

APPENDIX



2005

RECYCLING OF ELECTRONIC WASTES IN CHINA & INDIA: WORKPLACE & ENVIRONMENTAL CONTAMINATION

GREENPEACE

Appendix 1. Analytical methodology

All samples were collected and stored in pre-cleaned glass bottles that had been rinsed thoroughly with nitric acid and analytical grade pentane in order to remove all heavy metal and organic residues. At the wastewater sampling location, a 1 litre sample was collected in a screw-cap bottle. Sediment and solid waste samples were collected in 100ml bottles. On arrival at the lab, two sub-samples were taken from each original. One of the sub-samples was subjected to qualitative organic analysis and the other one was analysed for heavy metals content. Full details of the methods for sample preparation and for GC-MS screening analysis and heavy metals analysis are given below.

A1.1 Organic analysis

A1.1.1 Preparation of samples for standard organic screen analysis

All solvents were of High Purity Grade (PRAG or low haloform). Glassware used in the extraction and clean up procedures was cleaned in detergent, rinsed with tap water and deionised water, dried in the oven overnight at 105°C, and rinsed three times with low haloform pentane.

A1.1.1.1 Solid Samples

In preparation for analysis of extractable organic compounds, approximately 30g (wet or air dried weight - see notes in Table A1.1) of each sample was weighed and transferred to a clean 100 ml glass bottle. However, in some cases the sub-sample amount that was taken for organic analysis was significantly less due to the original small size of the sample. The exact amount of each sub-sample is presented in Table A1.1 for samples from China and in Table A1.2 for samples from India.

Sample Number	Mass used for organic analysis (g)	Sample Number	Mass used for organic analysis (g)
CH05001	3.00	CH05027	36.15
CH05002	5.50	CH05028*	24.75
CH05003	1.96	CH05029*	24.05
CH05004	19.38	CH05030*	24.95
CH05005*	24.73	CH05031*	24.91
CH05006	29.99	CH05032	29.96
CH05007*	24.02	CH05034	29.84
CH05008*	5.93	CH05036	30.02
CH05009*	25.03	CH05037	19.40
CH05015	30.43	CH05039	30.04
CH05016*	11.28	CH05040	29.92
CH05017*	26.89	CH05041	29.97
CH05020	26.91	CH05042	24.06
CH05021	28.61	CH05043	30.10
CH05023*	25.90	CH05044	17.44
CH05024*	11.76	CH05045*	25.08

Table A1.1. Amount of samples taken for organic analysis, China, 2005.

(*) signifies samples which were air dried before weighing.

Sample Number	Mass used for organic analysis (g)	Sample Number	Mass used for organic analysis (g)
IT05001	30.25	IT05017	30.02
IT05002	30.22	IT05018	6.88
IT05005	19.25	IT05019	3.16
IT05006	30.09	IT05020	29.93
IT05007	2.08	IT05022	29.98
IT05008	2.06	IT05023	29.84
IT05011	3.74	IT05024	30.05
IT05012	10.07	IT05025	30.16
IT05013	30.11	IT05026	14.96
IT05014	10.08	IT05027	29.93
IT05015	1.55	IT05028	29.97

Table A1.2. Amount of samples taken for organic analysis, India, 2005

Samples were spiked with deuterated naphthalene (an internal standard) at a concentration of 4.7 mg/kg. 15ml of pentane was added, followed by 5ml of acetone in the case of wet samples. Samples that were originally dry or air dried were extracted only with 20ml of pentane. The samples were then sonicated for 2 hours.

The extracts were decanted, filtered through a pre-cleaned hydrophobic phase separator filter and collected in reagent tubes. The samples were then acidified to pH 2 with 10% nitric acid. Following this, a second portion of 15ml of pentane was added, followed by 5ml of acetone and the extraction procedure repeated. Finally, both extracts obtained for each sample were combined and evaporated to a volume of approximately 3ml. 3ml of iso-propanol and 3ml of fresh prepared TBA-reagent (mixture of 3% tetrabutylammonium hydrogen sulfate and 20% sodium sulfite anhydrous in deionised water) were added to the concentrated extract, and the mixture shaken for 1 min. After shaking, 20ml of deionised water was added to reagent tube and the phases were allowed to separate. Finally, the organic layer was transferred into a pentane pre-washed Florisil column. The compounds were eluted with a 95:5 mixture of pentane: toluene, and the elluent evaporated down to a volume of 2 ml under a stream of analytical grade nitrogen. 1-Bromonaphthalene was then added at a concentration of 10mg/l to provide an indication of GC/MS performance.

A1.1.1.2 Aqueous Samples

Prior to the extraction, the samples were spiked with deuterated naphthalene (an internal standard) at a concentration of 10mg/l. 20ml of pentane was added, and the sample agitated for 2 hours on a bottle roller to maximise contact between solvent and sample. After separation of the phases, the solvent extract was filtered through a pre-cleaned hydrophobic phase separator filter and collected in a pre-cleaned reagent tube. The aqueous sample was acidified to pH 2 with 10% nitric acid, a second portion of 20ml pentane was added and the extraction procedure repeated. Both extracts were combined and cleaned up as described above for solid samples.

A1.1.2 Chromatographic Analysis

Organic compounds were identified qualitatively using Gas Chromatography Mass Spectrometry (GC-MS). Instrumentation was an Agilent 6890 Series gas chromatograph, interfaced with a Agilent Enhanced Chem-Station data system and linked to a Agilent

5973N inert Mass Selective Detector operated in SCAN mode. The identification of compounds was carried out by computer matching against Agilent Wiley7N and Pesticides Libraries of over 390,000 mass spectra combined with expert interpretation. Also all extracts were analysed using selective ion monitoring (SIM) method against three standard solutions. The lists of compounds containing in Standard I, Standard II and Standard III are presented below. Individual standards of chlorinated benzenes, chlorinated phenols and chlorinated pesticides were obtained from Sigma Aldrich Co. Ltd., Supelco, UK; individual standards of brominated diphenyl ethers were obtained from Greyhound Chromatography and Allied Chemicals, UK.

Compound	Ions to monitor
Benzene, 1,3-dichloro-	146, 148, 111, 75
Benzene, 1,4-dichloro-	146, 148, 111, 75
Benzene, 1,2-dichloro-	146, 148, 111, 75
Benzene, 1,3,5-trichloro-	180, 182, 145, 74
Phenol, 2,4-dichloro-	162, 164, 63, 98
Benzene, 1,2,4-trichloro-	180, 182, 145, 109
Benzene, 1,2,3-trichloro-	180, 182, 145, 109
Dichlorvos	109, 185, 79, 47
Benzene, 1,2,3,5-tetrachloro-	216, 214, 218, 179
Benzene, 1,2,4,5-tetrachloro-	216, 214, 218, 179
Benzene, 1,2,3,4-tetrachloro-	216, 214, 218, 179
Benzene, pentachloro-	250, 252, 248, 215
alpha-HCH	181, 183, 219, 217
Benzene, hexachloro-	284, 286, 282, 249
Atrazine	200, 215, 202, 217
beta-HCH	181, 183, 219, 217
gamma-HCH	181, 183, 219, 217
delta-HCH	181, 183, 219, 217
o,p'-DDE	246, 248, 318, 176
p,p'-DDE	246, 318, 246, 316
o,p'-DDD	235, 237, 165, 199
p,p'-DDD	235, 237, 165, 199
o,p'-DDT	235, 237, 165, 199
p,p'-DDT	235, 237, 165, 199
Heptachlor	272, 274, 100, 270
Aldrin	66, 263, 265, 261
Dieldrin	79, 77, 81, 263
Endrin aldehyde	345, 67, 347, 343
Methoxychlor	227, 228, 274, 344
Endosulfan I	170, 237, 172, 239
Octachlorostyrene	308, 310, 380, 343

Table A1.3. List of compounds in the Standard I used for SIM analysis

Results are reported as either reliably or tentatively identified. Match qualities of 90% or greater against Agilent Wiley7N and Pesticides Libraries or identification confirmed against standard compounds (using retention times and mass-spectra obtained during calibration) are assumed to give reliable identifications. Identification of hepta- and octabrominated diphenyl ethers was done by matching the spectra fragmentation pattern

against published data (see note below). • Tentative identification refers to qualities between 51% and 90% against Agilent Wiley7N and Pesticides Libraries only. Analytes yielding match qualities of 50% or less are taken to be unidentified.

Compound	Ions to monitor
Phenol	94, 66, 65, 95
Phenol, 2-chloro-	128, 64, 92, 39
Phenol, 2-methyl-	108, 79, 90, 51
Phenol, 3-methyl- and 4-methyl-	108, 107, 79, 77
Phenol, 2-nitro-	139, 65, 81, 109
Phenol, 2,5-dichloro-	162, 164, 63, 99
Phenol, 2,3-dichloro-	162, 126, 63, 99
Phenol, 4-chloro-	128, 65, 130, 100
Phenol, 2,6-dichloro-	162, 164, 63, 98
Butadiene, hexachloro-	225, 190, 260, 118
Phenol, 4-chloro-3-methyl-	107, 142, 77, 144
Phenol, 2,3,5-trichloro-	196, 198, 160, 97
Phenol, 2,4,6-trichloro-	196, 198, 97, 132
Phenol, 2,4,5-trichloro-	196, 198, 97, 132
Phenol, 2,3,4-trichloro-	196, 198, 97, 160
Phenol, 2,3,6-trichloro-	196, 198, 97, 132
Phenol, 3,5-dichloro-	162, 164, 99, 63
Phenol, 3,4-dichloro-	162, 164, 99, 63
Phenol, 2,3,5,6-tetrachloro-	232, 234, 230, 131
Phenol, 2,3,4,6-tetrachloro-	232, 234, 230, 131
Phenol, pentachloro-	266, 268, 264, 165
Dinoseb	211, 163, 147, 117
PCB-28	256, 258, 186, 150
PCB-52	292, 220, 290, 222
Chlordane I	373, 375, 272, 237
PCB-101	326, 324, 254, 328
Chlordane II	373, 375, 272, 237
PCB-81	292, 290, 294, 220
PCB-77	292, 290, 294, 220
PCB-123	326, 324, 254, 328
PCB-118	326, 324, 256, 328
PCB-114	326, 324, 256, 328
PCB-153	360, 362, 290, 358
PCB-105	326, 324, 254, 328
PCB-138	360, 362, 290, 358
PCB-126	326, 324, 254, 328
PCB-167	360, 362, 290, 358
PCB-156	360, 362, 290, 358
PCB-157	360, 362, 290, 358
PCB-180	396, 394, 324, 162
PCB-169	360, 362, 358, 145
PCB-170	396, 394, 324, 326
PCB-189	396, 394, 398, 324

Table A1.4. List of compounds in the Standard II used for SIM analysis

Compound	Ions to monitor
Tetrabrominated diphenyl ethers including BDE-47	485, 487, 483, 326,328, 324
Pentabrominated diphenyl ethers including BDE-99	563, 565, 561, 404, 406, 402
Hexabrominated diphenyl ethers including BDE-153	643, 641, 645, 483, 481, 485

Table A1.5. List of compounds in the Standard III used for SIM analysis

• Tu, C. & Prest, H.F. (2005) Determination of polybrominated diphenyl ethers in polymeric materials using the 6890 GC/ 5973N inert MSD with electron impact ionization. Application Note 5989-2850EN. Environmental, Component Testing. Agilent Technologies Inc. 2005. Printed in the USA. April 5, 2005.

A1.2 Inorganic Analysis

A1.2.1 Preparation of samples for heavy metal analysis

All chemicals were of High Purity Aristar Grade. All glassware was cleaned in detergent, rinsed with tap water and deionised water, soaked in 10% nitric acid overnight, rinsed with deionised water and dried in an oven at 105°C.

A1.2.1.1 Solid Samples

Samples were air dried until weighing readings became constant. They were then crushed using a pestle and mortar until homogenous and sieved through a 2-mm mesh. Dust samples were further sieved through a 63-µm mesh. Approximately 0.5 g of sample was accurately weighed into a glass 100 ml boiling tube and to this 10 ml of deionised water was added, followed by 7.5 ml of concentrated hydrochloric acid and 2.5 ml of concentrated nitric acid. The samples were digested at room temperature overnight prior to being placed onto a Gerhardt Kjeldatherm digestion block (40 space) connected to a Gerhardt Turbosog scrubber unit (filled with 10% w/v sodium hydroxide). The samples were then refluxed at 130°C for four hours. To prepare samples for mercury analysis, this procedure was repeated in an identical manner other than using a digest temperature of 90°C. After cooling to ambient temperature, the digests were filtered into volumetric flasks, diluted with deionised water, made up to a volume of 50 ml and mixed.

With every batch of samples digested, approximately one in ten samples were analysed in duplicate to verify method reproducibility. Furthermore, a blank sample, and appropriate certified reference material (CRM) samples were prepared in an identical manner. The CRMs analysed were; GBW07406, yellow-red soil, certified by the China National Analysis Centre for Iron and Steel, Beijing, China; 7004, loam with elevated analyte levels, certified by the Czech Metrological Institute; GBW8301, river Sediment, certified by the State Bureau of Metrology of The People's Republic of China; GBW07311, stream sediment, certified by the China National Analysis Centre for Iron and Steel, Beijing, China; 2583, trace elements in indoor dust, certified by the US National Institute of Standards and Technology), and PACS-2, marine sediment, certified by the National Research Council of Canada.

A1.2.1.2 Solders

Approximately 0.05 g of sample was accurately weighed into a glass 50 ml volumetric flask, 5 ml of concentrated hydrochloric acid added and stood overnight for the majority of the sample to dissolve. To this solution was added 30 ml deionised water followed by 2.5 ml concentrated nitric acid and 2.5 ml concentrated hydrochloric acid. The solution was made up to 50 ml with deionised water and mixed. For all samples, all solid residues dissolved at room temperature and the solutions were analysed without further processing.

A1.2.1.3 Aqueous sample

On arrival, 100ml of the sample was transferred to a clean glass bottle and acidified with nitric acid (10% v/v). For samples containing very high amounts of suspended solids a separate 100ml representative portion was filtered into a clean glass bottle prior to

acidification with nitric acid (10% v/v). For each acidified sub-sample, 50 ml was subsequently transferred to a 100ml boiling tube, placed onto the Gerhardt Kjeldatherm digestion block, and refluxed at 130°C for four hours. After cooling to ambient temperature, each digest was filtered into a volumetric flask, diluted with deionised water, made up to a volume of 50 ml and mixed. With each batch of samples, approximately one in ten samples were analysed in duplicate to verify method reproducibility, and a mixed metal quality control solution of 8 mg/l and a blank sample were separately prepared in an identical manner.

To prepare the sample for mercury analysis, this procedure was repeated in an identical manner other than using 25 ml of each acidified sample solution and a digest temperature of 90°C. With the batch of samples, a blank sample and a quality control solution (80 µg/l mercury) was separately prepared in an identical manner.

A1.2.2 Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)

Following preparation, samples were analysed by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES), using a Varian MPX Simultaneous Spectrometer. The following metals were quantified directly: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), bismuth (Bi), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), gallium (Ga), germanium (Ge), gold (Au), indium (In), lead (Pb), manganese (Mn), mercury (Hg), molybdenum (Mo), nickel (Ni), palladium (Pd), platinum (Pt), selenium (Se), silver (Ag), tantalum (Ta), tin (Sn), vanadium (V), Yttrium (Y) and zinc (Zn). A multi-element instrument calibration standard was prepared at a concentration of 10 mg/l, matrix matched to the samples (i.e. in 15% v/v hydrochloric acid and 5% v/v nitric acid). The calibration was validated using a quality control standard (8 mg/l), prepared internally from different reagent stocks. Any sample exceeding the calibration range was diluted accordingly, in duplicate, and re-analysed.

For low concentration samples, mercury (Hg) was also determined using Cold Vapour Generation ICP-AES. Ionic mercury, Hg (II), was reduced to elemental mercury, Hg (0), following reduction of the samples with sodium borohydride (0.6% w/v), sodium hydroxide (0.5% w/v) and hydrochloric acid (10 molar). The elemental mercury vapour was carried in a stream of argon into the spectrometer. Two calibration standards were prepared, at 10 µg/l and 100 µg/l, matrix matched to the samples (i.e. in 15% v/v hydrochloric acid and 5% v/v nitric acid for solid samples or 10% v/v nitric acid for aqueous samples). The calibration was validated using a quality control standard (80 µg/l), prepared internally from different reagent stock. Any sample exceeding the calibration range was diluted accordingly, in duplicate, and re-analysed.

Appendix 2: Organic compounds reliably identified and tentatively identified in the samples from China and India, 2005.

CHINA

Sample Number: CH05001
Sample Type: Floor dust
Location: Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 08.03.05
Sample Information: Workshop where waste plastic is both shredded and heat-extruded
Number of compounds isolated: 78

Compounds identified to better than 90%:

CAS#	Name		
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000475-20-7	Junipene
000541-02-6	Cyclopentasiloxane, decamethyl-	000629-92-5	Nonadecane
000629-97-0	Docosane	001560-86-7	Nonadecane, 2-methyl-
077536-31-3	Docosane, 2,21-dimethyl-	040710-32-5	Nonahexacontanoic acid
000112-95-8	Eicosane	000593-45-3	Octadecane
006418-47-9	Heneicosane, 3-methyl-	006561-44-0	Octadecane, 3-methyl-
000629-78-7	Heptadecane	000629-99-2	Pentacosane
001560-89-0	Heptadecane, 2-methyl-	000646-31-1	Tetracosane
006418-44-6	Heptadecane, 3-methyl-	007098-22-8	Tetratetracontane
000544-76-3	Hexadecane	000638-67-5	Tricosane
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	001928-30-9	Tricosane, 2-methyl-
021164-95-4	Hexadecane, 7,9-dimethyl-	001633-22-3	[2.2]Paracyclophane

Compounds tentatively identified:

CAS#	Name		
003452-07-1	1-Eicosene	013151-76-3	Decane, 5-cyclohexyl-
000112-72-1	1-Tetradecanol	026429-11-8	Heptadecane, 4-methyl-
003018-21-1	Cyclobutane, 1,2-diphenyl-	003892-00-0	Pentadecane, 2,6,10-trimethyl-

Sample Number: CH05002
Sample Type: Floor dust
Location: Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 08.03.05
Sample Information: Workshop where waste plastic is both shredded and heat-extruded, collected near to shredder
Number of compounds isolated: None

Compounds identified to better than 90%:

None

Compounds tentatively identified:

None

Note: Sample contained long chain hydrocarbons that were not possible to separate by the method applied. Chromatogram showed unresolved hill at high abundance, retention time was in range from 9.3 to 20 min.

Sample Number: CH05003
Sample Type: Floor dust
Location: Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 08.03.05
Sample Information: Workshop where waste plastic is both shredded and heat-extruded, approximately 100m from workshop where CH05001-02 collected
Number of compounds isolated: 94

Compounds identified to better than 90%:

CAS#	Name		
074420-22-7	4,8-Dimethylnaphtho(1,2:5,6)dicyclobutene	001560-92-5	Hexadecane, 2-methyl-
001599-67-3	1-Docosene	000630-06-8	Hexatriacontane
000112-88-9	1-Octadecene	000630-03-5	Nonacosane
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000629-92-5	Nonadecane
001786-12-5	Cyclotetradecane, 1,7,11-trimethyl-	000630-02-4	Octacosane
000629-97-0	Docosane	000593-45-3	Octadecane
031295-56-4	Dodecane, 2,6,11-trimethyl-	001560-88-9	Octadecane, 2-methyl-
000112-95-8	Eicosane	000629-99-2	Pentacosane
000629-94-7	Heneicosane	000629-62-9	Pentadecane
000630-04-6	Hentriacontane	055162-61-3	Tetracontane, 3,5,24-trimethyl-
000593-49-7	Heptacosane	000646-31-1	Tetracosane
000629-78-7	Heptadecane	000629-59-4	Tetradecane
006418-44-6	Heptadecane, 3-methyl-	000629-50-5	Tridecane
000630-01-3	Hexacosane	000638-67-5	Tricosane
000544-76-3	Hexadecane	001633-22-3	[2.2]Paracyclophane

Compounds tentatively identified:

CAS#	Name		
002425-77-6	1-Decanol, 2-hexyl-	013151-86-5	Dodecane, 6-cyclohexyl-
013360-61-7	1-Pentadecene	000629-92-5	Nonadecane
006971-40-0	17-Pentatriacontene	001560-88-9	Octadecane, 2-methyl-
003260-45-5	2,2':5',2'-Terpyrrole	000629-62-9	Pentadecane
		055162-61-3	Tetracontane, 3,5,24-trimethyl-

Sample Number: CH05004**Sample Type:** Street dust and soil**Location:** Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China**Sampling Date:** 08.03.05**Sample Information:** Collected from street between the 2 workshops (CH05001-02 & CH05003)**Number of compounds isolated:** 81**Compounds identified to better than 90%:**

CAS#	Name		
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000630-02-4	Octacosane
000118-74-1	Benzene, hexachloro- (SIM)	000593-45-3	Octadecane
000629-97-0	Docosane	006561-44-0	Octadecane, 3-methyl-
000112-95-8	Eicosane	000629-99-2	Pentacosane
000629-94-7	Heneicosane	000629-62-9	Pentadecane
000629-78-7	Heptadecane	000128-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-
000544-76-3	Hexadecane	000646-31-1	Tetracosane
001560-92-5	Hexadecane, 2-methyl-	000629-59-4	Tetradecane
000475-20-7	Junipene	000638-68-6	Triacotane
000629-92-5	Nonadecane	000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name		
000000-00-0	(17.alpha.h,21.beta.h)-Hopane	006418-44-6	Heptadecane, 3-methyl-
000112-88-9	1-Octadecene	001560-88-9	Octadecane, 2-methyl-
001560-89-0	Heptadecane, 2-methyl-	001633-22-3	[2.2]Paracyclophane

Sample Number: CH05005**Sample Type:** Soil and solid waste**Location:** Acid working area, Longmen village, 1km from Guiyu town town, PuNing City, Guangdong Province, China**Sampling Date:** 08.03.05**Sample Information:** pH=1; Black & oily material collected from a dry shallow pit in the upstream acid working area, approximately 20m from adjacent river**Number of compounds isolated:** 101**Compounds identified to better than 90%:**

CAS#	Name
000612-71-5	1,1':3',1"-Terphenyl, 5'-phenyl-
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-
000629-97-0	Docosane
000544-85-4	Dotriacontane
000112-95-8	Eicosane
000629-94-7	Heneicosane
000593-49-7	Heptacosane
000629-78-7	Heptadecane
000630-01-3	Hexacosane
000544-76-3	Hexadecane
002385-85-5	Mirex
000630-03-5	Nonacosane
000629-92-5	Nonadecane
000630-02-4	Octacosane
000593-45-3	Octadecane
000629-99-2	Pentacosane
000646-31-1	Tetracosane
000629-59-4	Tetradecane
000638-67-5	Tricosane
000629-50-5	Tridecane

Polychlorinated benzenes:

000095-50-1	Benzene, 1,2-dichloro-(SIM)
000541-73-1	Benzene, 1,3-dichloro-(SIM)
000106-46-7	Benzene, 1,4-dichloro-(SIM)
000087-61-6	Benzene, 1,2,3-trichloro-(SIM)
000120-82-1	Benzene, 1,2,4-trichloro-(SIM)
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)
000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)
000608-93-5	Benzene, pentachloro-(SIM)
000118-74-1	Benzene, hexachloro-(SIM)

Polychlorinated biphenyls:

a) Dichlorinated:

1 unspecified dichlorinated congener detected in SIM mode

b) Trichlorinated:

007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-) (SIM)
6 unspecified trichlorinated congeners, all of them detected in SIM mode

c) Tetrachlorinated:

035693-99-3 PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
052663-62-4 PCB-81 (1,1'-Biphenyl, 3,4,4',5-tetrachloro-)(SIM)

9 more unspecified tetrachlorinated congeners, all of them detected in SIM mode

d) Pentachlorinated:

037680-73-2 PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-) (SIM)
032598-14-4 PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)
074472-37-0 PCB-114 1,1'-Biphenyl, 2,3,4,4',5-pentachloro-) (SIM)
065510-44-3 PCB-123 (1,1'-Biphenyl, 2',3,4,4',5-pentachloro-) (SIM)
6 more unspecified pentachlorinated congeners

e) Hexachlorinated:

035065-28-2 PCB-138 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
035065-27-1 PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
038380-08-4 PCB-156 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
069782-90-7 PCB-157 (1,1'-Biphenyl, 2,3,3',4,4',5'-hexachloro-) (SIM)
052663-72-6 PCB-167 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)

f) Heptachlorinated:

035065-30-6 PCB-170 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-) (SIM)
035065-29-3 PCB-180 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)

Polybrominated diphenyl ethers:

a) Tetrabrominated:

005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-)
2 more unspecified tetrabrominated congeners, 2 of them detected in SIM mode

b) Pentabrominated:

060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-) (SIM)
4 more unspecified pentabrominated congeners, both of them detected in SIM mode

c) Hexabrominated:

068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-) (SIM)
2 more unspecified hexabrominated congener detected in SIM mode

Compounds tentatively identified:

000084-15-1	1,1':2',1"-Terphenyl	002719-63-3	Benzene, (1-butyl-octyl)-
003558-24-5	1H-Indole, 1-methyl-2-phenyl-	000612-94-2	Naphthalene, 2-phenyl-
004757-69-1	1H-Indole, 2-methyl-3-phenyl-	026730-14-3	Tridecane, 7-methyl-
		017312-82-2	Undecane, 4,6-dimethyl-

Note: Chromatogram contains 3 peaks of unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compound.

Sample Number: CH05006

Sample Type: River sediment

Location: Acid working area, Longmen village, 1km from Guiyu town town, PuNing City, Guangdong Province, China

Sampling Date: 08.03.05

Sample Information: PH=6; Collected from the river flowing adjacent to the acid working areas, approximately 40m upstream of all working areas.

Number of compounds isolated: 15

Compounds identified to better than 90%:

CAS#	Name	000822-28-6	Hexadecane, 1-(ethenylloxy)-
000000-00-0	Azulene, 1,2,3,4,6,8-hexamethyl-	000629-59-4	Tetradecane
000629-78-7	Heptadecane		

Compounds tentatively identified:

CAS#	Name	074685-33-9	3-Eicosene, (E)-
003452-07-1	1-Eicosene		

Sample Number: CH05007**Sample Type:** Solid waste and soil**Location:** Acid working area, Longmen village, 1km from Guiyu town town, PuNing City, Guangdong Province, China**Sampling Date:** 08.03.05**Sample Information:** PH=0; Collected in the central acid working area, from the main sump furthest from the river. The sump contained wastewater**Number of compounds isolated:** 53**Compounds identified to better than 90%:**

CAS#	Name	000593-49-7	Heptacosane
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester	000629-78-7	Heptadecane
		000630-01-3	Hexacosane
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	000544-76-3	Hexadecane
		002385-85-5	Mirex
000112-88-9	1-Octadecene	000630-03-5	Nonacosane
000120-82-1	Benzene, 1,2,4-trichloro- (SIM)	000630-02-4	Octacosane
000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)	000593-45-3	Octadecane
000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)	000629-99-2	Pentacosane
000118-74-1	Benzene, hexachloro- (SIM)	004130-42-1	Phenol, 2,6-bis(1,1-dimethylethyl)-
000629-97-0	Docosane	010544-50-0	Sulfur, mol. (S8)
000544-85-4	Dotriacontane	000646-31-1	Tetracosane
000112-95-8	Eicosane	000629-59-4	Tetradecane
000630-04-6	Hentriacontane	000629-50-5	Tridecane

Compounds tentatively identified:

CAS#	Name	000629-92-5	Nonadecane
058278-67-4	1,1'-Dithiobisbenzimidazole	015869-86-0	Octane, 4-ethyl-

*Note: Sample contains two unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.***Sample Number:** CH05008**Sample Type:** River sediment**Location:** Acid working area, Longmen village, 1km from Guiyu town town, PuNing City, Guangdong Province, China**Sampling Date:** 08.03.05**Sample Information:** PH=4; Collected from the river flowing adjacent to the acid working areas, adjacent to the downstream working area.**Number of compounds isolated:** 76**Compounds identified to better than 90%:**

CAS#	Name	000112-95-8	Eicosane
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	000630-04-6	Hentriacontane
003452-07-1	1-Eicosene	000593-49-7	Heptacosane
037921-31-6	2,4(1H,3H)-Pteridinedione, 5,6,7,8-tetrahydro-1,3,6,7,8-pentamethyl-	000629-78-7	Heptadecane
000000-00-0	2-(4-Methoxyphenyl)benzo[b]furan	000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-
000112-62-9	9-Octadecenoic acid (z)-, methyl ester	000630-03-5	Nonacosane
000629-97-0	Docosane	000629-92-5	Nonadecane
000544-85-4	Dotriacontane	000630-02-4	Octacosane
		000593-45-3	Octadecane
		000112-61-8	Octadecanoic acid, methyl ester

000629-99-2	Pentacosane	2,2',4,4'-tetrabromo-)
000629-62-9	Pentadecane	9 more unspecified tetrabrominated congeners, 6 of them
005129-60-2	Pentadecanoic acid, 14-methyl-, methyl ester	detected in SIM mode
000646-31-1	Tetracosane	

Polybrominated diphenyl ethers:

a) Dibrominated: 2 unspecified dibrominated congeners	d) Pentabrominated: 000000-00-0 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-) 7 more unspecified pentabrominated congeners, 5 of them detected in SIM mode
b) Tribrominated: 2 unspecified tribrominated congeners	e) Hexabrominated: 000000-00-0 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-) 1 more unspecified hexabrominated congener detected in SIM mode
c) Tetrabrominated: 000000-00-0 BDE-47 (Diphenyl ether,	

Compounds tentatively identified:

CAS#	Name	CAS#	Name
059681-06-0	10-Demethylsqualene	000502-69-2	2-Pentadecanone, 6,10,14-trimethyl-
111005-47-1	1A,9b-Dihydro-4-methyl-1h-phenanthrene	000101-84-8	Diphenyl ether
004757-69-1	1H-Indole, 2-methyl-3-phenyl-	000505-32-8	Isophytol
013228-36-9	1H-Indole, 5-methyl-2-phenyl-	000000-00-0	Z-5-Nonadecene
		001633-22-3	[2.2]Paracyclophane

Sample Number: CH05009

Sample Type: Sediment

Location: Acid working area, Longmen village, 1km from Guiyu town town, PuNing City, Guangdong Province, China

Sampling Date: 08.03.05

Sample Information: PH=0; Central acid working area, from a pond connected to both the river & the main sump closest to the river. See CH05010

Number of compounds isolated: 33

Compounds identified to better than 90%:

CAS#	Name	CAS#	Name
010544-50-0	Sulfur, mol. (S8)	000593-49-7	Heptacosane
000117-81-7	Di-(2-ethylhexyl)phthalate	000099-28-5	Phenol, 2,6-dibromo-4-nitro-
000629-97-0	Docosane	000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name
002385-85-5	Mirex

Sample Number: CH05010

Sample Type: Wastewater

Location: Acid working area, Longmen village, 1km from Guiyu town town, PuNing City, Guangdong Province, China

Sampling Date: 08.03.05

Sample Information: PH=0; Central acid working area, from a pond connected to both the river & the main sump closest to the river. See CH05009

Number of compounds isolated: 57

Compounds identified to better than 90%:

CAS#	Name	CAS#	Name
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	000084-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
017851-53-5	1,2-Benzenedicarboxylic acid, butyl isobutyl ester	005037-60-5	1H-Inden-1-one, 2,3-dihydro-4,7-dimethyl-
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	000000-00-0	Coumarin, 4,5,7-trimethyl-
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester	000000-00-0	Coumarin, 5,7,8-trimethyl-
		010544-50-0	Cyclic octatomic sulfur

000112-95-8	Eicosane	000534-52-1	Phenol, 2-methyl-4,6-dinitro-
000932-66-1	Ethanone, 1-(1-cyclohexen-1-yl)-	000089-64-5	Phenol, 4-chloro-2-nitro-
000544-76-3	Hexadecane	000119-33-5	Phenol, 4-methyl-2-nitro-
002423-71-4	Phenol, 2,6-dimethyl-4-nitro-	000791-28-6	Triphenylphosphine oxide

Compounds tentatively identified:

CAS#	Name		
105372-28-9	2,5-Dimethoxy-3-methylnaphthalene	000121-92-6	Benzoic acid, 3-nitro-
000000-00-0	2-Methoxy-4-methyl-phenol	017312-53-7	Decane, 3,6-dimethyl-
061407-17-8	2-Methylbenzofuran-5,6-diol	017312-54-8	Decane, 3,7-dimethyl-
002445-83-2	2H-1-benzopyran-2-one, 7-methyl-	000629-97-0	Docosane
002005-10-9	3,4-Benzocoumarin	006418-47-9	Heneicosane, 3-methyl-
090111-15-2	3-Hydroxy-2-methylbenzaldehyde	062016-18-6	Octane, 5-ethyl-2-methyl-
000486-25-9	9H-Fluoren-9-one	000000-00-0	Phenol, 2-methyl-5-nitro-
000538-51-2	Benzenamine, n-(phenylmethylene)-	007147-89-9	Phenol, 4-chloro-5-methyl-2-nitro-

Sample Number: CH05015

Sample Type: Sediment

Location: River bank, near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 08.03.05

Sample Information: Wastewater discharge gully; open-air workshop where circuit boards are shredded & components separated using water

Number of compounds isolated: 113

Compounds identified to better than 90%:

CAS#	Name		
006975-98-0	Decane, 2-methyl-	000629-59-4	Tetradecane
000101-84-8	Diphenyl ether	018435-22-8	Tetradecane, 3-methyl-
000629-97-0	Docosane	000638-68-6	Triacotane
000112-40-3	Dodecane	000638-67-5	Tricosane
003891-98-3	Dodecane, 2,6,10-trimethyl-	000629-50-5	Tridecane
000544-85-4	Dotriacontane	013151-92-3	Tridecane, 7-cyclohexyl-
000112-95-8	Eicosane		
000629-94-7	Heneicosane		
000593-49-7	Heptacosane		
000629-78-7	Heptadecane		
001560-89-0	Heptadecane, 2-methyl-		
006418-44-6	Heptadecane, 3-methyl-		
026429-11-8	Heptadecane, 4-methyl-		
000544-76-3	Hexadecane		
000112-39-0	Hexadecanoic acid, methyl ester		
000112-62-9	Methyloleate		
002385-85-5	Mirex		
000829-26-5	Naphthalene, 2,3,6-trimethyl-		
000630-03-5	Nonacosane		
000629-92-5	Nonadecane		
001560-86-7	Nonadecane, 2-methyl-		
000630-02-4	Octacosane		
000593-45-3	Octadecane		
000112-61-8	Octadecanoic acid, methyl ester		
000629-62-9	Pentadecane		
001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-		
001560-93-6	Pentadecane, 2-methyl-		
002882-96-4	Pentadecane, 3-methyl-		
000646-31-1	Tetracosane		

Polybrominated diphenyl ethers:

a) Tribrominated:
7 unspecified tribrominated congeners

b) Tetrabrominated:
005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-)
14 more unspecified tetrabrominated congeners, 4 of them detected in SIM mode

c) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-)
13 more unspecified pentabrominated congeners, 4 of them detected in SIM mode

d) Hexabrominated:
068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-)
6 more unspecified hexabrominated congeners, 5 of them detected in SIM mode

Compounds tentatively identified:

CAS#	Name		
000000-00-0	2-(4-Methoxyphenyl)benzo[b]furan	001560-92-5	Hexadecane, 2-methyl-
000000-00-0	9H-Fluoren-3-ol, 9,9-dimethyl-	000111-84-2	Nonane
000611-14-3	Benzene, 1-ethyl-2-methyl-	000111-01-3	Tetracosane, 2,6,10,15,19,23-hexamethyl-

Sample Number: CH05016
Sample Type: Soil and acidic waste residues
Location: Larger acid workings, river bank near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 08.03.05
Sample Information: From a waste ground overflow area adjacent to the acid working area, on the bank of a river (name unknown). (As CH05017, CH05030-31)

Number of compounds isolated: 175

Compounds identified to better than 90%:

CAS#	Name	
000092-06-8	m-Terphenyl	9 more unspecified tetrachlorinated congeners, 4 of them detected in SIM mode
000092-94-4	p-Terphenyl	
001165-53-3	1,1':2',1''-Terphenyl, 4'-phenyl-	c) Pentachlorinated:
000612-71-5	1,1':3',1''-Terphenyl, 5'-phenyl-	037680-73-2 PCB-101 (1,1'-Biphenyl,
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	2,2',4,5,5'-pentachloro-)
000000-00-0	2,6-Di(t-butyl)-4-hydroxy-4-methyl-2,5-cyclohexadien-1-one	032598-14-4 PCB-105 (1,1'-Biphenyl,
024157-81-1	2,6-Diisopropyl-naphthalene	2,3,3',4,4'-pentachloro-)
000086-73-7	9H-Fluorene	074472-37-0 PCB-114 1,1'-Biphenyl, 2,3,4,4',5-pentachloro-) (SIM)
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	031508-00-6 PCB-118 (1,1'-Biphenyl,
000095-50-1	Benzene, 1,2-dichloro-	2,3',4,4',5-pentachloro-) (SIM)
000541-73-1	Benzene, 1,3-dichloro-	065510-44-3 PCB-123 (1,1'-Biphenyl,
000106-46-7	Benzene, 1,4-dichloro-	2',3,4,4',5-pentachloro-) (SIM)
000087-61-6	Benzene, 1,2,3-trichloro-	4 more unspecified pentachlorinated congeners, 2 of them detected in SIM mode
000120-82-1	Benzene, 1,2,4-trichloro-	
000108-70-3	Benzene, 1,3,5-trichloro- (SIM)	d) Hexachlorinated:
000634-66-2	Benzene, 1,2,3,4-tetrachloro-	035065-28-2 PCB-138 (1,1'-Biphenyl,
000095-94-3	Benzene, 1,2,4,5-tetrachloro-	2,2',3,4,4',5'-hexachloro-) (SIM)
000608-93-5	Benzene, pentachloro-	035065-27-1 PCB-153 (1,1'-Biphenyl,
000118-74-1	Benzene, hexachloro-(SIM)	2,2',3,4,4',5'-hexachloro-)
000630-06-8	Hexatriacontane	038380-08-4 PCB-156 (1,1'-Biphenyl,
000119-61-9	Methanone, diphenyl-	2,2',3,4,4',5'-hexachloro-) (SIM)
002385-85-5	Mirex	069782-90-7 PCB-157 (1,1'-Biphenyl,
000090-12-0	Naphthalene, 1-methyl-	2,3,3',4,4',5'-hexachloro-) (SIM)
000605-02-7	Naphthalene, 1-phenyl-	052663-72-6 PCB-167 (1,1'-Biphenyl,
055720-40-6	Naphthalene, 2,3,6-trichloro-	2,2',3,4,4',5'-hexachloro-) (SIM)
000091-57-6	Naphthalene, 2-methyl-	3 more unspecified hexachlorinated congeners, all of them detected in SIM mode
000612-94-2	Naphthalene, 2-phenyl-	
000085-01-8	Phenanthrene	
010544-50-0	Sulfur, mol. (s8)	e) Heptachlorinated:
000000-00-0	Z/e-1-(8-methyl-1-phenanthryl)-2-(4-methylphenyl)ethylene	035065-30-6 PCB-170 (1,1'-Biphenyl,

Polychlorinated biphenyls:

a) Dichlorinated:
4 unspecified dichlorinated congeners detected, 3 of them detected in SIM mode

a) Trichlorinated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)
10 more unspecified trichlorinated congeners, 4 of them detected in SIM mode

b) Tetrachlorinated:
035693-99-3 PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
032598-13-3 PCB-77 (1,1'-Biphenyl, 3,3',4,4'-tetrachloro-) (SIM)

Polybrominated diphenyl ethers:

a) Tetrabrominated:
005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-)
2 more unspecified tetrabrominated congeners, all of them detected in SIM mode

b) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-)
4 more unspecified pentabrominated congeners, all of them detected in SIM mode

Compounds tentatively identified:

000000-00-0	1,4-Diphenylbut-3-ene-2-ol	000095-63-6 Benzene, 1,2,4-trimethyl-
000000-00-0	1-Propene, 3-(2-cyclopentenyl)-	000092-52-4 Biphenyl
000239-09-8	11H-indolo[3,2-c]quinoline	000000-00-0 Cyclohexane-1-methanol, 3,3-dimethyl-
017932-18-2	2-Phenyl-3-(4-methoxyphenyl)indenone	069069-44-9 Dihydrokepone gem-diol
000000-00-0	6-Aza-5,7,12,14-tetrathiapentacene	000629-97-0 Docosane
000000-00-0	9-Phenyl-5h-benzocycloheptene	055401-55-3 Docosane, 11-decyl-
		010233-13-3 Dodecanoic acid, 1-methylethyl-

000593-49-7 Heptacosane
017135-74-9 Naphthalene, 1,8-dibromo-

002876-17-7 Phenazine, 1-methoxy-

Sample Number: CH05017

Sample Type: Soil and acidic wastes

Location: Larger acid workings, river bank near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 08.03.05

Sample Information: PH=0; From a small channel between the waste ground overflow area and the adjacent river (name unknown). (As CH05016, CH05030-31)

Number of compounds isolated: 137

Compounds identified to better than 90%:

CAS#	Name	
000612-71-5	1,1':3',1''-Terphenyl, 5'-phenyl-	8 more unspecified trichlorinated congeners, 5 of them detected in SIM mode
062338-57-2	1,4-Cyclohexadiene, 3-ethenyl-1,2-dimethyl-	
000629-73-2	1-Hexadecene	c) Tetrachlorinated:
000000-00-0	3-Heptadecene, (z)-	035693-99-3 PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	10 more unspecified tetrachlorinated congeners, 7 of them detected in SIM mode
001520-44-1	Benzene,1,1'-(1-methyl-1,3-propanediyl)-	
000629-97-0	Docosane	d) Pentachlorinated:
000544-85-4	Dotriacontane	037680-73-2 PCB-101 (1,1'-Biphenyl,
000112-95-8	Eicosane	2,2',4,5,5'-pentachloro-)
000086-73-7	Fluorene	032598-14-4 PCB-105 (1,1'-Biphenyl,
000629-94-7	Heneicosane	2,3,3',4,4'-pentachloro-)
000593-49-7	Heptacosane	(SIM)
000629-78-7	Heptadecane	074472-37-0 PCB-114 1,1'-Biphenyl, 2,3,4,4',5-
000630-01-3	Hexacosane	pentachloro-)
000544-76-3	Hexadecane	(SIM)
002385-85-5	Mirex	031508-00-6 PCB-118 (1,1'-Biphenyl,
000571-58-4	Naphthalene, 1,4-dimethyl-	2,3',4,4',5-pentachloro-)
000090-12-0	Naphthalene, 1-methyl-	5 more unspecified pentachlorinated congeners, 2 of them detected in SIM mode
055720-40-6	Naphthalene, 2,3,6-trichloro-	
000630-03-5	Nonacosane	e) Hexachlorinated:
000630-02-4	Octacosane	035065-28-2 PCB-138 (1,1'-Biphenyl,
000593-45-3	Octadecane	2,2',3,4,4',5'-hexachloro-)
000629-99-2	Pentacosane	035065-27-1 PCB-153 (1,1'-Biphenyl,
000085-01-8	Phenanthrene	2,2',3,4,4',5'-hexachloro-)
000646-31-1	Tetracosane	038380-08-4 PCB-156 (1,1'-Biphenyl,
000629-59-4	Tetradecane	2,2',3,4,4',5'-hexachloro-)
000638-67-5	Tricosane	(SIM)
000629-50-5	Tridecane	6 more unspecified hexachlorinated congeners, 2 of them detected in SIM mode

Polychlorinated benzenes:

000095-50-1	Benzene, 1,2-dichloro-	(SIM)	f) Heptachlorinated:
000541-73-1	Benzene, 1,3-dichloro-	(SIM)	035065-30-6 PCB-170 (1,1'-Biphenyl,
000106-46-7	Benzene, 1,4-dichloro-	(SIM)	2,2',3,3',4,4',5-heptachloro-) (SIM)
000087-61-6	Benzene, 1,2,3-trichloro-	(SIM)	035065-29-3 PCB-180 (1,1'-Biphenyl,
000120-82-1	Benzene, 1,2,4-trichloro-	(SIM)	2,2',3,3',4,4',5-heptachloro-)
000634-66-2	Benzene, 1,2,3,4-tetrachloro-	(SIM)	
000634-90-2	Benzene, 1,2,3,5-tetrachloro-	(SIM)	Polybrominated diphenyl ethers:
000608-93-5	Benzene, pentachloro-	(SIM)	a) Tetrabrominated:
000118-74-1	Benzene, hexachloro-	(SIM)	000000-00-0 BDE-47 (Diphenyl ether,

Polychlorinated biphenyls:

a) Dichlorinated:			b) Pentabrominated:
4 unspecified dichlorinated congener detected in SIM mode			4 unspecified pentabrominated congeners, both of them detected in SIM mode
b) Trichlorinated:			c) Hexabrominated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)			2 unspecified hexabrominated congener detected in SIM mode

Compounds tentatively identified:

CAS#	Name	061141-66-0	1,1'-Biphenyl, 3,4-diethyl-
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025423-56-7	1,4,7,10-Tetrathiacyclododecane	000091-57-6	Naphthalene, 2-methyl-
053584-60-4	28-Nor-17.alpha.(h)-hopane	000092-94-4	P-terphenyl
000613-12-7	Anthracene, 2-methyl-	000483-65-8	Phenanthrene, 1-methyl-7-(1-methylethyl)-
003891-98-3	Dodecane, 2,6,10-trimethyl-	000111-01-3	Tetracosane, 2,6,10,15,19,23-hexamethyl-
052896-90-9	Heptane, 3-ethyl-5-methyl-	014905-56-7	Tetradecane, 2,6,10-trimethyl-
000613-59-2	Naphthalene, 2-(phenylmethyl)-		

Note: Chromatogram contains 1 peak of unidentified compound, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

Sample Number: CH05020
Sample Type: Floor dust including printer ink powder
Location: Nanyang, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: From the floor of a small workshop where printers are dismantled
Number of compounds isolated: 148

Compounds identified to better than 90%:

CAS#	Name		
000092-52-4	1,1'-Biphenyl	c) Tetrachlorinated:	
000000-00-0	2,3-Dihydro-2,2,3-trimethylnaphtho[2,3-b]furan-4,9-dione	035693-99-3	PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
000000-00-0	4b,8-Dimethyl-2-isopropylphenanthrene, 4b,5,6,7,8,8a,9,10-octahydro-	032598-13-3	PCB-77 (1,1'-Biphenyl, 3,3',4,4'-tetrachloro-)
005789-35-5	Benzene, 1,1'-(1,2-dimethyl-1,2-ethanediyl)bis-	052663-62-4	PCB-81 (1,1'-Biphenyl, 3,4,4',5-tetrachloro-)
000952-80-7	Benzene, 1,1'-(1,2-ethanediyl)bis[2-methyl-		6 unspecified tetrachlorinated congeners
000538-39-6	Benzene, 1,1'-(1,2-ethanediyl)bis[4-methyl-	d) Pentachlorinated:	
000128-37-0	Butylated hydroxytoluene	037680-73-2	PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
000593-49-7	Heptacosane	032598-14-4	PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)
000629-78-7	Heptadecane	065510-44-3	PCB-123 (1,1'-Biphenyl, 2',3,4,4',5-pentachloro-)
000630-01-3	Hexacosane		(SIM)
000544-76-3	Hexadecane		4 unspecified pentachlorinated congeners
000593-45-3	Octadecane	e) Hexachlorinated:	
000629-99-2	Pentacosane	035065-28-2	PCB-138 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
000629-62-9	Pentadecane	035065-27-1	PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
000646-31-1	Tetracosane	038380-08-4	PCB-156 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
000638-67-5	Tricosane		(SIM)
001633-22-3	[2.2]Paracyclophane		2 unspecified hexachlorinated congeners, 1 of them detected in SIM mode
		f) Heptachlorinated:	
		035065-30-6	PCB-170 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)
		035065-29-3	PCB-180 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)
			(SIM)

Polychlorinated biphenyls:

a) Dichlorinated:
1 more unspecified dichlorinated congener detected in SIM mode

b) Trichlorinated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)
10 more unspecified trichlorinated congeners, 4 of them detected in SIM mode

Compounds tentatively identified:

CAS#	Name		
007773-83-3	1-Docosanethiol	072668-37-2	2-Isopropyl-4-methylhex-2-enal
004757-69-1	1H-Indole, 2-methyl-3-phenyl-	001140-08-5	2-Methyl-7-phenylindole
007573-15-1	2,7-Dimethylxanthone	002294-71-5	Benzeneacetic acid, .alpha.-ethyl-
000000-00-0	2-(4-Methoxyphenyl)benzo[b]furan	000776-35-2	Phenanthrene, 9,10-dihydro-

Sample Number: CH05021
Sample Type: Soil / sediment
Location: Nanyang, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: From a small pool in a yard used to store printers, outside the small workshop where printers are dismantled (see CH05020)

Number of compounds isolated: 163

Compounds identified to better than 90%:

CAS#	Name			
000000-00-0	17-.beta.(H)-28-Norlupane	032598-14-4	PCB-105	(1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)
110769-62-5	Aromadendran ('2')	037680-73-2	PCB-101	(1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
080655-44-3	Naphthalene, decahydro-4,4,8,9,10-pentamethyl-	031508-00-6	PCB-118	(1,1'-Biphenyl, 2,3',4,4',5-pentachloro-)
Polychlorinated biphenyls:				
a) Monochlorinated:				
1 unspecified monochlorinated congener				
b) Dichlorinated:				
4 unspecified dichlorinated congeners, 1 of them detected in SIM mode				
c) Trichlorinated:				
007012-37-5	PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)	065510-44-3	PCB-123	(1,1'-Biphenyl, 2',3,4,4',5-pentachloro-)
8 more unspecified trichlorinated congeners				
d) Tetrachlorinated:				
035693-99-3	PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)	f) Hexachlorinated:		
11 more unspecified tetrachlorinated congeners, 2 of them detected in SIM mode				
e) Pentachlorinated:				
9 unspecified pentachlorinated congeners				
f) Hexachlorinated:				
4 unspecified hexachlorinated congeners, 1 of them detected in SIM mode				
g) Heptachlorinated:				
7 unspecified heptachlorinated congeners				

Compounds tentatively identified:

CAS#	Name		
053584-60-4	28-nor-17.alpha.(H)-Hopane	000000-00-0	Isomeric dodecylbenzene
002400-00-2	Benzene, (1-ethyldecyl)-	004445-07-2	Octadecylbenzene
001461-02-5	Benzene, 1-(1,5-dimethylhexyl)-4-methyl-	000000-00-0	Salvialane
		000629-59-4	Tetradecane

Sample Number: CH05022
Sample Type: Well water
Location: Nanyang, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: PH=7; From a hand pump in a yard outside the small workshop where printers are dismantled (see CH05020). Well approximately 40m deep

Number of compounds isolated: 5

Compounds identified to better than 90%:

CAS#	Name
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester

Compounds tentatively identified:

None

Sample Number: CH05023
Sample Type: Stream sediment
Location: Huamei, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: PH=2; From a stream adjacent to open air acid workings; opposite corner of working area to where wastewaters directly enter the stream
Number of compounds isolated: 132

Compounds identified to better than 90%:

CAS#	Name	
022393-99-3	9-Octadecenoic acid (z)-, 9-hexade	trichloro-)
000100-52-7	Benzaldehyde	9 more unspecified trichlorinated congeners, 3 of them detected in SIM mode
023676-09-7	Benzoic acid, 4-ethoxy-, ethyl ester	
000629-97-0	Docosane	c) Tetrachlorinated:
000544-85-4	Dotriacontane	035693-99-3 PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
000112-95-8	Eicosane	12 more unspecified tetrachlorinated congeners, 5 of them detected in SIM mode
000629-94-7	Heneicosane	
000630-04-6	Hentriacontane	d) Pentachlorinated:
000593-49-7	Heptacosane	037680-73-2 PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
000629-78-7	Heptadecane	032598-14-4 PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)
007225-64-1	Heptadecane, 9-octyl-	5 unspecified pentachlorinated congeners
000630-01-3	Hexacosane	e) Hexachlorinated:
000544-76-3	Hexadecane	035065-27-1 PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
001560-92-5	Hexadecane, 2-methyl-	038380-08-4 PCB-156 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
002385-85-5	Mirex	052663-72-6 PCB-167 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
000630-03-5	Nonacosane	3 more unspecified hexachlorinated congeners, 2 of them detected in SIM mode
000629-92-5	Nonadecane	f) Heptachlorinated:
000593-45-3	Octadecane	035065-30-6 PCB-170 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-) (SIM)
000629-99-2	Pentacosane	1 more unspecified heptachlorinated congener detected in SIM mode
000629-62-9	Pentadecane	
000646-31-1	Tetracosane	
000629-59-4	Tetradecane	
000638-68-6	Triacontane	
000638-67-5	Tricosane	

Polychlorinated biphenyls:

a) Dichlorinated:
3 unspecified dichlorinated congeners, 1 of them detected in SIM mode

b) Trichlorinated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-

Compounds tentatively identified:

CAS#	Name	
000000-00-0	(17.alpha.h,21.beta.h)-Kopane	000100-51-6 Benzenemethanol
000000-00-0	1-Butylonylbenzene	013901-20-7 Cholest-3-ene, (5.beta.)-
002719-62-2	Benzene, (1-pentylheptyl)-	000122-99-6 Ethanol, 2-phenoxy-
		000638-36-8 Hexadecane, 2,6,10,14-tetramethyl-

Sample Number: CH05024
Sample Type: Stream sediment
Location: Huamei, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: PH=2; From a stream adjacent to open air acid workings; where wastewaters directly enter the stream
Number of compounds isolated: 27

Compounds identified to better than 90%:

CAS#	Name	
054290-12-9	8-Heptadecene	

000080-97-7	Cholestanol	000629-92-5	Nonadecane
000295-65-8	Cyclohexadecane	000593-45-3	Octadecane
000629-97-0	Docosane	000629-99-2	Pentacosane
000593-49-7	Heptacosane	000629-62-9	Pentadecane
000629-78-7	Heptadecane	010544-50-0	Sulfur, mol. (S8)
000630-01-3	Hexacosane	000646-31-1	Tetracosane
000544-76-3	Hexadecane	000638-67-5	Tricosane

Compounds tentatively identified:

None

Sample Number: CH05025
Sample Type: Wastewater
Location: Huamei, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: PH=0; From one of the pools in the acid working area
Number of compounds isolated: 27

Compounds identified to better than 90%:

CAS#	Name	ester	
017851-53-5	1,2-Benzenedicarboxylic acid, butyl isobutyl ester	000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	000100-52-7	Benzaldehyde
000084-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	000112-05-0	Nonanoic acid

Compounds tentatively identified:

CAS#	Name	000543-87-3	1-Butanol, 3-methyl-, nitrate
004376-18-5	1,2-Benzenedicarboxylic acid, mono methyl ester	000098-86-2	Ethanone, 1-phenyl-
		000115-86-6	Phosphoric acid, triphenyl ester

Sample Number: CH05027
Sample Type: River sediment
Location: Smaller acid workings on bank of Lianjiang River, near crossing of the road between Guiyu town and Nanyang, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: PH=6; From the Lianjiang river by an open-air acid working area. Furthest from the wastewater discharge channel (CH05028)
Number of compounds isolated: 62

Compounds identified to better than 90%:

CAS#	Name	<i>Polybrominated diphenyl ethers:</i>
000077-73-6	4,7-Methano-1H-Indene, 3a,4,7,7a-tetramethyl-	a) Tribrominated: 2 unspecified tribrominated congeners
002807-33-2	4-Nonene, 5-methyl-, (z)-	b) Tetrabrominated: 005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-) 3 more unspecified tetrabrominated congeners, 1 of them detected in SIM mode
000629-97-0	Docosane	c) Pentabrominated: 060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-) 3 more unspecified pentabrominated congeners, all of them detected in SIM mode
022681-52-3	Cyclododecane, 1-ethyl-2-methyl-	d) Hexabrominated: 068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-) (SIM)
000112-95-8	Eicosane	
000629-78-7	Heptadecane	
000544-76-3	Hexadecane	
000091-57-6	Naphthalene, 2-methyl-	
000629-92-5	Nonadecane	
000000-00-0	Nonadecene	
000593-45-3	Octadecane	
000085-01-8	Phenanthrene	
000129-00-0	Pyrene	
000646-31-1	Tetracosane	
000629-59-4	Tetradecane	
000000-00-0	Tetradecene, 2-methyl-	

1 more unspecified hexabrominated congener detected in SIM mode

Compounds tentatively identified:

CAS#	Name		
069009-90-1	1,1'-Biphenyl, bis(1-methylethyl)-	000000-00-0	Cyclohexadecane, 1,2-diethyl-
019899-32-2	1,2,3,5-Tetramethylcyclohexane	061142-52-7	Cyclopentane, 1-butyl-2-pentyl-
018835-33-1	1-Hexacosene	000829-26-5	Naphthalene, 2,3,6-trimethyl-
004038-04-4	1-Pentene, 3-ethyl-	075163-99-4	Nonadecane, 2,3-dimethyl-
015918-07-7	4-Nonene, 5-methyl-	055124-80-6	Nonadecane, 2,6,10,14-tetramethyl-
074630-69-6	4-Undecene, 5-methyl-, (z)-	040710-32-5	Nonahexacontanoic acid
007206-17-9	6-Dodecene, (e)-	000629-62-9	Pentadecane
000613-12-7	Anthracene, 2-methyl-	000629-50-5	Tridecane

Sample Number: CH05028

Sample Type: Soil and acid residues

Location: Smaller acid workings on bank of Lianjiang River, near crossing of the road between Guiyu town and Nanyang, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 09.03.05

Sample Information: PH=0; From a dried, unlined discharge channel between the acid working area and the Lianjiang river

Number of compounds isolated: 48

Compounds identified to better than 90%:

CAS#	Name		
000077-73-6	4,7-Methano-1H-Indene, 3a,4,7,7a-tetramethyl-	2 unspecified tribrominated congeners	
000629-97-0	Docosane	b) Tetrabrominated:	
000206-44-0	Fluoranthene	005436-43-1 BDE-47	(Diphenyl ether, 2,2'4,4'-tetrabromo-)
000630-04-6	Hentriacontane	6 more unspecified tetrabrominated congeners, 4 of them detected in SIM mode	
000629-78-7	Heptadecane		
006418-44-6	Heptadecane, 3-methyl-	c) Pentabrominated:	
000544-76-3	Hexadecane	060348-60-9 BDE-99	(Diphenyl ether, 2,2'4,4',5-pentabromo-)
000630-03-5	Nonacosane	4 more unspecified pentabrominated congeners, 3 of them detected in SIM mode	
000629-92-5	Nonadecane		
000593-45-3	Octadecane	d) Hexabrominated:	
000629-99-2	Pentacosane	068631-49-2 BDE-153	(Diphenyl ether, 2,2'4,4',5,5'-hexabromo-)
000085-01-8	Phenanthrene	1 more unspecified hexabrominated congener detected in SIM mode	
000629-59-4	Tetradecane		
000638-67-5	Tricosane		

Polybrominated diphenyl ethers:

a) Tribrominated:

Compounds tentatively identified:

CAS#	Name		
001795-21-7	Cyclopentane, decyl-	000612-94-2	Naphthalene, 2-phenyl-
000112-95-8	Eicosane	000646-31-1	Tetracosane
000605-02-7	Naphthalene, 1-phenyl-	001928-30-9	Tricosane, 2-methyl-

Sample Number: CH05029

Sample Type: River sediment

Location: Smaller acid workings on bank of Lianjiang River, near crossing of the road between Guiyu town and Nanyang, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 09.03.05

Sample Information: PH=1; From the Lianjiang river by an open-air acid working area. Adjacent to the input from a wastewater discharge channel (CH05028)

Number of compounds isolated: 88

Compounds identified to better than 90%:

CAS#	Name	
000630-04-6	Hentriacontane	a) Tribrominated:
000629-78-7	Heptadecane	2 unspecified tribrominated congeners
000630-01-3	Hexacosane	b) Tetrabrominated:
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	005436-43-1 BDE-47 (Diphenyl ether,
021164-95-4	Hexadecane, 7,9-dimethyl-	2,2',4,4'-tetrabromo-)
000546-99-6	Hop-17,21-ene	12 more unspecified tetrabrominated congeners, 7 of them
002385-85-5	Mirex	detected in SIM mode
000630-03-5	Nonacosane	c) Pentabrominated:
040710-32-5	Nonahexacontanoic acid	060348-60-9 BDE-99 (Diphenyl ether,
000630-02-4	Octacosane	2,2',4,4',5-pentabromo-)
000593-45-3	Octadecane	4 more unspecified pentabrominated congeners
000629-99-2	Pentacosane	d) Hexabrominated:
000629-62-9	Pentadecane	068631-49-2 BDE-153 (Diphenyl ether,
010544-50-0	Sulfur, mol. (S8)	2,2',4,4',5,5'-hexabromo-) (SIM)
000646-31-1	Tetracosane	2 more unspecified hexabrominated congeners, 1 of them
000638-67-5	Tricosane	detected in SIM mode
001928-30-9	Tricosane, 2-methyl-	

Polybrominated diphenyl ethers:

Compounds tentatively identified:

CAS#	Name	ester
000000-00-0	(17.alpha.h,21.beta.h)-Hopane	006418-44-6 Heptadecane, 3-methyl-
058278-67-4	1,1'-Dithiobisbenzimidazole	000000-00-0 Z-14-nonacosane
000000-00-0	5,14,23-Octadecatrien-14,15-diol	020175-84-2 [1,2'-Binaphthalene]-5,5',8,8'-
000000-00-0	Dodecanoic acid, 12-(4-methylphenyl)	tetramethyl-

Sample Number: CH05030

Sample Type: River sediment

Location: Larger acid workings, river bank near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 09.03.05

Sample Information: PH=1; From a river (name unknown), adjacent to the edge of an overflow area furthest from the working area. (As CH05016-17, 31)

Number of compounds isolated: 93

Compounds identified to better than 90%:

CAS#	Name	
000000-00-0	(22e,24s)-Crinosterol	000000-00-0 Cholestadiene
000638-95-9	.alpha.-Amyrin	000000-00-0 Cyclooctadecane, ethyl-
000559-70-6	.beta.-Amyrin	000593-49-7 Heptacosane
000083-47-6	.gamma.-Sitosterol	000629-78-7 Heptadecane
000612-71-5	1,1':3',1"-Terphenyl, 5'-phenyl-	000540-10-3 Hexadecanoic acid, hexadecyl ester
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	002598-99-4 Hexadecanoic acid, octadecyl ester
000629-73-2	1-Hexadecene	000505-32-8 Isophytol
000112-88-9	1-Octadecene	000630-03-5 Nonacosane
000112-72-1	1-Tetradecanol	000630-02-4 Octacosane
000000-00-0	23 s-Methylcholesterol	000629-99-2 Pentacosane
000000-00-0	3-Keto-urs-12-ene	000629-62-9 Pentadecane
000000-00-0	5.Alpha.-cholestan-3.beta.-ol	000083-48-7 Stigmasta-5,22-dien-3-ol
000057-88-5	Cholest-5-en-3-ol (3.beta.)-	010544-50-0 Sulfur, mol. (S8)
		000646-31-1 Tetracosane
		000638-67-5 Tricosane

Compounds tentatively identified:

CAS#	Name	
000000-00-0	.beta.-iso-Methyl ionone	055515-18-9 Lanost-7-en-3-one
000084-15-1	1,1':2',1"-Terphenyl	000545-47-1 Lupeol
000000-00-0	1,2-Dimethyl[2.2]paracyclophan-1-ene	000000-00-0 Methyl (e,z)-2,4-decadienoate
095841-71-7	5.Beta.,6.beta.-epoxycholest-7-en-3.beta.-ol	000000-00-0 Monotolyl diphenyl phosphate
000000-00-0	7,11-Dihydroxy-3,4,9,11b-tetramethyl-	000000-00-0 Norcollatone
040071-65-6	Cholest-7-ene, (5.alpha.)-	003234-85-3 Tetradecanoic acid, tetradecyl ester
002097-85-0	Cholestan-3-one, 4,4-dimethyl-	000115-86-6 Triphenyl phosphate
018865-44-6	Ergost-22-en-3-one	

Sample Number: CH05031

Sample Type: River sediment

Location: Larger acid workings, river bank near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 09.03.05

Sample Information: PH=1; From a river (name unknown), adjacent to the narrow channel connecting the overflow area and the river. (As CH05016-17, 30)

Number of compounds isolated: 56

Compounds identified to better than 90%:

CAS#	Name	000638-67-5	Tricosane
000559-70-6	.beta.-Amyrin		
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	Polybrominated diphenyl ethers:	
036645-68-8	1,30-Triacontanediol	a) Tetrabrominated:	
000000-00-0	Cyclohexadecane, 1,2-diethyl-	005436-43-1	BDE-47 (Diphenyl ether,
000629-97-0	Docosane	2,2',4,4'-tetrabromo-) (SIM)	
000112-95-8	Eicosane	9 more unspecified tetrabrominated congeners, all detected in SIM mode	
000593-49-7	Heptacosane		
000629-78-7	Heptadecane		
000630-01-3	Hexacosane	b) Pentabrominated:	
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	060348-60-9	BDE-99 (Diphenyl ether,
000000-00-0	Neophytadiene	2,2',4,4',5-pentabromo-) (SIM)	
000630-02-4	Octacosane		
000000-00-0	Stigmasterol, 22,23-dihydro-	c) Hexabrominated:	
010544-50-0	Sulfur, mol. (S8)	068631-49-2	BDE-153 (Diphenyl ether,
000646-31-1	Tetracosane	2,2',4,4',5,5'-hexabromo-) (SIM)	
002599-01-1	Tetradecanoic acid, hexadecyl ester		

Compounds tentatively identified:

CAS#	Name	028338-69-4	Cholest-3-ene, (5.alpha.)-
004757-69-1	1H-indole, 2-methyl-3-phenyl-	056009-20-2	Cyclohexane, 1-(1,5-dimethylhexyl)-
056554-34-8	2-Hexadecene, 2,6,10,14-tetramethyl-	000540-10-3	Hexadecanoic acid, hexadecyl ester
000502-69-2	2-Pentadecanone, 6,10,14-trimethyl-	000546-99-6	Hop-17,21-ene
053584-60-4	28-Nor-17.alpha.(h)-hopane	055515-18-9	Lanost-7-en-3-one
071502-22-2	9-Hexacosene		

Sample Number: CH05032

Sample Type: Shredded electrical components and plastics

Location: River bank, near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 09.03.05

Sample Information: Material dumped behind a shredding facility (CH05015)

Number of compounds isolated: 132

Compounds identified to better than 90%:

000000-00-0	4B,8-dimethyl-2-isopropylphenanthrene, 4b,5,6,7,8,8a,9,10-octahydro-	000629-92-5	Nonadecane
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000630-02-4	Octacosane
004957-14-6	Benzene, 1,1'-methylenebis[4-methyl-	000593-45-3	Octadecane
017024-58-7	Benzene, 1,3,5-trimethyl-2-(2-phenylethenyl)-	006561-44-0	Octadecane, 3-methyl-
000629-97-0	Docosane	000629-62-9	Pentadecane
000544-85-4	Dotriacontane	000646-31-1	Tetracosane
000112-95-8	Eicosane	000629-59-4	Tetradecane
000629-94-7	Heneicosane	007098-22-8	Tetratetracontane
001560-89-0	Heptadecane, 2-methyl-	000638-68-6	Triacontane
000630-01-3	Hexacosane	000638-67-5	Tricosane
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	000629-50-5	Tridecane
001560-92-5	Hexadecane, 2-methyl-	000000-00-0	Triterpane
000630-06-8	Hexatriacontane	Polybrominated diphenyl ethers:	
002385-85-5	Mirex	a) Tetrabrominated:	
000630-03-5	Nonacosane	2 unspecified tetrabrominated congeners, 1 of them detected in SIM	

b) Pentabrominated: 2,2',4,4',5,5'-hexabromo-)
 060348-60-9 BDE-99 (Diphenyl ether, d) Heptabrominated:
 2,2',4,4',5-pentabromo-) 1 unspecified heptabrominated congener
 2 more unspecified pentabrominated congeners
 c) Hexabrominated: e) Octabrominated:
 068631-49-2 BDE-153 (Diphenyl ether, 3 unspecified octabrominated congeners

Compounds tentatively identified:

CAS#	Name		
095910-36-4	(-)-Isodene	methyl-	
000000-00-0	(17.alpha.h,21.beta.h)-hopane	000098-51-1	Benzene, 1-(1,1-dimethylethyl)-4-
003910-35-8	1H-Indene, 2,3-dihydro-1,1,3-trimethyl-	methyl-	
013228-36-9	3-phenyl-	017851-27-3	Benzene, 1-ethyl-2,4,5-trimethyl-
000098-51-1	1H-Indole, 5-methyl-2-phenyl-	004920-99-4	Benzene, 1-ethyl-3-(1-methylethyl)-
000098-51-1	4-Tert-butyltoluene	000100-42-5	Benzene, ethenyl-
022566-43-4	Anthracene, 9,10-dihydro-9,10-	032454-24-3	Benzeneacetic acid, .alpha.,.alpha.,
000778-22-3	dimethyl-	reimethyl-, ethyl ester	
001075-38-3	Benzene, 1,1'-(1-methylethylidene)bis-	000000-00-0	Benzenebutanal, .gamma.,.gamma.,4-
	Benzene, 1-(1,1-dimethylethyl)-3-	trimethyl-	

Note: Chromatogram contains 2 peaks of unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

Sample Number: CH05033
Sample Type: Ground water
Location: River bank, near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: Collected from a hand pump adjacent to a shredding facility, approximately 150m from an acid working area (CH05016-17, 30-31)
Number of compounds isolated: 10

Compounds identified to better than 90%:

CAS#	Name	ester	
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl	000095-16-9	Benzothiazole
ester		000615-22-5	Benzothiazole, 2-(methylthio)-
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl	001138-52-9	Phenol, 3,5-bis(1,1-dimethylethyl)-

Compounds tentatively identified:

None

Sample Number: CH05034
Sample Type: River sediment
Location: Near crossing of the road between Guiyu town and Nanyang & the Lianjiang River, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 09.03.05
Sample Information: PH=7; 500m along the river (name unknown) that receives wastes from the larger of two acid working areas (CH05016-17, 30-31)
Number of compounds isolated: 34

Compounds identified to better than 90%:

CAS#	Name		
001599-67-3	1-Docosene	000544-76-3	Hexadecane
000629-73-2	1-Hexadecene	000629-92-5	Nonadecane
015918-07-7	4-Nonene, 5-methyl-	000593-45-3	Octadecane
020634-43-9	4-Undecene, 5-methyl-	000629-62-9	Pentadecane
013151-94-5	Cyclooctane, 1,2-dimethyl-	000085-01-8	Phenanthrene
000112-95-8	Eicosane	000000-00-0	Quinindoline
000629-78-7	Heptadecane	041446-78-0	Tetradecene

Compounds tentatively identified:

CAS#	Name	007206-15-7	4-Dodecene, (e)-
000872-05-9	1-Decene	002807-33-2	4-Nonene, 5-methyl-, (z)-
000645-72-7	1-Hexadecanol, 3,7,11,15-tetramethyl-	041446-61-1	6-Tetradecene, cis-
041446-68-8	3-Tetradecene, (e)-	025558-23-0	Cyclobutane, 1,3-diphenyl-, trans-

Sample Number: CH05036**Sample Type:** Sediment**Location:** One of two shredding & separating facilities, 750m from Chendian Guiyu town Road near Fucaodu Bridge, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China**Sampling Date:** 10.03.05**Sample Information:** Sediment from a wastewater discharge channel immediately before it enters the Lianjiang River, 150m from discharge point**Number of compounds isolated:** 124**Compounds identified to better than 90%:**

CAS#	Name	000646-31-1	Tetracosane
000274-09-9	1,3-Benzodioxole	000629-59-4	Tetradecane
000000-00-0	2',5'-Dibromophenylol	000638-68-6	Triacotane
000098-83-9	Benzene, (1-methylethenyl)-	000638-67-5	Tricosane
000488-23-3	Benzene, 1,2,3,4-tetramethyl-	001928-30-9	Tricosane, 2-methyl-
000526-73-8	Benzene, 1,2,3-trimethyl-	000629-50-5	Tridecane
000095-93-2	Benzene, 1,2,4,5-tetramethyl-	001120-21-4	Undecane
000611-14-3	Benzene, 1-ethyl-2-methyl-		
000620-14-4	Benzene, 1-ethyl-3-methyl-		
000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-		
017384-72-4	Cyclopent[<i>a</i>]indene, 3,8-dihydro-1,2,3,3,8,8-hexamethyl-		
000138-86-3	dl-Limonene	a) Dibrominated:	
000629-97-0	Docosane	2 unspecified dibrominated congeners	
000544-85-4	Dotriacontane	b) Tribrominated:	
000112-95-8	Eicosane	6 unspecified tribrominated congeners	
000206-44-0	Fluoranthene	c) Tetrabrominated:	
000629-94-7	Heneicosane	005436-43-1	BDE-47 (Diphenyl ether,
000593-49-7	Heptacosane	2,2',4,4'-tetrabromo-)	
000629-78-7	Heptadecane	14 more unspecified tetrabrominated congeners, 5 of them detected in SIM mode	
006418-44-6	Heptadecane, 3-methyl-	d) Pentabrominated:	
000544-76-3	Hexadecane	060348-60-9	BDE-99 (Diphenyl ether,
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	2,2',4,4',5-pentabromo-)	
000475-20-7	Junipene	10 more unspecified pentabrominated congeners, 3 of them detected in SIM mode	
002385-85-5	Mirex	e) Hexabrominated:	
000090-12-0	Naphthalene, 1-methyl-	068631-49-2	BDE-153 (Diphenyl ether,
000091-57-6	Naphthalene, 2-methyl-	2,2',4,4',5,5'-hexabromo-)	
000630-02-4	Octacosane	7 more unspecified hexabrominated congeners, 7 of them detected in SIM mode	
000593-45-3	Octadecane		
000629-99-2	Pentacosane		
000085-01-8	Phenanthrene		
000128-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-		
000104-40-5	Phenol, 4-nonyl-		
000129-00-0	Pyrene		

Compounds tentatively identified:

CAS#	Name	000122-39-4	Diphenylamine
000000-00-0	1,3,7,8-Tetramethyl-5h-pyrido[4,3- <i>b</i>]indole	055470-98-9	Eicosane, 10-heptyl-10-octyl-
111492-92-3	2,2',4,5'-Tetramethyldiphenylmethane	000098-86-2	Ethanone, 1-phenyl-
000095-63-6	Benzene, 1,2,4-trimethyl-	006418-47-9	Heneicosane, 3-methyl-
000108-67-8	Benzene, 1,3,5-trimethyl-	000629-62-9	Pentadecane
000934-74-7	Benzene, 1-ethyl-3,5-dimethyl-	019814-75-6	Xanthene, 9,9-dimethyl-
000103-65-1	Benzene, propyl-	001633-22-3	[2.2]Paracyclophane

Note: Chromatogram contains 2 peaks of unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

Sample Number: CH05037
Sample Type: Sediment
Location: One of two shredding & separating facilities, 750m from Chendian Guiyu town Road near Fucaodu Bridge, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 10.03.05
Sample Information: Sediment from a wastewater discharge channel, at the point of discharge from the facility
Number of compounds isolated: 143

Compounds identified to better than 90%:

CAS#	Name	
000085-68-7	1,2-Benzenedicarboxylic acid, butyl benzyl ester	ester, mixture of isomers 000000-00-0 Monophenyl ditolyl phosphate 000000-00-0 Monotolyl diphenyl phosphate
000084-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	000115-86-6 Triphenyl phosphate 000129-00-0 Pyrene
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester	
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	
028553-12-0	} 1,2-Benzenedicarboxylic acid, diisononyl ester, mixture of isomers	
071549-78-5		
014103-61-8		
068515-48-0		
000103-23-1	Hexanedioic acid, bis(2-ethylhexyl) ester	
000112-61-8	Octadecanoic acid, methyl ester	
052355-31-4	6-Octadecenoic acid, methyl ester	
002613-76-5	1H-Indene, 2,3-dihydro-1,1,3-trimethyl-	
000084-51-5	9,10-Anthracenedione, 2-ethyl-	
000488-23-3	Benzene, 1,2,3,4-tetramethyl-	
000629-97-0	Docosane	
000630-06-8	Hexatriacontane	
000475-20-7	Junipene	
002385-85-5	Mirex	
000091-57-6	Naphthalene, 2-methyl-	
000095-87-4	Phenol, 2,5-dimethyl-	
000088-69-7	Phenol, 2-(1-methylethyl)-	
000106-44-5	Phenol, 4-methyl-	
025154-52-3	} Phenol, nonyl-, mixture of isomers	
084852-15-3		
001330-78-5	Phosphoric acid, tris(methylphenyl)	

Polybrominated diphenyl ethers:

a) Dibrominated:
1 unspecified dibrominated congeners

b) Tribrominated:
5 unspecified tribrominated congeners

c) Tetrabrominated:
005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-) (SIM)
7 more unspecified tetrabrominated congeners, all of them detected in SIM mode

d) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-)
10 more unspecified pentabrominated congeners, 7 of them detected in SIM mode

e) Hexabrominated:
068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-)

f) Heptabrominated:
1 unspecified heptabrominated congener

Compounds tentatively identified:

CAS#	Name	
094925-95-8	2,6,6-Trimethyl-3-methylenecyclohexane	
119296-94-5	(E)-3,3-Diphenyl-4-hexenoic acid	
000098-83-9	.alpha.-Methylstyrene	
004757-69-1	1H-Indole, 2-methyl-3-phenyl-	
111492-92-3	2,2',4,5'-Tetramethyldiphenylmethane	
000000-00-0	2,5-Cyclohexadiene, 1,4-diethyl-1,4-dimethyl-	
000620-14-4	Benzene, 1-ethyl-3-methyl-	
067698-82-2	Benzene, 1-methoxy-4-octyl-	
020056-58-0	Benzene, 1-methoxy-4-pentyl-	
000112-39-0	Hexadecanoic acid, methyl ester	
000475-03-6	Naphthalene, 1,2,3,4-tetrahydro-	
000646-31-1	Tetracosane	

Sample Number: CH05038
Sample Type: Wastewater
Location: One of two shredding & separating facilities, 750m from Chendian Guiyu town Road near Fucaodu Bridge, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China
Sampling Date: 10.03.05
Sample Information: PH=7; Discharged from the facility via a pipe; contained large amounts of suspended solids
Number of compounds isolated: 213

Compounds identified to better than 90%:

CAS#	Name		
000080-56-8	.alpha.-Pinene, (-)-	000829-26-5	Naphthalene, 2,3,6-trimethyl-
000000-00-0	1,4,6,8-Tetramethyl-[1,3a-(13c)]-azulene	000091-57-6	Naphthalene, 2-methyl-
018835-33-1	1-Hexacosene	000630-03-5	Nonacosane
006004-38-2	4,7-Methano-1h-indene, octahydro-	000629-92-5	Nonadecane
071502-22-2	9-Hexacosene	000630-02-4	Octacosane
000098-83-9	Benzene, (1-methylethenyl)-	000593-45-3	Octadecane
020071-09-4	Benzene, 1,1'-(1,2-cyclobutanediyl)bis-	000629-99-2	Pentacosane
000488-23-3	Benzene, 1,2,3,4-tetramethyl-	000629-62-9	Pentadecane
000095-93-2	Benzene, 1,2,4,5-tetramethyl-	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
000095-63-6	Benzene, 1,2,4-trimethyl-	003892-00-0	Pentadecane, 2,6,10-trimethyl-
000106-46-7	Benzene, 1,4-dichloro-	000085-01-8	Phenanthrene
000095-50-1	Benzene, 1,2-dichloro- (SIM)	000646-31-1	Tetracosane
054340-85-1	Benzene, 1-(2-butenyl)-2,3-dimethyl-	000629-59-4	Tetradecane
000100-80-1	Benzene, 1-ethenyl-3-methyl-	018435-22-8	Tetradecane, 3-methyl-
000622-96-8	Benzene, 1-ethyl-4-methyl-	000638-68-6	Triacotane
000535-77-3	Benzene, 1-methyl-3-(1-methylethyl)-	000638-67-5	Tricosane
002870-04-4	Benzene, 2-ethyl-1,3-dimethyl-	001928-30-9	Tricosane, 2-methyl-
054120-62-6	Benzene, ethyl-1,2,4-trimethyl-	000629-50-5	Tridecane
025155-15-1	Benzene, methyl(1-methylethyl)-	001120-21-4	Undecane
000103-65-1	Benzene, propyl-	017301-23-4	Undecane, 2,6-dimethyl-
000297-35-8	Cyclotriacontane	000000-00-0	Z-14-nonacosane
000138-86-3	dl-Limonene		
000629-97-0	Docosane		
000112-40-3	Dodecane		
000112-95-8	Eicosane		
000629-94-7	Heneicosane		
000630-04-6	Hentriacontane		
000593-49-7	Heptacosane		
000629-78-7	Heptadecane		
001560-89-0	Heptadecane, 2-methyl-		
006418-44-6	Heptadecane, 3-methyl-		
026429-11-8	Heptadecane, 4-methyl-		
000630-01-3	Hexacosane		
000544-76-3	Hexadecane		
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-		
006418-43-5	Hexadecane, 3-methyl-		
000630-06-8	Hexatriacontane		
000475-20-7	Junipene		
002385-85-5	Mirex		
002245-38-7	Naphthalene, 1,6,7-trimethyl-		

Polybrominated diphenyl ethers:

	a) Tetrabrominated:		
	005436-43-1	BDE-47	(Diphenyl ether, 2,2',4,4'-tetrabromo-)
	5 more unspecified tetrabrominated congeners, 4 of them detected in SIM mode		
	b) Pentabrominated:		
	060348-60-9	BDE-99	(Diphenyl ether, 2,2',4,4',5-pentabromo-)
	3 more unspecified pentabrominated congeners, all of them detected in SIM mode		
	c) Hexabrominated:		
	068631-49-2	BDE-153	(Diphenyl ether, 2,2',4,4',5,5'-hexabromo-)
	2 more unspecified hexabrominated congeners, both of them detected in SIM mode		

Compounds tentatively identified:

CAS#	Name		
000000-00-0	(17.alpha.h,21.beta.h)-hopane	055429-83-9	Hexacosane, 9-octyl-
006765-39-5	1-Heptadecene	021693-54-9	Naphthalene, 1,2,3,4-tetrahydro-5,7-dimethyl-
013228-36-9	1H-Indole, 5-methyl-2-phenyl-	001680-51-9	Naphthalene, 1,2,3,4-tetrahydro-6-methyl-
082359-55-5	Tetramethoxybenzo[c]phenanthrene	000571-58-4	Naphthalene, 1,4-dimethyl-
056851-34-4	2-Undecene, 5-methyl-	000582-16-1	Naphthalene, 2,7-dimethyl-
000941-81-1	Azulene, 2,4,6-trimethyl-	000111-84-2	Nonane
000098-82-8	Benzene, (1-methylethyl)-	062185-55-1	Nonane, 4-methyl-5-propyl-
054105-66-7	Cyclohexane, undecyl-	007396-38-5	Phenanthrene, 2,4,5,7-tetramethyl-
000541-02-6	Cyclopentasiloxane, decamethyl-	014905-56-7	Tetradecane, 2,6,10-trimethyl-
001786-12-5	Cyclotetradecane, 1,7,11-trimethyl-	006418-41-3	Tridecane, 3-methyl-
000556-67-2	Cyclotetrasiloxane, octamethyl-	026730-12-1	Tridecane, 4-methyl-
013151-73-0	Decane, 2-cyclohexyl-	017312-80-0	Undecane, 2,4-dimethyl-
006975-98-0	Decane, 2-methyl-	001002-43-3	Undecane, 3-methyl-
017312-55-9	Decane, 3,8-dimethyl-	017301-33-6	Undecane, 4,8-dimethyl-
054833-23-7	Eicosane, 10-methyl-	001633-22-3	[2.2]Paracyclophane

Sample Number: CH05039

Sample Type: Sediment

Location: One of two shredding & separating facilities, 750m from Chendian Guiyu town Road near Fucaodu Bridge, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 10.03.05

Sample Information: PH=7; Sediment from a wastewater discharge channel, at the point of discharge from the facility

Number of compounds isolated: 135

Compounds identified to better than 90%:

CAS#	Name		
000112-41-4	1-Dodecene	000615-54-3	Benzene, 1,2,4-tribromo-
076319-77-2	10-Methoxybenz[a]azulen-1,4-dione	000626-39-1	Benzene, 1,3,5-tribromo-
000112-62-9	9-Octadecenoic acid (z)-, methyl ester	000095-50-1	Benzene, 1,2-dichloro-(SIM)
000488-23-3	Benzene, 1,2,3,4-tetramethyl-	000106-46-7	Benzene, 1,4-dichloro-(SIM)
000526-73-8	Benzene, 1,2,3-trimethyl-	000120-82-1	Benzene, 1,2,4-trichloro-(SIM)
000099-87-6	Benzene, 1-methyl-4-(1-methylethyl)-	000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)
017384-72-4	Cyclopent[a]indene, 3,8-dihydro-	000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)
1,2,3,3,8,8-hexamethyl-		002385-85-5	Mirex
000629-97-0	Docosane	055720-40-6	Naphthalene, 2,3,6-trichloro-
000544-85-4	Dotriacontane	053555-64-9	Naphthalene, 1,3,5,7-tetrachloro-
000630-04-6	Hentriacontane	055720-43-9	Naphthalene, 1,4,6,7-tetrachloro-
000593-49-7	Heptacosane		
000629-78-7	Heptadecane		
000544-76-3	Hexadecane		
000112-39-0	Hexadecanoic acid, methyl ester		
000475-20-7	Junipene		
005989-54-8	l-Limonene		
000090-12-0	Naphthalene, 1-methyl-		
000629-92-5	Nonadecane		
000630-02-4	Octacosane		
000593-45-3	Octadecane		
000112-61-8	Octadecanoic acid, methyl ester		
000629-99-2	Pentacosane		
000085-01-8	Phenanthrene		
000104-40-5	Phenol, 4-nonyl-		
000646-31-1	Tetracosane		
000629-59-4	Tetradecane		
000638-68-6	Triacontane		
000629-50-5	Tridecane		
001120-21-4	Undecane		

Polybrominated diphenyl ethers:

- a) Dibrominated:
4 unspecified dibrominated congeners
- b) Tribrominated:
7 unspecified tribrominated congeners
- c) Tetrabrominated:
005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-)
12 more unspecified tetrabrominated congeners, 3 of them detected in SIM mode
- d) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-)
8 more unspecified pentabrominated congeners, 1 of them detected in SIM mode
- e) Hexabrominated:
068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-)
6 more unspecified hexabrominated congeners, all of them detected in SIM mode

Halogenated compounds:

CAS#	Name
000583-53-9	Benzene, 1,2-dibromo-
000106-37-6	Benzene, 1,4-dibromo-
000000-00-0	Benzene, 1,2,3-tribromo-

Compounds tentatively identified:

CAS#	Name		
000098-83-9	.alpha.-Methylstyrene	000620-14-4	Benzene, 1-ethyl-3-methyl-
000000-00-0	2-(4-Methoxyphenyl)benzo[b]furan	000622-96-8	Benzene, 1-ethyl-4-methyl-
099113-88-9	2-Acetyl-4-(2,5-dichlorophenyl)furan	001135-66-6	Isolongifolene
000098-86-2	Acetophenone	000088-69-7	Phenol, 2-(1-methylethyl)-
000098-82-8	Benzene, (1-methylethyl)-	019814-75-6	Xanthene, 9,9-dimethyl-

Note: Chromatogram contains 5 peaks of unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

Sample Number: CH05040

Sample Type: Ash and soil

Location: Waste dumpsite, edge of Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 10.03.05

Sample Information: Collected from an area where electronic products had been burned on an open fire to recover copper

Number of compounds isolated: 177

Compounds identified to better than 90%:

CAS#	Name		
000000-00-0	(2Z)-Dehydrocholesterol-1-ether	000087-61-6	Benzene, 1,2,3-trichloro-(SIM)
001165-58-8	1,1':2',1'':4'',1'''-Quaterphenyl	000120-82-1	Benzene, 1,2,4-trichloro-(SIM)
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000108-70-3	Benzene, 1,3,5-trichloro-(SIM)
000095-50-1	Benzene, 1,2-dichloro-(SIM)	000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)
000541-73-1	Benzene, 1,3-dichloro-(SIM)	000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)
000106-46-7	Benzene, 1,4-dichloro-(SIM)	000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)
		000608-93-5	Benzene, pentachloro-(SIM)

000118-74-1	Benzene, hexachloro-(SIM)	000629-92-5	Nonadecane
018530-02-4	Campherone	000630-02-4	Octacosane
014982-53-7	Cholestane	000593-45-3	Octadecane
040071-70-3	Cholestane, (5.alpha.,14.beta.)-	000629-99-2	Pentacosane
000629-97-0	Docosane	000629-62-9	Pentadecane
000112-40-3	Dodecane	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
003891-98-3	Dodecane, 2,6,10-trimethyl-	003892-00-0	Pentadecane, 2,6,10-trimethyl-
000112-95-8	Eicosane	000000-00-0	Sclerodione
000629-94-7	Heneicosane	000646-31-1	Tetracosane
000593-49-7	Heptacosane	000629-59-4	Tetradecane
000630-01-3	Hexacosane	000638-68-6	Triacotane
000544-76-3	Hexadecane	000638-67-5	Tricosane
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	000629-50-5	Tridecane
000630-03-5	Nonacosane		

Compounds tentatively identified:

CAS#	Name		
000000-00-0	(17.alpha.h,21.beta.h)-Hopane	003045-76-9	Cyclododecanone, 2-methylene-
000000-00-0	1,7,7-Trimethylbicyclo[4.4.0]decane	054934-92-8	Cyclohexane, 1-(cyclohexylmethyl)-
036728-72-0	28-Nor-17.beta.(h)-Hopane	056196-17-9	Cyclopropaneundecanal, 2-nonyl-
006418-47-9	3-Methylheneicosane	000297-35-8	Cyclotriacontane
007206-21-5	5-Octadecene, (e)-	013151-74-1	Decane, 3-cyclohexyl-
041446-64-4	6-Tetradecene, (e)-	055401-55-3	Docosane, 11-decyl-
002097-85-0	Cholestan-3-one, 4,4-dimethyl-	055515-18-9	Lanost-7-en-3-one
023044-74-8	Cholestane, 4,5-epoxy-	026730-14-3	Tridecane, 7-methyl-
000000-00-0	Cholesteryl methyl ether	017301-23-4	Undecane, 2,6-dimethyl-

Sample Number: CH05041

Sample Type: Ash & partially burned electronic components / plastic fragments

Location: Waste dumpsite, edge of Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 10.03.05

Sample Information: The material appeared to have been burned elsewhere and subsequently dumped here. Separate material to CH05042-43

Number of compounds isolated: 231

Compounds identified to better than 90%:

CAS#	Name		
000098-83-9	.alpha.-Methylstyrene	000092-06-8	M-terphenyl
000514-51-2	.beta.-Patchoulene	000630-03-5	Nonacosane
031307-59-2	1,1'-Biphenyl, (phenylmethyl)-	000629-92-5	Nonadecane
001165-53-3	1,1':2',1"-Terphenyl, 4'-phenyl-	000630-02-4	Octacosane
000612-71-5	1,1':3',1"-Terphenyl, 5'-phenyl-	000593-45-3	Octadecane
004773-83-5	1,2,3-Trimethylindene	000092-94-4	P-terphenyl
018835-33-1	1-Hexacosene	000629-99-2	Pentacosane
002437-56-1	1-Tridecene	000128-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-
000000-00-0	10-Methyltriacontane	002409-55-4	Phenol, 2-(1,1-dimethylethyl)-4-methyl-
000000-00-0	17-Methyltriacontane	000599-64-4	Phenol, 4-(1-methyl-1-phenylethyl)
000095-13-6	1H-Indene	000646-31-1	Tetracosane
000605-39-0	2,2'-Dimethylbiphenyl	000638-67-5	Tricosane
036728-72-0	28-nor-17.beta.(H)-Hopane	102861-35-8	Tricyclo[4.4.0.0(3,9)]dec-4-ene
000612-75-9	3,3'-Dimethylbiphenyl	000629-50-5	Tridecane
000122-03-2	Benzaldehyde, 4-(1-methylethyl)-	001120-21-4	Undecane
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-		
000099-62-7	Benzene, 1,3-bis(1-methylethyl)-		
000100-18-5	Benzene, 1,4-bis(1-methylethyl)-		
003459-94-7	Benzene, 1,4-bis(phenylthio)-		
000100-80-1	Benzene, 1-ethenyl-3-methyl-	002051-60-7	1,1'-Biphenyl, 2-chloro-
000620-14-4	Benzene, 1-ethyl-3-methyl-	002051-62-9	1,1'-Biphenyl, 4-chloro-
000103-65-1	Benzene, propyl-	000000-00-0	2,2',3',4',5',5'-Heptachloro-3-biphenylol
000000-00-0	Cyclohexadecane, 1,2-diethyl-	000087-61-6	Benzene, 1,2,3-trichloro-
000541-02-6	Cyclopentasiloxane, decamethyl-	000120-82-1	Benzene, 1,2,4-trichloro-
000132-65-0	Dibenzothiophene	000108-70-3	Benzene, 1,3,5-trichloro-
000882-33-7	Disulfide, diphenyl	000095-94-3	Benzene, 1,2,4,5-tetrachloro-
000544-85-4	Dotriacontane	000583-53-9	Benzene, 1,2-dibromo-
000112-95-8	Eicosane	000095-50-1	Benzene, 1,2-dichloro-
000530-48-3	Ethylene, 1,1-diphenyl-	014862-52-3	Benzene, 1,3-dibromo-5-chloro-
000593-49-7	Heptacosane	000541-73-1	Benzene, 1,3-dichloro-
000629-78-7	Heptadecane	000106-46-7	Benzene, 1,4-dichloro-
000822-28-6	Hexadecane, 1-(ethenyl-oxo)-	000694-80-4	Benzene, 1-bromo-2-chloro-
		019752-55-7	Benzene, 1-bromo-3,5-dichloro-

Halogenated compounds:

000108-37-2	Benzene, 1-bromo-3-chloro-	000120-12-7	Anthracene
000106-39-8	Benzene, 1-bromo-4-chloro-	000613-12-7	Anthracene, 2-methyl-
000000-00-0	Benzene, 1-chloro-2,4-dibromo-	000056-55-3	Benzo[a]anthracene
018282-59-2	Benzene, 4-bromo-1,2-dichloro-	000205-99-2	Benzo[b]fluoranthene
000608-93-5	Benzene, pentachloro-	000207-08-9	Benzo[k]fluoranthene
000118-74-1	Benzene, hexachloro-(SIM)	000496-16-2	Benzofuran, 2,3-dihydro-
000107-80-2	Butane, 1,3-dibromo-	000218-01-9	Chrysene
000000-00-0	Diphenyl ether, tetrabromo-	000206-44-0	Fluoranthene
000095-56-7	Phenol, 2-bromo-	000091-20-3	Naphthalene
000000-00-0	Styrene, 3,4-dibromo-	004175-54-6	Naphthalene, 1,2,3,4-tetrahydro-1,4-
000000-00-0	Tetrachlorodibenzo-p-dioxin	dimethyl-	
000000-00-0	Tribromotoluene – 3 isomers	000571-61-9	Naphthalene, 1,5-dimethyl-
		000085-01-8	Phenanthrene
		000832-69-9	Phenanthrene, 1-methyl-
		000776-35-2	Phenanthrene, 9,10-dihydro-
PAHs and their derivatives:			
000000-00-0	9H-Fluoren-3-ol, 9,9-dimethyl-		

Compounds tentatively identified:

CAS#	Name		
000643-93-6	1,1'-Biphenyl, 3-methyl-	000214-17-5	Benzo[b]chrysene
002350-89-2	1,1'-Biphenyl, 4-ethenyl-	000095-15-8	Benzo[b]thiophene
000644-08-6	1,1'-Biphenyl, 4-methyl-	000271-89-6	Benzofuran
000084-15-1	1,1':2',1"-Terphenyl	054965-18-3	Benzofuran, 2,3-dihydro-2-methyl-4-
033733-07-2	1,1':3',1"-Terphenyl, 5'-methyl-	phenyl-	
000000-00-0	1,2-Benzopyren	004265-25-2	Benzofuran, 2-methyl-
000000-00-0	1,2-Dihydro-7-methylbenz[a]anthracene	023145-07-5	Benzofuran, 5-bromo-
013228-36-9	1H-Indole, 5-methyl-2-phenyl-	000110-56-5	Butane, 1,4-dichloro-
017635-44-4	1H-Pyrazole, 3,4,5-tribromo-	055521-27-2	Cyclohexane, 1-(1-tetradecylpentad
000483-77-2	1s,cis-Calamenene	001082-12-8	Dibenzo[a,c]cyclooctene, 5,6,7,8-
000612-78-2	2,2'-Binaphthalene	tetamethyl-	
090909-59-4	2,4-Dichloro-6h-dibenzo[b,d]pyran-	000132-64-9	Dibenzofuran
050451-90-6	2-Chloro-3-bromo-benzo(b)thiophene	000000-00-0	Dibenzofuran, 4,6-dibromo-
000135-19-3	2-Naphthalenol	000139-66-2	Diphenyl sulfide
000000-00-0	4-Chlorophenyl phenyl sulfide	000000-00-0	Diphenylmethylene-cyclopropane
000208-96-8	Acenaphthylene	000598-16-3	Ethene, tribromo-
023707-65-5	Anthracene, 9-(2-propenyl)-	000955-83-9	Furan, 2,5-diphenyl-
000602-55-1	Anthracene, 9-phenyl-	000000-00-0	Methylnaphthalene
000622-25-3	Benzene, (2-chloroethenyl)-	002385-85-5	Mirex
000768-56-9	Benzene, 3-butenyl-	000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-
053911-82-3	Benzene, [(cyclopropylmethyl)thio]	002765-18-6	Naphthalene, 1-propyl-
000108-86-1	Benzene, bromo-	000091-57-6	Naphthalene, 2-methyl-
025550-13-4	Benzene, diethylmethyl-	000612-94-2	Naphthalene, 2-phenyl-
000104-53-0	Benzenepropanal	001576-67-6	Phenanthrene, 3,6-dimethyl-
		001633-22-3	[2.2]Paracyclophane

Note: Chromatogram contains 12 peaks of unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

Sample Number: CH05042

Sample Type: Ash & partially burned electronic components / plastic fragments

Location: Waste dumpsite, edge of Longgang Village, Guiyu town, Chao Yang, Shantou City, Guangdong Province, China

Sampling Date: 10.03.05

Sample Information: The material appeared to have been burned elsewhere and subsequently dumped here. Separate material to CH05041, 43

Number of compounds isolated: 130

Compounds identified to better than 90%:

CAS#	Name		
061819-81-6	2,3',5'-Trimethyldiphenylmethane	000095-50-1	Benzene, 1,2-dichloro-(SIM)
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000541-73-1	Benzene, 1,3-dichloro-(SIM)
004957-14-6	Benzene, 1,1'-methylenebis[4-methyl-	000106-46-7	Benzene, 1,4-dichloro-(SIM)
013540-56-2	Benzene, 1,2-dimethyl-4-	000087-61-6	Benzene, 1,2,3-trichloro-(SIM)
(phenylmethyl)methyl]-		000120-82-1	Benzene, 1,2,4-trichloro-(SIM)
000102-25-0	Benzene, 1,3,5-triethyl-	000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)
000098-51-1	Benzene, 1-(1,1-dimethylethyl)-4-	000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)
methyl-		000608-93-5	Benzene, pentachloro-(SIM)
021895-17-0	Benzene, 1-methyl-2-[(4-	000118-74-1	Benzene, hexachloro-(SIM)
methylphenyl)methyl]-		000000-00-0	Benzenebutanal, ,gamma.,,gamma.,4-
021895-16-9	Benzene, 1-methyl-3-[(4-	trimethyl-	
methylphenyl)methyl]-		000629-97-0	Docosane
		000112-95-8	Eicosane

000630-01-3 Hexacosane
 000630-03-5 Nonacosane
 000630-02-4 Octacosane
 000092-94-4 p-Terphenyl
 000629-99-2 Pentacosane
 000085-01-8 Phenanthrene
 000000-00-0 Phenyl m-isopropylphenyl ether
 000000-00-0 Sclerodione
 004181-95-7 Tetracontane
 000646-31-1 Tetracosane
 000638-68-6 Triacontane
 000638-67-5 Tricosane

detected in SIM mode

b) Pentabrominated:
 060348-60-9 BDE-99 (Diphenyl ether,
 2,2',4,4',5-pentabromo-) (SIM)
 4 more unspecified pentabrominated congeners, all of
 them detected in SIM mode

c) Hexabrominated:
 068631-49-2 BDE-153 (Diphenyl ether,
 2,2',4,4',5,5'-hexabromo-)
 2 more unspecified hexabrominated congeners, all of them
 detected in SIM mode

d) Heptabrominated:
 1 unspecified heptabrominated congener

e) Octabrominated:
 2 unspecified octabrominated congeners

Polybrominated diphenyl ethers:

a) Tetrabrominated:
 005436-43-1 BDE-47 (Diphenyl ether,
 2,2',4,4'-tetrabromo-) (SIM)
 2 more unspecified tetrabrominated congeners, 1 of them

Compounds tentatively identified:

CAS#	Name		
000084-15-1	1,1':2',1''-Terphenyl	006565-57-7	4-Sec-butyl-ethylbenzene
000000-00-0	1,3-Dimethyl-4-azaphenanthrene	000000-00-0	7-Methyl-4-azafluorene
134329-46-7	1,5,6,7-Tetramethylbicyclo[3.2.0]	022566-43-4	Anthracene, 9,10-dihydro-9,10-
000934-32-7	1H-Benzimidazol-2-amine	dimethyl-	
004757-69-1	1H-Indole, 2-methyl-3-phenyl-	001075-38-3	Benzene, 1-(1,1-dimethylethyl)-3-
000000-00-0	2-Phosphabicyclo[3.1.0]hex-3-ene	methyl-	
109086-76-2	2H-1,3-oxazine, tetrahydro-2-(4-	004920-99-4	Benzene, 1-ethyl-3-(1-methylethyl)-
	methyl)-	025155-15-1	Benzene, methyl(1-methylethyl)-
010447-20-8	2H-quinolizin-1-ol, octahydro-	000092-52-4	Biphenyl
000000-00-0	4-Phenylpropiolactam	062238-33-9	Cyclohexane, 1-ethyl-2-propyl-
		000612-94-2	Naphthalene, 2-phenyl-

Note: Chromatogram contains 1 peak of unidentified compound, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

INDIA

Sample Number: IT05001
Sample Type: Ground electronic components
Location: Backstreet workshop, Mandoli Industrial Area, East Delhi, India
Sampling Date: 14.03.05
Sample Information: Components removed from circuit boards are ground and sieved to obtain this material, from which metals are recovered using acid extraction
Number of compounds isolated: 25

Compounds identified to better than 90%:

CAS#	Name		
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000119-33-5	Phenol, 4-methyl-2-nitro-
000620-83-7	Benzene, 1-methyl-4-(phenylmethyl)-	000629-59-4	Tetradecane
		000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name		
034879-87-3	1,6-Dimethyl-indazole	015964-80-4	Benzeneacetic acid, 4-hydroxy-3-
000000-00-0	2-(3'-Methylbut-3-en-1'-ynyl)benzene	methyl-	
000097-51-8	Benzaldehyde, 2-hydroxy-5-nitro-	000629-78-7	Heptadecane

Sample Number: IT05002
Sample Type: Dust and water slurry
Location: Backstreet workshop, Mandoli Industrial Area, East Delhi, India
As IT05001
Sampling Date: 14.03.05
Sample Information: PH=7; Slurry produced from the dust of separate batch of ground components removed from printed circuit boards
Number of compounds isolated: 20

Compounds identified to better than 90%:

CAS#	Name		
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)
000095-50-1	Benzene, 1,2-dichloro-(SIM)	000608-93-5	Benzene, pentachloro-(SIM)
000541-73-1	Benzene, 1,3-dichloro-(SIM)	000118-74-1	Benzene, hexachloro-(SIM)
000106-46-7	Benzene, 1,4-dichloro-(SIM)	000629-78-7	Heptadecane
000087-61-6	Benzene, 1,2,3-trichloro-(SIM)	000544-76-3	Hexadecane
000120-82-1	Benzene, 1,2,4-trichloro-(SIM)	000629-92-5	Nonadecane
000108-70-3	Benzene, 1,3,5-trichloro-(SIM)	000593-45-3	Octadecane
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)	000629-59-4	Tetradecane

Compounds tentatively identified:

None

Sample Number: IT05003
Sample Type: Acidic process water
Location: Backstreet workshop, Mandoli Industrial Area, East Delhi, India
As IT05001
Sampling Date: 14.03.05
Sample Information: pH=0; Acidic process water used to dissolve metals from the dust slurry obtained by grinding components (IT05002)
Number of compounds isolated: 29

Compounds identified to better than 90%:

CAS#	Name		
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester	000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
		000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl

ester		methyl-	
091420-23-4	3-Pyridinol, 5-chloro-2-methyl-	000106-48-9	Phenol, 4-chloro-(SIM)
000106-46-7	Benzene, 1,4-dichloro- (SIM)	000089-64-5	Phenol, 4-chloro-2-nitro-
000087-61-6	Benzene, 1,2,3-trichloro-	000119-33-5	Phenol, 4-methyl-2-nitro-
000111-06-8	Hexadecanoic acid, butyl ester	000115-86-6	Phosphoric acid, triphenyl ester
000630-06-8	Hexatriacontane	000000-00-0	Stigmasterol, 22,23-dihydro-
000088-75-5	Phenol, 2-nitro-	010544-50-0	Sulfur, mol. (S8)
000128-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-4-		

Compounds tentatively identified:

CAS#	Name	000593-49-7	Heptacosane
000629-96-9	1-Eicosanol	000493-02-7	Naphthalene, decahydro-, trans-
000078-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl-	000123-95-5	Octadecanoic acid, butyl ester
000121-92-6	Benzoic acid, 3-nitro-		

Sample Number: IT05004

Sample Type: Acid processing waste water

Location: Backstreet workshop, Mandoli Industrial Area, East Delhi, India
As IT05001

Sampling Date: 14.03.05

Sample Information: pH=5; Wastewater from acidic metal extraction process. Disposed of by simply pouring onto the ground in the vicinity of the workshop

Number of compounds isolated: 12

Compounds identified to better than 90%:

CAS#	Name	000108-95-2	Phenol(SIM)
000084-69-5	1,2-Benzenedicarboxylic acid, diisobutyl ester	000095-48-7	Phenol, 2-methyl-(SIM)
		000108-39-4	Phenol, 3-methyl-(SIM)
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	000088-75-5	Phenol, 2-nitro-(SIM)
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	000106-48-9	Phenol, 4-chloro-
		000115-86-6	Phosphoric acid, triphenyl ester

Compounds tentatively identified:

CAS#	Name	000000-00-0	Monophenyl ditolyl phosphate
000062-23-7	Benzoic acid, 4-nitro-	000000-00-0	Monotolyl diphenyl phosphate

Sample Number: IT05005

Sample Type: Burnt circuit board components & ash

Location: Backstreet workshop, Mandoli Industrial Area, East Delhi, India
As IT05001

Sampling Date: 14.03.05

Sample Information: Recovered following acid leaching and burning of circuit boards. Subsequently leached using strong acids to recover additional metals

Number of compounds isolated: 82

Compounds identified to better than 90%:

CAS#	Name	000638-67-5	Tricosane
001165-53-3	1,1':2',1''-Terphenyl, 4'-phenyl-		
000087-61-6	Benzene, 1,2,3-trichloro-(SIM)		Polybrominated diphenyl ethers:
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)		
000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)	a) Tetrabrominated:	
000608-93-5	Benzene, pentachloro-(SIM)	005436-43-1	BDE-47 (Diphenyl ether,
000118-74-1	Benzene, hexachloro-(SIM)		2,2'4,4'-tetrabromo-)
000541-02-6	Cyclopentasiloxane, decamethyl-		6 more unspecified tetrabrominated congeners, 3 of them
000556-67-2	Cyclotetrasiloxane, octamethyl-		detected in SIM mode
000629-97-0	Docosane		
000084-15-1	o-Terphenyl	b) Pentabrominated:	
000593-45-3	Octadecane	060348-60-9	BDE-99 (Diphenyl ether,
001087-02-1	p-Dicyclohexylbenzene		2,2'4,4',5-pentabromo-)
000085-01-8	Phenanthrene		8 more unspecified pentabrominated congeners, 5 of them
000483-65-8	Phenanthrene, 1-methyl-7-(1-methylethyl)-		detected in SIM mode

c) Hexabrominated: 2,2',4,4',5,5'-hexabromo-
 068631-49-2 BDE-153 (Diphenyl ether,

Compounds tentatively identified:

CAS#	Name		methyl-2-butyl)-, methyl ester
001519-36-4	9,10-Anthracenedione, 1,4-dimethyl-	000540-97-6	Cyclohexasiloxane, dodecamethyl-
000091-48-5	Benzeneacetic acid, .alpha.-(phenylmethyl)-	000629-97-0	Docosane
104550-39-2	Benzoic acid, 3,5-dihydroxy-4-(3-	001002-43-3	Undecane, 3-methyl-

Sample Number: IT05006

Sample Type: Ash

Location: Backstreet workshop, Mandoli Industrial Area, East Delhi, India
 As IT05001

Sampling Date: 14.03.05

Sample Information: Separated from burnt circuit board components (IT05005).
 Ash simply left on ground at the open burning site

Number of compounds isolated: 79

Compounds identified to better than 90%:

CAS#	Name		<i>PAHs and derivatives:</i>
000612-71-5	1,1':3',1"-Terphenyl, 5'-phenyl-	000120-12-7	Anthracene
000092-94-4	1,1':4',1"-Terphenyl	000206-44-0	Fluoranthene
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000091-20-3	Naphthalene
000095-50-1	Benzene, 1,2-dichloro-(SIM)	000091-57-6	Naphthalene, 2-methyl-
000541-73-1	Benzene, 1,3-dichloro-(SIM)	000085-01-8	Phenanthrene
000106-46-7	Benzene, 1,4-dichloro-(SIM)	000129-00-0	Pyrene
000087-61-6	Benzene, 1,2,3-trichloro-(SIM)		
000120-82-1	Benzene, 1,2,4-trichloro-(SIM)		
000108-70-3	Benzene, 1,3,5-trichloro-(SIM)		
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)		
000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)		
000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)		
000608-93-5	Benzene, pentachloro-(SIM)		
000118-74-1	Benzene, hexachloro-(SIM)		
000615-54-3	Benzene, 1,2,4-tribromo-		
000092-52-4	Biphenyl		
000541-02-6	Cyclopentasiloxane, decamethyl-		
000629-97-0	Docosane		
000112-95-8	Eicosane		
000629-78-7	Heptadecane		
000544-76-3	Hexadecane		
000630-03-5	Nonacosane		
000593-45-3	Octadecane		
000629-62-9	Pentadecane		
000100-42-5	Styrene		
000629-50-5	Tridecane		

Polybrominated diphenyl ethers:

a) Tetrabrominated:
 005436-43-1 BDE-47 (Diphenyl ether,
 2,2',4,4'-tetrabromo-)(SIM)
 7 more unspecified tetrabrominated congeners detected in SIM mode

b) Pentabrominated:
 060348-60-9 BDE-99 (Diphenyl ether,
 2,2',4,4',5-pentabromo-)(SIM)
 10 more unspecified pentabrominated congeners detected in SIM mode

c) Hexabrominated:
 068631-49-2 BDE-153 (Diphenyl ether,
 2,2',4,4',5,5'-hexabromo-)(SIM)
 3 more unspecified hexabrominated congeners detected in SIM mode

Compounds tentatively identified:

CAS#	Name		
000644-08-6	1,1'-Biphenyl, 4-methyl-	006232-48-0	Acephenanthrylene, 4,5-dihydro-
000000-00-0	1-Propene, 3-(2-cyclopentenyl)-2-	000588-59-0	Benzene, 1,1'-(1,2-ethenediyl)bis-
Methyl-		074685-42-0	Benzene, 1-methyl-2-(2-phenylethenyl)-
020576-56-1	2,6-Dodecadien-1-ol, 3,7,11-trimethyl-	000556-67-2	Cyclotetrasiloxane, octamethyl-
		001591-30-6	[1,1'-Biphenyl]-4,4'-dicarbonitrile

Note: Chromatogram contains 2 peaks of unidentified compounds, which showed GC/MS fragmentation characteristic for polyhalogenated organic compounds.

Sample Number: IT05007

Sample Type: Floor dust, 63µm fraction

Location: Backstreet workshop, Shashtri Park, East Delhi, India

Sampling Date: 14.03.05

Sample Information: Collected from a workshop where circuit board and individual components are manually separated

Number of compounds isolated:

219

Compounds identified to better than 90%:

CAS#	Name			
000941-81-1	4,6,8-Trimethylazulene			7 more unspecified trichlorinated congeners, 4 of them detected in SIM mode
000941-81-1	Azulene, 2,4,6-trimethyl-			
000056-55-3	Benz[a]anthracene			b) Tetrachlorinated:
000264-09-5	Benzocycloheptatriene	035693-99-3	PCB-52	(1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
000541-02-6	Cyclopentasiloxane, decamethyl-			
000556-67-2	Cyclotetrasiloxane, octamethyl-	032598-13-3	PCB-77	(1,1'-Biphenyl, 3,3',4,4'-tetrachloro-)(SIM)
000629-97-0	Docosane			10 more unspecified tetrachlorinated congeners, 6 of them detected in SIM mode
000544-85-4	Dotriacontane			
000112-95-8	Eicosane			
000206-44-0	Fluoranthene			
000629-94-7	Heneicosane			c) Pentachlorinated:
000630-04-6	Hentriacontane	037680-73-2	PCB-101	(1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
000593-49-7	Heptacosane			
000629-78-7	Heptadecane	032598-14-4	PCB-105	(1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)
007194-84-5	Heptatriacontane			
000630-01-3	Hexacosane	031508-00-6	PCB-118	(1,1'-Biphenyl, 2,3',4,4',5-pentachloro-)(SIM)
000544-76-3	Hexadecane			
000630-06-8	Hexatriacontane	065510-44-3	PCB-123	(1,1'-Biphenyl, 2',3,4,4',5-pentachloro-)(SIM)
000575-41-7	Naphthalene, 1,3-dimethyl-			4 more unspecified pentachlorinated congeners, 2 of them detected in SIM mode
002131-42-2	Naphthalene, 1,4,6-trimethyl-			
002245-38-7	Naphthalene, 1,6,7-trimethyl-			
000575-43-9	Naphthalene, 1,6-dimethyl-			
000090-12-0	Naphthalene, 1-methyl-			d) Hexachlorinated:
000829-26-5	Naphthalene, 2,3,6-trimethyl-	035065-28-2	PCB-138	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)
000582-16-1	Naphthalene, 2,7-dimethyl-			
080655-44-3	Naphthalene, decahydro-4,4,8,9,10-pentamethyl-	035065-27-1	PCB-153	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)
000630-03-5	Nonacosane	038380-08-4	PCB-156	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)
000629-92-5	Nonadecane			
000630-02-4	Octacosane	052663-72-6	PCB-167	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)
000593-45-3	Octadecane			4 more unspecified hexachlorinated congeners, all of them detected in SIM mode
007194-85-6	Octatriacontane			
000629-99-2	Pentacosane			
000629-62-9	Pentadecane			
000630-07-9	Pentatriacontane			e) Heptachlorinated:
000085-01-8	Phenanthrene	035065-30-6	PCB-170	(1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)(SIM)
000129-00-0	Pyrene			
000646-31-1	Tetracosane	035065-29-3	PCB-180	(1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)(SIM)
000629-59-4	Tetradecane			
014167-59-0	Tetraatriacontane			
000638-68-6	Triaccontane			
000638-67-5	Tricosane			
000629-50-5	Tridecane			
000630-05-7	Tritriacontane			

Polychlorinated biphenyls:

a) Trichlorinated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)

Polybrominated diphenyl ethers:

a) Tetrabrominated:
005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-)(SIM)

b) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-)(SIM)

Compounds tentatively identified:

CAS#	Name		
128113-45-1	2-(1-Propenyl)naphthanol	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
031032-94-7	2-Ethyl-3-methylnaphthalene	003674-66-6	Phenanthrene, 2,5-dimethyl-
000612-75-9	3,3'-Dimethylbiphenyl	002531-84-2	Phenanthrene, 2-methyl-
055401-55-3	Docosane, 11-decyl-	015679-09-1	Thiazole, 2-ethyl-
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	089507-22-2	[8]Paracyclophane-2,4-diene
001127-76-0	Naphthalene, 1-ethyl-		

Sample Number: IT05008

Sample Type: Floor dust, 63µm fraction

Location: Backstreet workshop, Shashtri Park, East Delhi, India. As IT05007

Sampling Date: 14.03.05

Sample Information: Collected from an open air rooftop workshop where circuit board are heated over kerosene burners to melt and recover solder

Number of compounds isolated: 138

Compounds identified to better than 90%:

CAS#	Name			
001087-02-1	Benzene, p-dicyclohexyl-	035693-99-3	PCB-52	(1,1'-Biphenyl, 2,2',5,5'-tetrachloro-) (SIM)
000541-02-6	Cyclopentasiloxane, decamethyl-	032598-13-3	PCB-77	(1,1'-Biphenyl, 3,3',4,4'-tetrachloro-) (SIM)
000556-67-2	Cyclotetrasiloxane, octamethyl-			
000629-97-0	Docosane	10 more unspecified tetrachlorinated congeners, 9 of them detected in SIM mode		
000544-85-4	Dotriacontane			
000112-95-8	Eicosane			
000206-44-0	Fluoranthene	d) Pentachlorinated:		
000630-04-6	Hentriacontane	037680-73-2	PCB-101	(1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-) (SIM)
000593-49-7	Heptacosane	032598-14-4	PCB-105	(1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-) (SIM)
007194-84-5	Heptatriacontane	031508-00-6	PCB-118	(1,1'-Biphenyl, 2,3',4,4',5-pentachloro-) (SIM)
000630-01-3	Hexacosane	065510-44-3	PCB-123	(1,1'-Biphenyl, 2',3,4,4',5-pentachloro-) (SIM)
000630-06-8	Hexatriacontane	2 more unspecified pentachlorinated congeners		
000475-20-7	Junipene			
000571-61-9	Naphthalene, 1,5-dimethyl-			
000582-16-1	Naphthalene, 2,7-dimethyl-			
000630-03-5	Nonacosane			
000629-92-5	Nonadecane			
000630-02-4	Octacosane	e) Hexachlorinated:		
000593-45-3	Octadecane	035065-28-2	PCB-138	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
000629-99-2	Pentacosane	035065-27-1	PCB-153	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
000085-01-8	Phenanthrene	038380-08-4	PCB-156	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
000129-00-0	Pyrene	052663-72-6	PCB-167	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
000646-31-1	Tetracosane	4 more unspecified hexachlorinated congeners, 3 of them detected in SIM mode		
014167-59-0	Tetraatriacontane			
000638-68-6	Triacontane			
000638-67-5	Tricosane			
000630-05-7	Tritriacontane			

Polychlorinated naphthalenes:

a) Trichlorinated
1 unspecified trichlorinated congener

b) Tetrachlorinated
5 unspecified tetrachlorinated congeners

c) Pentachlorinated
1 unspecified pentachlorinated congener

Polychlorinated biphenyls:

a) Dichlorinated:
1 unspecified dichlorinated congener detected in SIM mode

b) Trichlorinated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-) (SIM)
6 unspecified trichlorinated congeners, 4 of them detected in SIM mode

c) Tetrachlorinated:

f) Heptachlorinated:

035065-30-6 PCB-170 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-) (SIM)
035065-29-3 PCB-180 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-) (SIM)

Polybrominated diphenyl ethers:

a) Tetrabrominated:
005436-43-1 BDE-47 (Diphenyl ether, 2,2',4,4'-tetrabromo-)
1 more unspecified tetrabrominated congener detected in SIM mode

b) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-)
1 more unspecified pentabrominated congener detected in SIM mode

c) Hexabrominated:
068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-) (SIM)

Compounds tentatively identified:

CAS#	Name
061142-60-7	1H-Indene, 2,3,3a,4,7,7a-hexahydro-
000000-00-0	5-Methoxycamalexin
000264-09-5	Benzocycloheptatriene
001921-70-6	Pentadecane, 2,6,10,14-tetramethyl
000000-00-0	Spiro[4.5]decan-7-one, 1,8-dimethyl-
000111-01-3	Squalane

Sample Number: IT05011

Sample Type: Floor dust, 63µm fraction

Location: Backstreet workshop, Zarfarabad, East Delhi, India

Sampling Date: 15.03.05

Sample Information: Collected from a workshop where circuit board and individual components are manually separated

Number of compounds isolated: 149

Compounds identified to better than 90%:

CAS#	Name	
000475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-	a) Dichlorinated: 3 unspecified dichlorinated congeners, 2 of them detected in SIM mode
000605-39-0	2,2'-Dimethylbiphenyl	
000095-50-1	Benzene, 1,2-dichloro-(SIM)	b) Trichlorinated:
000106-46-7	Benzene, 1,4-dichloro-(SIM)	007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)
000087-61-6	Benzene, 1,2,3-trichloro-(SIM)	8 more unspecified trichlorinated congeners, 1 of them detected in SIM mode
000120-82-1	Benzene, 1,2,4-trichloro-(SIM)	
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)	
000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)	
000608-93-5	Benzene, pentachloro-(SIM)	b) Tetrachlorinated:
000095-94-3	Benzene, 1,2,4,5-tetrachloro-	035693-99-3 PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)(SIM)
000713-36-0	Benzene, 1-methyl-2-(phenylmethyl)-	032598-13-3 PCB-77 (1,1'-Biphenyl, 3,3',4,4'-tetrachloro-)(SIM)
000541-02-6	Cyclopentasiloxane, decamethyl-	11 more unspecified tetrachlorinated congeners
000556-67-2	Cyclotetrasiloxane, octamethyl-	
000629-97-0	Docosane	
000544-85-4	Dotriacontane	
000112-95-8	Eicosane	c) Pentachlorinated:
000206-44-0	Fluoranthene	032598-14-4 PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)(SIM)
000630-04-6	Henatriacontane	037680-73-2 PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
000593-49-7	Heptacosane	065510-44-3 PCB-123 (1,1'-Biphenyl, 2',3,4,4',5-pentachloro-)
007194-84-5	Heptatriacontane	3 more unspecified pentachlorinated congeners
000630-01-3	Hexacosane	
000630-06-8	Hexatriacontane	
000630-03-5	Nonacosane	
000630-02-4	Octacosane	
000593-45-3	Octadecane	d) Hexachlorinated:
000629-99-2	Pentacosane	035065-28-2 PCB-138 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
000630-07-9	Pentatriacontane	035065-27-1 PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
000085-01-8	Phenanthrene	038380-08-4 PCB-156 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)
000129-00-0	Pyrene	052663-72-6 PCB-167 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)
000646-31-1	Tetracosane	2 more unspecified hexachlorinated congeners, 1 of them detected in SIM mode
014167-59-0	Tetatriacontane	
000638-68-6	Triacotane	
000630-05-7	Trtriacontane	

Polychlorinated biphenyls:

Compounds tentatively identified:

001137-12-8	1,2,4-Methanoazulene, decahydro-1,5,58a-tetramethyl-	052251-71-5 Anthracene, 2-ethyl-
000000-00-0	4B,8-dimethyl-2-isopropylphenanthrene	000000-00-0 Anthracene, 9-butyl-1,2,3,4-tetrahydro-
004567-37-7	6-Methylnaphtho[2,1-b]thiophene	000111-01-3 Tetracosane, 2,6,10,15,19,23-hexamethyl-
004567-34-4	9-Methylnaphtho[2,1-b]thiophene	000000-00-0 Triterpane

Sample Number: IT05012

Sample Type: Plastic fragments

Location: Backstreet workshop, Zarfarabad, East Delhi, India

Sampling Date: 15.03.05

Sample Information: Fragmented plastic from electronics goods, mainly monitors and keyboards. Material recycled by grinding then heated extrusion

Number of compounds isolated: 64

Compounds identified to better than 90%:

000112-88-9	1-Octadecene	000102-96-5 Benzene, (2-nitroethenyl)-
000719-22-2	2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethylethyl)-	000293-96-9 Cyclodecane
000106-46-7	Benzene, 1,4-dichloro- (SIM)	002156-97-0 Dodecyl acrylate
000087-61-6	Benzene, 1,2,3-trichloro- (SIM)	002440-22-4 Drometrizole
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)	000593-49-7 Heptacosane
000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)	000630-01-3 Hexacosane
		000057-10-3 Hexadecanoic acid
		000000-00-0 Octadec-9-enoic acid

000057-11-4	Octadecanoic acid
000629-99-2	Pentacosane
027193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)
000118-79-6	Phenol, 2,4,6-tribromo-
000000-00-0	Phenol, 2,4-di-t-butyl-6-nitro-
000128-39-2	Phenol, 2,6-bis(1,1-dimethylethyl)
000128-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-
000098-54-4	Phenol, 4-(1,1-dimethylethyl)-
000599-64-4	Phenol, 4-(1-methyl-1-phenylethyl)-
025154-52-3	Phenol, nonyl-, mix of isomers
000115-86-6	Phosphoric acid, triphenyl-
000000-00-0	Monotolyl diphenyl phosphate
000000-00-0	Podocarpa-8,11,13-trien-15-oic acid, 13-isopropyl-
000646-31-1	Tetracosane

Polybrominated diphenyl ethers:

- a) Pentabrominated:
060348-60-9 BDE-99 (Diphenyl ether, 2,2',4,4',5-pentabromo-) (SIM)
- b) Hexabrominated:
068631-49-2 BDE-153 (Diphenyl ether, 2,2',4,4',5,5'-hexabromo-)
4 more unspecified hexabrominated congeners, all of them detected in SIM mode
- c) Heptabrominated:
1 unspecified heptabrominated congener
- d) Octabrominated:
3 unspecified octabrominated congeners

Compounds tentatively identified:

CAS#	Name	055282-31-0	Docosane, 10-ethyl-10-propyl-
000613-73-0	1,2-Benzenediacetonitrile	000086-34-0	Phensuximide
000000-00-0	2,4-Diphenyl-4-methyl-1(e)-pentene	001633-22-3	[2.2]Paracyclophane
005661-55-2	2-Azetidinone, 4-phenyl-		

Sample Number: IT05013

Sample Type: Ash

Location: Outside storage area, Ibrahimpur, East Delhi, India

Sampling Date: 15.03.05

Sample Information: Ash from open burning of electronic waste to remove plastics and recover metals

Number of compounds isolated: 27

Compounds identified to better than 90%:

CAS#	Name	c) Pentachlorinated:	
000091-20-3	Naphthalene	037680-73-2 PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)(SIM)	
Chlorinated benzenes:			
CAS#	Name	032598-14-4 PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)(SIM)	
000095-50-1	Benzene, 1,2-dichloro-(SIM)	031508-00-6 PCB-118 (1,1'-Biphenyl, 2,3',4,4',5-pentachloro-)(SIM)	
000541-73-1	Benzene, 1,3-dichloro-(SIM)	1 more unspecified pentachlorinated congener detected in SIM mode	
000106-46-7	Benzene, 1,4-dichloro-(SIM)		
000087-61-6	Benzene, 1,2,3-trichloro-(SIM)	d) Hexachlorinated:	
000120-82-1	Benzene, 1,2,4-trichloro-(SIM)	035065-28-2 PCB-138 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)	
000108-70-3	Benzene, 1,3,5-trichloro-(SIM)	035065-27-1 PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)	
000634-66-2	Benzene, 1,2,3,4-tetrachloro-(SIM)	038380-08-4 PCB-156 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)	
000634-90-2	Benzene, 1,2,3,5-tetrachloro-(SIM)	052663-72-6 PCB-167 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)	
000095-94-3	Benzene, 1,2,4,5-tetrachloro-(SIM)		
000608-93-5	Benzene, pentachloro-(SIM)	e) Heptachlorinated:	
000118-74-1	Benzene, hexachloro-(SIM)	035065-30-6 PCB-170 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)(SIM)	
Polychlorinated biphenyls:			
CAS#	Name	035065-29-3 PCB-180 (1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)(SIM)	
b) Tetrachlorinated:			
035693-99-3	PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)(SIM)		
4 more unspecified tetrachlorinated congeners, all of them detected in SIM mode			

Compounds tentatively identified:

None

Sample Number: IT05014

Sample Type: Ground plastic

Location: Backstreet workshop, Gaziabad, East Delhi, India

Sampling Date: 15.03.05

Sample Information: Obtained by grinding fragmented plastic from electronics goods, mainly monitors and keyboards. Material reused by heated extrusion

Number of compounds isolated: 60

Compounds identified to better than 90%:

CAS#	Name		
000112-41-4	1-Dodecene	000475-20-7	Junipene
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	002245-38-7	Naphthalene, 1,6,7-trimethyl-
000095-63-6	Benzene, 1,2,4-trimethyl-	000630-03-5	Nonacosane
000108-67-8	Benzene, 1,3,5-trimethyl-	000629-92-5	Nonadecane
001074-17-5	Benzene, 1-methyl-2-propyl-	000630-02-4	Octacosane
000100-42-5	Benzene, ethenyl-	000593-45-3	Octadecane
000103-65-1	Benzene, propyl-	000629-99-2	Pentacosane
003018-21-1	Cyclobutane, 1,2-diphenyl-	000629-62-9	Pentadecane
000541-02-6	Cyclopentasiloxane, decamethyl-	000128-37-0	Phenol, 2,6-bis(1,1-methylethyl)-4-methyl-
006975-98-0	Decane, 2-methyl-	000646-31-1	Tetracosane
000101-84-8	Diphenyl ether	000629-59-4	Tetradecane
000629-97-0	Docosane	000638-68-6	Triacotane
000112-40-3	Dodecane	000638-67-5	Tricosane
000112-95-8	Eicosane	000629-50-5	Tridecane
000593-49-7	Heptacosane	001120-21-4	Undecane
000629-78-7	Heptadecane	001633-22-3	[2.2]Paracyclophane
000544-76-3	Hexadecane		

Compounds tentatively identified:

CAS#	Name		
000581-42-0	Naphthalene, 2,6-dimethyl-	000581-42-0	Naphthalene, 2,6-dimethyl-
005961-33-1	Azetidine, 3-methyl-3-phenyl-	000091-57-6	Naphthalene, 2-methyl-
003018-20-0	Naphthalene, 1,2,3,4-tetrahydro-	000776-35-2	Phenanthrene, 9,10-dihydro-
000575-43-9	Naphthalene, 1,6-dimethyl-	001560-96-9	Tridecane, 2-methyl-

Sample Number: IT05015

Sample Type: Floor dust, 63µm fraction

Location: Backstreet workshop, Gaziabad, East Delhi, India

Sampling Date: 15.03.05

Sample Information: Dust collected in the vicinity of plastic grinding equipment

Number of compounds isolated: 108

Compounds identified to better than 90%:

CAS#	Name		
000103-30-0	(E)-Stilbene	000829-26-5	Naphthalene, 2,3,6-trimethyl-
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000581-40-8	Naphthalene, 2,3-dimethyl-
000101-84-8	Benzene, 1,1'-oxybis-	000581-42-0	Naphthalene, 2,6-dimethyl-
000629-97-0	Docosane	000091-57-6	Naphthalene, 2-methyl-
000112-95-8	Eicosane	000630-03-5	Nonacosane
000629-94-7	Heneicosane	000629-92-5	Nonadecane
000593-49-7	Heptacosane	000630-02-4	Octacosane
000629-78-7	Heptadecane	000629-99-2	Pentacosane
000544-76-3	Hexadecane	000629-62-9	Pentadecane
003018-20-0	Naphthalene, 1,2,3,4-tetrahydro-	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
002245-38-7	Naphthalene, 1,6,7-trimethyl-	001732-13-4	Pyrene, 1,2,3,6,7,8-hexahydro-
000575-43-9	Naphthalene, 1,6-dimethyl-	000646-31-1	Tetracosane
000090-12-0	Naphthalene, 1-methyl-	000638-68-6	Triacotane
		000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name		
041002-74-8	1-Acenaphthylenol, 1,2-dihydro-1-methyl-	002400-00-2	Benzene, (1-ethyldecyl)-
053584-60-4	28-Nor-17.alpha.(h)-hopane	004534-53-6	Benzene, (1-methyldodecyl)-
071131-16-3	9,10-Dihydro-9-(2'-propenyl)-9,10	004534-49-0	Benzene, (1-pentyloctyl)-
000781-43-1	9,10-Dimethylanthracene	003282-18-6	Benzene, 1,1'-cyclopropylidenebis-
002444-68-0	Anthracene, 9-ethenyl-	000635-81-4	Benzene, 1,2,4,5-tetraethyl-
		002294-71-5	Benzeneacetic acid, .alpha.-ethyl-
		003018-21-1	Cyclobutane, 1,2-diphenyl-

000000-00-0 Cyclohexane, 1,2,3,5-tetraisopropyl- 000638-36-8 Hexadecane, 2,6,10,14-tetramethyl-

Sample Number: IT05016
Sample Type: Dust / CRT surface coating material
Location: Outside storage area, food market, Kantinagar, East Delhi, India
Sampling Date: 16.03.05
Sample Information: Collected from broken cathode ray tube (CRT) glass monitors awaiting transport to a smelting facility
Number of compounds isolated: 37

Compounds identified to better than 90%:

CAS#	Name		
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	000630-01-3	Hexacosane
000541-02-6	Cyclopentasiloxane, decamethyl-	000630-03-5	Nonacosane
000556-67-2	Cyclotetrasiloxane, octamethyl-	000630-02-4	Octacosane
000206-44-0	Fluoranthene	000593-45-3	Octadecane
000629-97-0	Docosane	000629-99-2	Pentacosane
000112-40-3	Dodecane	000629-62-9	Pentadecane
000544-85-4	Dotriacontane	000085-01-8	Phenanthrene
000112-95-8	Eicosane	000129-00-0	Pyrene
000629-94-7	Heneicosane	000646-31-1	Tetracosane
000630-04-6	Hentriacontane	000638-68-6	Triacontane
000593-49-7	Heptacosane	000638-67-5	Tricosane
		000630-05-7	Tritriacontane
		014167-59-0	Tettriacontane

Compounds tentatively identified:

CAS#	Name		
004534-53-6	Benzene, (1-methyldodecyl)-	003018-21-1	Cyclobutane, 1,2-diphenyl-
032134-41-1	Benzene, 1,1'-(2,2-dimethylcyclopropyl)-	055401-55-3	Docosane, 11-decyl-
		010544-50-0	Sulfur, mol. (s8)

Sample Number: IT05017
Sample Type: Soil
Location: Outside storage area, food market, Kantinagar, East Delhi, India
Sampling Date: 16.03.05
Sample Information: From an area where cathode ray tube (CRT) glass monitors are stored waiting transport to a smelting facility
Number of compounds isolated: 16

Compounds identified to better than 90%:

CAS#	Name		
000630-04-6	Hentriacontane	000630-03-5	Nonacosane
000593-49-7	Heptacosane	000629-99-2	Pentacosane
000630-01-3	Hexacosane	000638-68-6	Triacontane

Compounds tentatively identified:

CAS#	Name
000629-50-5	Tridecane

Sample Number: IT05018
Sample Type: Floor dust, 63µm fraction
Location: Backstreet battery recycling workshop, Mayapuri, Delhi, India
Sampling Date: 16.03.05
Sample Information: From the floor of a workshop where a wide range of batteries are recycled to recover metals
Number of compounds isolated: 93

Compounds identified to better than 90%:

CAS#	Name			
000120-12-7	Anthracene	037680-73-2	PCB-101	(1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
000112-95-8	Eicosane	032598-14-4	PCB-105	(1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-)
000593-45-3	Octadecane	031508-00-6	PCB-118	(1,1'-Biphenyl, 2,3',4,4',5-pentachloro-)(SIM)
000085-01-8	Phenanthrene	065510-44-3	PCB-123	(1,1'-Biphenyl, 2',3,4,4',5-pentachloro-)
000129-00-0	Pyrene	3 more unspecified pentachlorinated congeners, 1 of them detected in SIM mode		
Polychlorinated biphenyls:				
a) Dichlorinated:				
4 unspecified dichlorinated congeners, 3 of them detected in SIM mode				
b) Trichlorinated:				
007012-37-5	PCB-28	(1,1'-Biphenyl, 2,4,4'-trichloro-)		
10 more unspecified trichlorinated congeners, 3 of them detected in SIM mode				
c) Tetrachlorinated:				
035693-99-3	PCB-52	(1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)		
032598-13-3	PCB-77	(1,1'-Biphenyl, 3,3',4,4'-tetrachloro-)(SIM)		
9 more unspecified tetrachlorinated congeners, 2 of them detected in SIM mode				
d) Pentachlorinated:				
e) Hexachlorinated:				
035065-28-2	PCB-138	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)		
035065-27-1	PCB-153	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)		
038380-08-4	PCB-156	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)		
052663-72-6	PCB-167	(1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)(SIM)		
1 more unspecified hexachlorinated congener detected in SIM mode				
f) Heptachlorinated:				
035065-30-6	PCB-170	(1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)(SIM)		
035065-29-3	PCB-180	(1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-)(SIM)		

Compounds tentatively identified:

CAS#	Name		
000000-00-0	(+)-Longicyclene	004567-36-6	8-Methylnaphtho[2,1-b]thiophene
053584-60-4	28-Nor-17.alpha.(h)-Hopane	000781-43-1	Anthracene, 9,10-dimethyl-
036728-72-0	28-Nor-17.beta.(h)-Hopane	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
000000-00-0	4-Methyl-20r-cholestane	000000-00-0	Triterpane

Sample Number: IT05019

Sample Type: Floor dust, 63µm fraction

Location: Storage shed, Brijganj, East Delhi, India

Sampling Date: 16.03.05

Sample Information: From the floor of an open shed where broken cathode ray tube (CRT) glass is stored awaiting transport to a smelting facility

Number of compounds isolated: 88

Compounds identified to better than 90%:

CAS#	Name		
001786-12-5	Cyclotetradecane, 1,7,11-trimethyl-	000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-
000629-97-0	Docosane	000629-92-5	Nonadecane
055401-55-3	Docosane, 11-decyl-	000630-02-4	Octacosane
031295-56-4	Dodecane, 2,6,11-trimethyl-	000593-45-3	Octadecane
000112-95-8	Eicosane	001560-88-9	Octadecane, 2-methyl-
000629-94-7	Heneicosane	000629-62-9	Pentadecane
055320-06-4	Heneicosane, 11-decyl-	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
014739-72-1	Heneicosane, 11-pentyl-	003892-00-0	Pentadecane, 2,6,10-trimethyl-
000629-78-7	Heptadecane	000646-31-1	Tetracosane
000544-76-3	Hexadecane	000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name		
074685-33-9	3-Eicosene, (e)-	000556-67-2	Cyclotetrasiloxane, octamethyl-
054986-44-6	Benzene, (1,3,3-trimethylnonyl)-	017312-55-9	Decane, 3,8-dimethyl-
004534-53-6	Benzene, (1-methyldodecyl)-	055373-86-9	Docosane, 7-hexyl-
000540-97-6	Cyclohexasiloxane, dodecamethyl-	002882-96-4	Pentadecane, 3-methyl-
		013151-91-2	Tridecane, 6-cyclohexyl-

Sample Number: IT05020

Sample Type: Floor dust

Location: Storage shed, Brijganj, East Delhi, India
Sampling Date: 16.03.05
Sample Information: From the floor of an open shed where broken cathode ray tube (CRT) glass is stored awaiting transport to a smelting facility

Number of compounds isolated: 82

Compounds identified to better than 90%:

CAS#	Name		
000629-97-0	Docosane	000593-45-3	Octadecane
000112-95-8	Eicosane	000629-99-2	Pentacosane
000629-78-7	Heptadecane	000629-62-9	Pentadecane
000630-01-3	Hexacosane	001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-
000544-76-3	Hexadecane	000085-01-8	Phenanthrene
000638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	000646-31-1	Tetracosane
000629-92-5	Nonadecane	000638-68-6	Triacotane
000630-02-4	Octacosane	000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name		
056009-20-2	Cyclohexane, 1-(1,5-dimethylhexyl)-	054482-31-4	D-homoandrostane
		001560-93-6	Pentadecane, 2-methyl-

Sample Number: IT05022

Sample Type: Street dust/soil

Location: Shashtri Park, East Delhi, India

Sampling Date: 17.03.05

Sample Information: From narrow backstreet in the vicinity of many small workshops that recycle electronic wastes

Number of compounds isolated: 140

Compounds identified to better than 90%:

CAS#	Name		
002870-04-4	Benzene, 2-ethyl-1,3-dimethyl-	b)Trichlorinated:	
006785-23-5	Cyclopentane, undecyl-	007012-37-5	PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-)
000541-02-6	Cyclopentasiloxane, decamethyl-		8 unspecified trichlorinated congeners, 4 of them detected in SIM mode
001786-12-5	Cyclotetradecane, 1,7,11-trimethyl-		
000138-86-3	dl-Limonene		
000629-94-7	Heneicosane	c) Tetrachlorinated:	
000630-01-3	Hexacosane	035693-99-3	PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-)
000544-76-3	Hexadecane		10 unspecified tetrachlorinated congeners, 8 of them detected in SIM mode
000630-03-5	Nonacosane		
000629-92-5	Nonadecane		
000630-02-4	Octacosane		
000593-45-3	Octadecane	d) Pentachlorinated:	
000629-99-2	Pentacosane	037680-73-2	PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-)
000085-01-8	Phenanthrene	031508-00-6	PCB-118 (1,1'-Biphenyl, 2,3',4,4',5'-pentachloro-)
000129-00-0	Pyrene		5 unspecified pentachlorinated congeners, 4 of them detected in SIM mode
000646-31-1	Tetracosane		
000629-59-4	Tetradecane		
000638-68-6	Triacotane		
000638-67-5	Tricosane		
	Polychlorinated biphenyls:	e) Hexachlorinated:	
	a)Dichlorinated:	035065-28-2	PCB-138 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
	1 unspecified dichlorinated congener detected in SIM mode	035065-27-1	PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-)
			4 unspecified hexachlorinated congeners, 3 of them detected in SIM mode

Compounds tentatively identified:

CAS#	Name		
031032-94-7	2-Ethyl-3-methylnaphthalene	000000-00-0	9-Undecenoic acid, 2,6,10-trimethyl-
053966-51-1	3-Octene, 4-ethyl-	000941-81-1	Azulene, 2,4,6-trimethyl-
056771-77-8	4-Hexenoic acid, 3-methyl-2,6-diox	004794-05-2	Benzene, 2,5-cyclohexadien-1-yl-
019689-19-1	5-Decene	000540-97-6	Cyclohexasiloxane, dodecamethyl-
071502-22-2	9-Hexacosene	062199-51-3	Cyclopentane, 1-pentyl-2-propyl-
		000556-67-2	Cyclotetrasiloxane, octamethyl-

006975-98-0	Decane, 2-methyl-	000090-12-0	Naphthalene, 1-methyl-
024157-81-1	Diisopropylnaphthalene isomers	000829-26-5	Naphthalene, 2,3,6-trimethyl-
017312-57-1	Dodecane, 3-methyl-	000581-42-0	Naphthalene, 2,6-dimethyl-
000593-49-7	Heptacosane	000582-16-1	Naphthalene, 2,7-dimethyl-
000545-47-1	Lup-20(29)-en-3-ol, (3.beta.)-	000629-50-5	Tridecane

Sample Number: IT05023

Sample Type: Street dust/soil

Location: Shashtri Park, East Delhi, India

Sampling Date: 17.03.05

Sample Information: From narrow backstreet in the vicinity of many small workshops that recycle electronic wastes

Number of compounds isolated: 44

Compounds identified to better than 90%:

CAS#	Name	CAS#	Name
000099-85-4	.gamma.-Terpinene	000630-01-3	Hexacosane
018435-45-5	1-Nonadecene	000630-03-5	Nonacosane
000527-53-7	Benzene, 1,2,3,5-tetramethyl-	000000-00-0	Octadecene, 4-methyl-
000095-50-1	Benzene, 1,2-dichloro -(SIM)	000629-99-2	Pentacosane
000106-46-7	Benzene, 1,4-dichloro- (SIM)	000129-00-0	Pyrene
000087-44-5	Caryophyllene	000072-55-9	p,p'-DDE (SIM)
000118-65-0	iso-Caryophyllene	000072-54-8	p,p'-DDD (SIM)
000629-97-0	Docosane	000050-29-3	p,p'-DDT (SIM)
000544-85-4	Dotriacontane	007683-64-9	Squalene
000630-04-6	Hentriacontane	000646-31-1	Tetracosane
000593-49-7	Heptacosane	000638-68-6	Triacontane
000629-78-7	Heptadecane	000638-67-5	Tricosane

Compounds tentatively identified:

CAS#	Name	CAS#	Name
005337-61-1	2-Octadecyl-propane-1,3-diol	056009-20-2	Cyclohexane, 1-(1,5-dimethylhexyl)
		019814-75-6	Xanthene, 9,9-dimethyl-

Sample Number: IT05024

Sample Type: Street dust/soil

Location: Shashtri Park, East Delhi, India

Sampling Date: 17.03.05

Sample Information: From narrow backstreet in the vicinity of many small workshops that recycle electronic wastes

Number of compounds isolated: 59

Compounds identified to better than 90%:

CAS#	Name	Description
000117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	1 unspecified dichlorinated congener detected in SIM mode
000084-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	b) Trichlorinated:
002437-56-1	1-Tridecane	007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-trichloro-) (SIM)
000489-39-4	Aromadendrene	6 more unspecified trichlorinated congeners, all of them detected in SIM mode
024157-81-1	Diisopropylnaphthalene	
000629-94-7	Heneicosane	c) Tetrachlorinated:
000593-49-7	Heptacosane	035693-99-3 PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-) (SIM)
000629-78-7	Heptadecane	8 unspecified tetrachlorinated congeners, all of them detected in SIM mode
000206-44-0	Fluoranthene	
000629-92-5	Nonadecane	
000085-01-8	Phenanthrene	
000072-55-9	p,p'-DDE	d) Pentachlorinated:
000053-19-0	o,p'-DDD (SIM)	037680-73-2 PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-) (SIM)
000072-54-8	p,p'-DDD (SIM)	032598-14-4 PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-) (SIM)
000129-00-0	Pyrene	065510-44-3 PCB-123 (1,1'-Biphenyl, 2',3,4,4',5-pentachloro-) (SIM)
000646-31-1	Tetracosane	2 unspecified pentachlorinated congeners, both of them

Polychlorinated biphenyls:

a) Dichlorinated:

detected in SIM mode

e) Hexachlorinated:

035065-28-2 PCB-138 (1,1'-Biphenyl,
2,2',3,4,4',5'-hexachloro-) (SIM)
035065-27-1 PCB-153 (1,1'-Biphenyl,

2,2',3,4,4',5'-hexachloro-) (SIM)
038380-08-4 PCB-156 (1,1'-Biphenyl,
2,2',3,4,4',5'-hexachloro-) (SIM)
052663-72-6 PCB-167 (1,1'-Biphenyl,
2,2',3,4,4',5'-hexachloro-) (SIM)

Compounds tentatively identified:

CAS#	Name		
000000-00-0	2-Methyl-z-4-tetradecene	000000-00-0	E-14-hexadecenal
002807-33-2	4-Nonene, 5-methyl-, (z)-	006418-44-6	Heptadecane, 3-methyl-
006975-98-0	Decane, 2-methyl-	000630-02-4	Octacosane
013151-34-3	Decane, 3-methyl-	071005-15-7	Pentadecane, 8-heptyl-

Sample Number: IT05025

Sample Type: Street dust/soil

Location: Shashtri Park, East Delhi, India

Sampling Date: 17.03.05

Sample Information: From narrow backstreet in the vicinity of many small workshops that recycle electronic wastes
Number of compounds isolated: 66

Compounds identified to better than 90%:

CAS#	Name		
000541-02-6	Cyclopentasiloxane, decamethyl-		trichloro-) (SIM)
000556-67-2	Cyclotetrasiloxane, octamethyl-		7 more unspecified trichlorinated congeners, all of them detected in SIM mode
000544-85-4	Dotriacontane		
000206-44-0	Fluoranthene		c) Tetrachlorinated:
000629-94-7	Heneicosane	035693-99-3	PCB-52 (1,1'-Biphenyl, 2,2',5,5'-tetrachloro-) (SIM)
000593-49-7	Heptacosane	032598-13-3	PCB-77 (1,1'-Biphenyl, 3,3',4,4'-tetrachloro-) (SIM)
000629-78-7	Heptadecane		10 more unspecified tetrachlorinated congeners, all of them detected in SIM mode
000630-01-3	Hexacosane		
000630-03-5	Nonacosane		
000629-92-5	Nonadecane		
003424-82-6	o,p'-DDE (SIM)		
000072-55-9	p,p'-DDE		
000053-19-0	o,p'-DDD (SIM)	037680-73-2	PCB-101 (1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-) (SIM)
000072-54-8	p,p'-DDD (SIM)	032598-14-4	PCB-105 (1,1'-Biphenyl, 2,3,3',4,4'-pentachloro-) (SIM)
000050-29-3	p,p'-DDT (SIM)	065510-44-3	PCB-123 (1,1'-Biphenyl, 2',3,4,4',5-pentachloro-) (SIM)
000629-99-2	Pentacosane		1 more unspecified pentachlorinated congener detected in SIM mode
000129-00-0	Pyrene		
000646-31-1	Tetracosane		
000638-68-6	Triacotane		

Polychlorinated biphenyls:

a) Dichlorinated:
2 unspecified dichlorinated congeners, both of them detected in SIM mode

b) Trichlorinated:
007012-37-5 PCB-28 (1,1'-Biphenyl, 2,4,4'-

d) Hexachlorinated:
035065-28-2 PCB-138 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
035065-27-1 PCB-153 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)
052663-72-6 PCB-167 (1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-) (SIM)

Compounds tentatively identified:

CAS#	Name		
001599-68-4	1-Heneicosene	097825-91-7	9-Anthracenamine, 9,10-dihydro-
040305-52-0	2-T-butylxanthen-9-one	000593-45-3	Octadecane
034303-81-6	3-Hexadecene, (z)-	001560-96-9	Tridecane, 2-methyl-

Sample Number: IT05026

Sample Type: Ash

Location: Backstreet workshop, Shashtri Park, East Delhi, India. As IT05007

Sampling Date: 17.03.05

Sample Information: From open burning of thin plastic coated copper wire at an open-air rooftop workshop. Ash disposed of with general garbage

Number of compounds isolated: 159

Compounds identified to better than 90%:

CAS#	Name		
000643-58-3	1,1'-Biphenyl, 2-methyl-	000593-49-7	Heptacosane
000644-08-6	1,1'-Biphenyl, 4-methyl-	001559-81-5	Naphthalene, 1,2,3,4-tetrahydro-1-methyl-
000612-71-5	1,1':3',1''-Terphenyl, 5'-phenyl-	000573-98-8	Naphthalene, 1,2-dimethyl-
000238-84-6	1H-Benzo[a]fluorene	000575-41-7	Naphthalene, 1,3-dimethyl-
000243-17-4	1H-Benzo[b]fluorene	000571-58-4	Naphthalene, 1,4-dimethyl-
056147-63-8	1H-Indene, 2-ethyl-2,3-dihydro-	002245-38-7	Naphthalene, 1,6,7-trimethyl-
000605-39-0	2,2'-Dimethylbiphenyl	002489-86-3	Naphthalene, 1-(2-propenyl)-
000086-73-7	9H-Fluorene	000090-12-0	Naphthalene, 1-methyl-
001730-37-6	9H-Fluorene, 1-methyl-	000829-26-5	Naphthalene, 2,3,6-trimethyl-
001430-97-3	9H-Fluorene, 2-methyl-	000581-42-0	Naphthalene, 2,6-dimethyl-
000120-12-7	Anthracene	000582-16-1	Naphthalene, 2,7-dimethyl-
000941-81-1	Azulene, 2,4,6-trimethyl-	000091-57-6	Naphthalene, 2-methyl-
004489-84-3	Benzene, (3-methyl-2-butenyl)-	000085-01-8	Phenanthrene
001081-75-0	Benzene, 1,1'-(1,3-propanediyl)bis-	000129-00-0	Pyrene
000218-01-9	Chrysene	000638-68-6	Triacotane
000206-44-0	Fluoranthene		

Compounds tentatively identified:

CAS#	Name		
002471-84-3	1H-Indene, 1-methylene-	054340-85-1	Benzene, 1-(2-butenyl)-2,3-dimethyl-
001685-82-1	1H-Indene, 2,3-dihydro-4,6-dimethyl-	001074-17-5	Benzene, 1-methyl-2-propyl-
001961-97-3	1H-Indene, 3-phenyl-	000300-57-2	Benzene, 2-propenyl-
000000-00-0	2-(4'-Methylphenyl)-propanal	000092-52-4	Biphenyl
000000-00-0	2-Methyl anthracene	000828-15-9	Hex-1-enylbenzene
035465-71-5	2-Phenyl naphthalene	000767-58-8	Indan, 1-methyl-
052689-24-4	5-Ethylindan	000000-00-0	Indene, 2-methyl-3-phenyl-
007125-62-4	5H-benzocycloheptene, 6,7-dihydro-	002131-42-2	Naphthalene, 1,4,6-trimethyl-
002444-68-0	Anthracene, 9-ethenyl-	074793-18-3	Naphthalene, 2-(1-cyclopenten-1-yl)-
000768-49-0	Benzene, (2-methyl-1-propenyl)-	022531-20-0	Naphthalene, 6-ethyl-1,2,3,4-tetrahydro-
055669-88-0	Benzene, 1,4-dimethyl-2-(2-methylpropyl)-	001013-08-7	Phenanthrene, 1,2,3,4-tetrahydro-
		095676-48-5	Phenanthrene, 9,10-dihydro-1-methyl-
		010394-57-7	Phenanthrene, 9-butyl-

Sample Number: IT05027

Sample Type: Street dust / soil

Location: Kailash Nagar, East Delhi, India

Sampling Date: 17.03.05

Sample Information: From narrow backstreet in a location similar to Shashtri Park, but with no known recycling of electronic wastes in the vicinity. Control sample for samples IT05022-26

Number of compounds isolated: 102

Compounds identified to better than 90%:

CAS#	Name		
014912-44-8	.alpha.-Ylangene	000630-02-4	Octacosane
000099-85-4	.gamma.-Terpinene	000629-99-2	Pentacosane
000081-15-2	Benzene, 1-(1,1-dimethylethyl)-3,5-dimethyl-2,4,6-trinitro- (Musk xylene)	000085-01-8	Phenanthrene
000874-41-9	Benzene, 1-ethyl-2,4-dimethyl-	000129-00-0	Pyrene
000629-97-0	Docosane	000072-55-9	p,p'-DDE (SIM)
000206-44-0	Fluoranthene	000072-54-8	p,p'-DDD (SIM)
023986-74-5	Germacrene D	000050-29-3	p,p'-DDT (SIM)
000593-49-7	Heptacosane	000646-31-1	Tetracosane
000593-49-7	Hexacosane	000087-44-5	trans-Caryophyllene
000630-03-5	Nonacosane	000638-68-6	Triacotane
		000638-67-5	Tricosane
		066394-74-9	Urs-20-en-16-ol

Compounds tentatively identified:

CAS#	Name		
024157-81-1	2,6-Diisopropyl naphthalene	000000-00-0	Trispiro[4.2.4.2.4.2.]heneicosane
000091-57-6	Naphthalene, 2-methyl-	000000-00-0	Triterpane
000000-00-0	Spiro[4.5]decan-7-one, 1,8-dimethyl	066965-48-8	Ursane-3,16-diol

Sample Number: IT05028

Sample Type: Street dust / soil

Location: Safourjung, South Delhi, India

Sampling Date: 17.03.05

Sample Information: From a backstreet in a residential area with no known industrial or recycling activities. Control sample for samples IT05022-26

Number of compounds isolated: 45

Compounds identified to better than 90%:

CAS#	Name		
000087-61-6	Benzene, 1,2,3-trichloro- (SIM)	000630-01-3	Hexacosane
000608-93-5	Benzene, pentachloro- (SIM)	000544-76-3	Hexadecane
000118-74-1	Benzene, hexachloro- (SIM)	000630-03-5	Nonacosane
000541-02-6	Cyclopentasiloxane, decamethyl-	000630-02-4	Octacosane
000556-67-2	Cyclotetrasiloxane, octamethyl-	000629-99-2	Pentacosane
000629-97-0	Docosane	000085-01-8	Phenanthrene
000112-95-8	Eicosane	000129-00-0	Pyrene
000206-44-0	Fluoranthene	000646-31-1	Tetracosane
000629-94-7	Heneicosane	000638-67-5	Tricosane
000630-04-6	Hentriacontane	000630-05-7	Tritriacontane

Compounds tentatively identified:

CAS#	Name
061142-60-7	1H-indene, 2,3,3a,4,7,7a-hexahydro-
053584-60-4	28-Nor-17.alpha.(h)-hopane
055724-23-7	Ergost-5-en-3-ol, 22,23-dimethyl-
007683-64-9	Squalene

Appendix 3: Analysis of PCDDs and PCDFs for sample CH05041, collected from the dumpsite, Loggang area, Gui Yo, China, 2005

Congener	Conc.	TEFs	TEQ¹	TEQ²	DL
2378-TCDF	0.1935	0.100	0.0194	0.0194	0.0001
12378-PCDF	0.1478	0.050	0.0074	0.0074	0.0001
23478-PCDF	0.3369	0.500	0.1685	0.1685	0.0001
123478-HxCDF	0.3687	0.100	0.0369	0.0369	0.0001
123678-HxCDF	0.3241	0.100	0.0324	0.0324	0.0001
234678-HxCDF	0.3107	0.100	0.0311	0.0311	0.0001
123789-HxCDF	0.0450	0.100	0.0045	0.0045	0.0001
1234678-HpCDF	0.8111	0.010	0.0081	0.0081	0.0001
1234789-HpCDF	0.0793	0.010	0.0008	0.0008	0.0001
OCDF	0.1810	0.001	0.0002	0.0002	0.0001
2378-TCDD	0.1029	1.000	0.1029	0.1029	0.0001
12378-PCDD	0.2259	0.500	0.1129	0.1129	0.0001
123478-HxCDD	0.5658	0.100	0.0566	0.0566	0.0001
123678-HxCDD	0.3027	0.100	0.0303	0.0303	0.0001
123789-HxCDD	0.4607	0.100	0.0461	0.0461	0.0001
1234678-HpCDD	1.4792	0.010	0.0148	0.0148	0.0001
OCDD	2.0671	0.001	0.0021	0.0021	0.0001
TEQ (Nato)			0.6747	0.6747	

TEQ - Toxic Equivalent Value

TEF - Toxic Equivalent Factor

Conc - Concentration

DL - Detection Value

TEQ¹ - Concentration of Non Detected Congeners at Detection Limit

TEQ² - Concentration of Non Detected Congeners at Zero

