.

The retention time of a substance in a reversed-phase High Performance liquid Chromatography (HPLC) chromatographic system is related to its partition coefficient (n-octanol/water).
The HPLC method is useful for log P_{OW} values between 0 and 6.
Using the HPLC method, impurities are of minor importance. The HPLC method must also be applied if the test substance is a mixture of compounds but is not applicable to strong acids and bases, metal complexes, substances which react with the eluent or surface-active agents.

GUIDELINES

The study procedure described in this report was based on the following guidelines:

Organization for Economic Co-operation and Development (OECD), OECD Guideline for Testing of Chemicals, guideline no. 117: "Partition coefficient (n-octanol/water) High Performance Liquid Chromatography (HPLC) method" (adopted March 30, 1989).

European Economic Community (EEC), EEC-Directive 92/69 EEC, Annex V, Part A, Methods for the determination of physico-chemical properties, A.8: "Partition coefficient". EEC Publication no. L383, December 1992.

ARCHIVING

NOTOX B.V. will archive the following data for at least 10 years: protocol, report, test substance reference sample and raw data.

TEST SYSTEM AND RATIONALE

A High Performance Liquid Chromatograph with a spectrophotometric detector. The stationary phase was bonded silica C_{18}. The mobile phase was 85/15 (v/v) acetonitrile/water. Both HPLC instrumentation and conditions are described in the section "method of chemical analysis".

The test system was recognized by the international guidelines (OECD, EEC).

REFERENCE SUBSTANCE

A solution of 2,4-DDT (99%, HPLC, Riedel de Haën, Seelze, FRG) was prepared by adding 152.7 mg 2,4-DDT to 100 ml methanol (HPLC-grade, Labscan Limited Co., Dublin, Ireland). Before use, this solution was diluted 200 times with acetonitrile (HPLC-grade, Labscan Limited Co., Dublin, Ireland).

PERFORMANCE OF THE TEST

Preparation of the solutions

A stock solution of T-5896 was prepared by dissolving 10.0 mg test substance by sonication for 10 minutes in 100.0 ml acetonitrile. The stock solution was used as test solution. The corresponding blank solution was acetonitrile.

Preliminary test

T-5896 appeared to be insoluble in water. Therefore, the test solution was first injected in the HPLC system using 100% acetonitrile as mobile phase. In the resultant chromatogram a test substance peak was observed after 2.2 minutes. The same test solution was injected using 95/5, 90/10 and 85/15 (v/v) acetonitrile/water as mobile phase. In the resultant chromatograms a test substance peak was observed after 4.7, 10.8 and 24.4 minutes, respectively. Representative HPLC chromatograms are shown in Figures 1 to 4.

Performance of the test

The following solutions were injected: test solution, the corresponding blank solution and the reference substance.

Temperature of measurement

The temperature of the mobile phase was recorded several times during the measurements.

METHOD OF CHEMICAL ANALYSIS

The conditions used for the High Performance Liquid Chromatographic method are described below:

Analysis

Column	LiChrospher 100 RP-18; 125 x 4 (I.D.) mm; d_p= 5 µm (Merck, Darmstadt, FRG)
Mobile phase	85/15 (v/v) acetonitrile (HPLC-grade, Labscan Limited Co., Dublin, Ireland)/Milli-Q water (Millipore Corp., Bedford, MA, USA)
Flow	1 ml/min
Detection	UV/Visible at λ= 210 nm
Injection volume	10 µl

Instrumentation

HPLC Pump	Series 4 (Perkin Elmer, Norwalk, CT, USA)
Autosampler	ISS-200 (Perkin Elmer)
Detector	SpectroMonitor 3100 (LDC Analytical, Riviera Beach, FL, USA)
Integrator	SP 4290 (Spectra Physics, San Jose, CA, USA)

DATA HANDLING

Using High Performance Liquid Chromatography, especially large log P_{ow} values can be accurately determined from the chromatographic retention data.

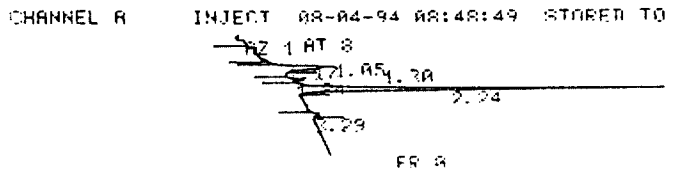
RESULTS

Representative HPLC chromatograms of the test solution, the blank (acetonitrile) and the reference substance are shown in Figures 1 to 7.

In the HPLC chromatograms of T-5896, using detection at 210 nm, one large and two small test substance peaks were observed. It was assumed that the large peak derived from the major component of test substance whereas the small peaks derived from impurities.

The retention time of the major component was 2.2, 4.7, 10.8 and 24.4 minutes using 100/0, 95/5, 90/10 and 85/15 (v/v) acetonitrile/water as mobile phase, respectively (figures 1 to 4). The retention time of 2,4-DDT was 1.9 and 4.7 minutes using 100/0 and 85/15 (v/v) acetonitrile/water, respectively (figures 6 and 7).
Hence, the retention time of the test substance peak is far beyond the retention time of the reference substance with the largest log P_{ow}-value (i.e. 2,4-DDT; log P_{ow} = 6.2). Therefore, it was concluded that the partition coefficient (n-octanol/water) of T-5896 is > 1.6×10^6 (log P_{ow} > 6.2).

The temperature of the mobile phase was 20.0-20.4°C during the measurements.



36774/121264 08-04-94 08:48:49 CH= "A" FS= 1.

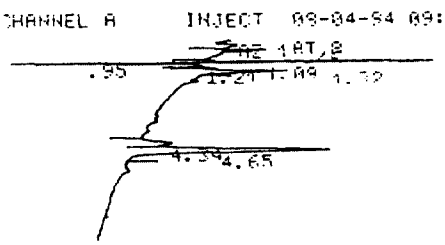
FILE 1. METHOD 0. RUN 12 INDEX 29 BIN 73

ANALYST: KPH

PEAK#	AREA%	RT	AREA CO
1	18.265	1.7	9866 03
2	81.735	2.04	44151 03
TOTAL	100.		54017

Figure 1 HPLC chromatogram of the test solution of 100.0 mg/l T-5896 in acetonitrile.

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	100 % acetonitrile
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl



6774/121264 08-04-94 09:11:25 CH= "A" FS= 1.

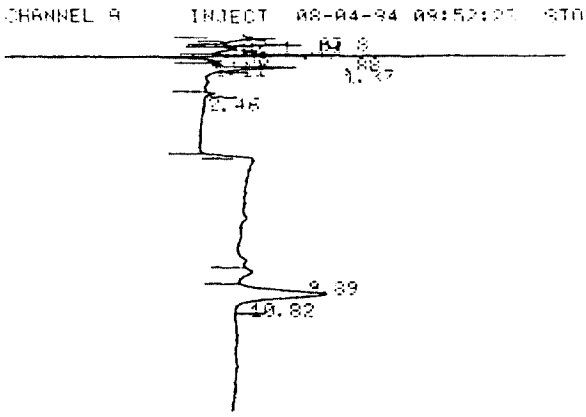
FILE 1. METHOD 0. RUN 13 INDEX 30 BIN 74

ANALYST: KRH

PEAK#	AREA%	RT	AREA SD
1	15.002	0.95	16484 02
2	29.209	1.09	32206 02
3	6.331	1.21	7012 02
4	19.762	1.32	21715 02
5	5.764	4.34	6334 02
6	32.881	4.65	36130 02
TOTAL	100.		109881

Figure 2 HPLC chromatogram of the test solution of 100.0 mg/l T-5896 in acetonitrile.

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	95/5 (v/v) acetonitrile/Milli-Q water
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl



DATA SAVED TO BIN # 75

36774/121264 08-04-94 09:53:23 CH= "A" PS= 1.

FILE 1. METHOD 0. RUN 14 INDEX 31 BIN 75

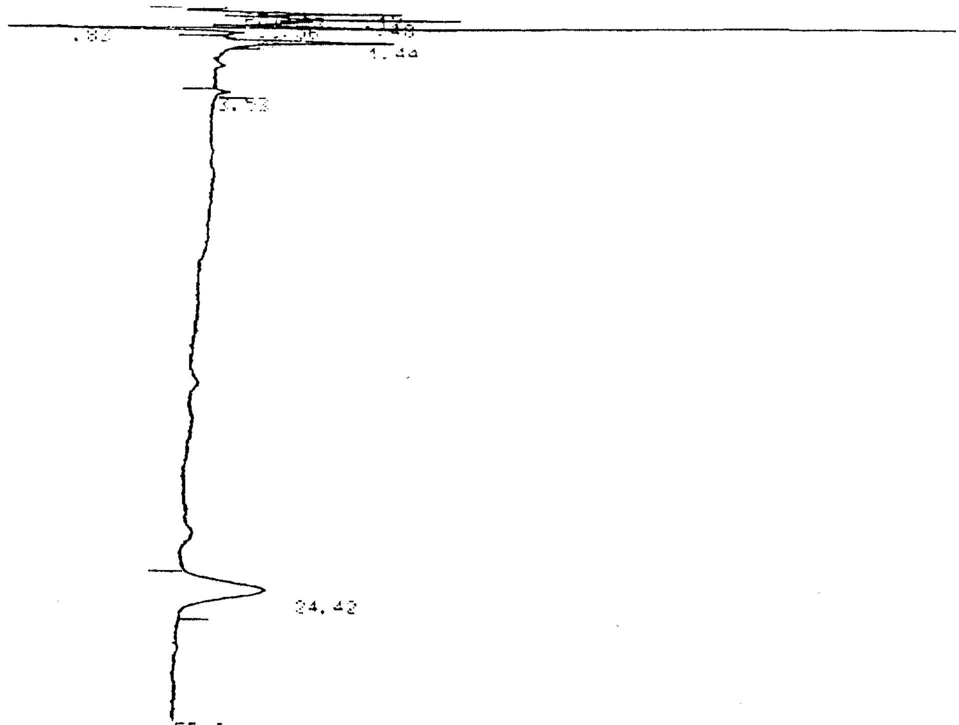
ANALYST: KRH

PEAK#	AREA%	RT	AREA CO
1	19.224	0.38	32081 02
2	28.199	1.11	47059 02
3	31.836	1.37	53129 03
4	20.741	10.82	34613 03
TOTAL	100.		166882

Figure 3 HPLC chromatogram of the test solution of 100.0 mg/l T-5896 in acetonitrile.

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	90/10 (v/v) acetonitrile/Milli-Q water
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl

CHANNEL A INJECT 08-04-94 10:38:34 STORED TO BIN # 76



ER 0
DATA SAVED TO BIN # 76

36774/121264 08-04-94 10:38:34 CH= "A" PS= 1.

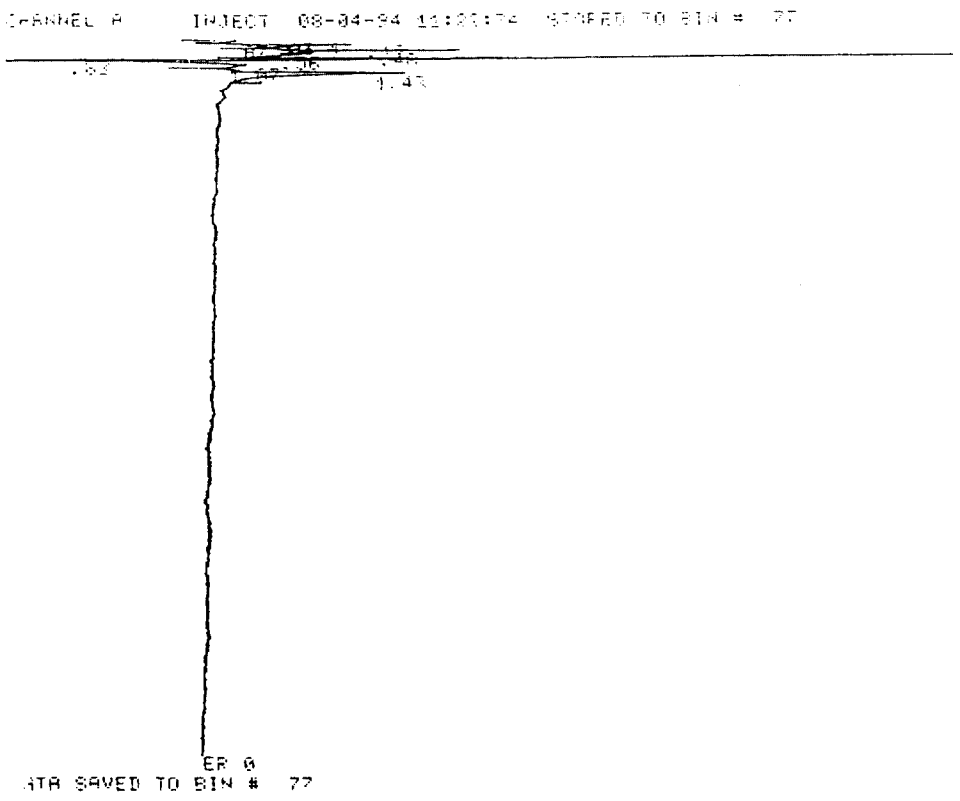
FILE 1. METHOD 9. RUN 15 INDEX 32 BIN 76

ANALYST: [illegible]

PEAK#	AREA%	RT	AREA BC
1	7.875	[illegible]	[illegible] 02
2	10.504	[illegible]	[illegible] 02
3	14.657	[illegible]	47756 02
4	17.174	[illegible]	[illegible] 02
5	[illegible]	[illegible]	[illegible] 02
6	[illegible]	1.44	[illegible] 07
7	[illegible]	24.42	[illegible] 01
TOTAL	100.		[illegible]

Figure 4 HPLC chromatogram of the test solution of 100.0 mg/l T-5896 in acetonitrile.

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	85/15 (v/v) acetonitrile/Milli-Q water
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl



36774/121264 08-04-94 11:22:34 CH= "A" FS= 1.

FILE 1. METHOD 0. RUN 16 INJEX 33 BIN 77

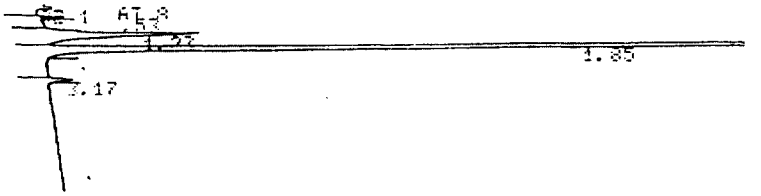
ANALYST: RRH

PEAK#	AREA%	RT	AREA PC
1	7.29	0.23	22054 PC
2	11.445	0.48	34621 PC
3	15.55	0.56	47162 PC
4	18.554	0.82	56127 PC
5	22.363	1.07	67649 PC
6	24.758	1.43	74893 PC
TOTAL	100.		302506

Figure 5 HPLC chromatogram of a blank (acetonitrile).

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	85/15 (v/v) acetonitrile/Milli-Q water
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl

CHANNEL A INJECT 07-04-94 13:38:23 STORED TO BIN # 70



DATA SAVED TO BIN # 70

36774/121264 07-04-94 13:38:23 CH= "A" PS= 1.

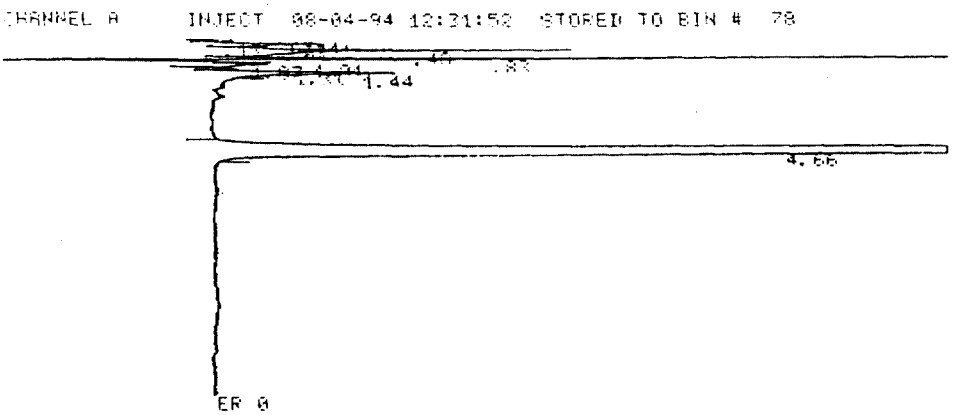
FILE 1. METHOD 0. RUN 9 INDEX 26 BIN 70

ANALYST: KPH

PEAK#	AREA%	RT	AREA BC
1	0.281	0.53	1866 01
2	4.979	1.23	33068 02
3	94.444	1.85	626547 03
4	0.396	3.17	2628 01
TOTAL	100.		663409

Figure 6 HPLC chromatogram of the reference substances in acetonitrile.

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	100/0 (v/v) acetonitrile/Milli-Q water
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl



36774/121264 08-04-94 12:31:52 CH= "A" PS= 1.

FILE 1. METHOD 0. RUN 17 INDEX 34 BIN 78

ANALYST: KRH

PEAK#	AREA%	RT	AREA CO
1	2.003	0.23	18168 02
2	9.695	0.48	87889 02
3	5.876	0.83	53265 02
4	3.144	1.01	28505 02
5	4.192	1.07	37999 02
6	2.489	1.31	22561 02
7	3.888	1.44	35244 02
8	68.714	4.66	622918 01
TOTAL	100.		906541

Figure 7 HPLC chromatogram of the reference substances in acetonitrile.

Column	LiChrospher 100 RP-18; 125x4 (I.D.) mm; d_p=5 µm
Mobile phase	85/15 (v/v) acetonitrile/Milli-Q water
Flow	1 ml/min
Detection	UV, at λ = 210 nm
Injection volume	10 µl