Wayne Merkley

SAMPLING INSTRUCTIONS FOR LABORATORY ANALYSES

PART A

ORGANIC COMPOUNDS

including

PESTICIDES

UNIVERSITY HYGIENIC LABORATORY
OAKDALE CAMPUS—THE UNIVERSITY OF IOWA
IOWA CITY, IOWA 52242
(319) 353-5990

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W J HAUSLER, JR PHD
DIRECTOR

NOVEMBER 1982

PREFACE

PROPER SAMPLE COLLECTION IS AN INTEGRAL PART OF A QUALITY ASSURANCE PROGRAM WHICH SEEKS TO PRODUCE HIGH-QUALITY ANALYTICAL DATA. BY "HIGH-QUALITY" DATA WE MEAN DATA WHICH ARE ACCURATE, PRECISE, COMPLETE, REPRESENTATIVE AND COMPARABLE. THE QUALITY OF A CHEMICAL ANALYSIS CAN BE NO BETTER THAN THE QUALITY OF THE SAMPLE COLLECTED. THIS BROCHURE WAS PREPARED AS PART OF THE UNIVERSITY HYGIENIC LABORATORY'S QUALITY ASSURANCE PROGRAM TO PROVIDE GUIDANCE IN COLLECTING SAMPLES.

THE SPECIAL ORGANIC CHEMISTRY AND PESTICIDE SECTIONS OF THE UNIVERSITY HYGIENIC LABORATORY (UHL) PROVIDE A WIDE RANGE OF ANALYSES FOR ORGANIC COMPOUNDS. PROPERLY USED, THIS BROCHURE WILL ASSURE OUR CLIENTS, AS WELL AS OUR STAFF, THAT THE RESULTS REPORTED HAVE NOT BEEN COMPROMISED BECAUSE OF SAMPLE COLLECTION PROBLEMS OR IMPROPER PRESERVATION PRIOR TO RECEIPT IN THE UHL.

INCLUDED IN THIS BROCHURE ARE INSTRUCTIONS WHICH LIST SAMPLING PRECAUTIONS, SAMPLE CONTAINERS, AND SHIPPING INSTRUCTIONS, WHEN REQUIRED. THE LIST OF ANALYSES PERFORMED IS NOT INCLUSIVE, AND IF YOU HAVE NON-ROUTINE ANALYTICAL NEEDS, CONTACT US. THE FORMS IN THE BACK OF THIS BROCHURE SHOULD BE USED FOR PROVIDING THE LABORATORY WITH NEEDED INFORMATION. PLEASE FILL OUT THE SAMPLING INFORMATION FORMS AS COMPLETELY AS POSSIBLE.

11/82

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SAMPLING INSTRUCTIONS

GENERAL PRECAUTIONS

1. SAMPLES SHOULD BE COLLECTED AT LOCATIONS APPROPRIATE FOR THE PURPOSE OF THE ANALYSIS. FOR EXAMPLE, ROUTINE MONITORING SAMPLES SHOULD BE REPRESENTATIVE OF THE MATERIAL BEING SAMPLED; SAMPLES COLLECTED FOR IDENTIFICATION PURPOSES (UNKNOWN CONTAMINANTS, ETC.) SHOULD GENERALLY BE COLLECTED AT THE POINT OF HIGHEST CONCENTRATION, IF IT IS KNOWN.

2. EXTREME CARE SHOULD BE USED TO AVOID CONTAMINATING THE SAMPLE DURING AND AFTER COLLECTION. IN MOST CASES WE ARE LOOKING FOR TRACE AMOUNTS OF SUBSTANCES THAT MAY BE PRESENT FROM OTHER SOURCES. DO NOT SMOKE WHILE COLLECTING SAMPLES. DO NOT TOUCH THE INSIDE OF THE SAMPLE CONTAINER OR CAP. DO NOT COLLECT SAMPLES NEAR A MOTOR VEHICLE. IF NOTICEABLE ODORS ARE PRESENT FROM SOURCES OTHER THAN THE SAMPLING SITE, PLEASE NOTE THIS ON THE DATA SHEET. IF SAMPLE CONTAINERS ARE ACCIDENTALLY CONTAMINATED, PLEASE CALL THE LABORATORY FOR ASSISTANCE.

3. FILL OUT THE DATA FORMS AS COMPLETELY AS POSSIBLE; THE MORE INFORMATION WE HAVE THE MORE WE CAN DO FOR YOU. SAMPLING INFORMATION FORMS ARE INCLUDED AT THE BACK OF THIS BROCHURE.

4. SHIP SAMPLES PROMPTLY AFTER COLLECTION. DO NOT SHIP SAMPLES TO ARRIVE ON SATURDAY OR SUNDAY UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE WITH THE LABORATORY.

5. PACK SAMPLES FOR SHIPPING TO AVOID BREAKAGE.

6. ASSUME SAMPLES SHOULD BE SHIPPED ICED OR REFRIGERATED UNLESS OTHERWISE INSTRUCTED.

7. IN WINTER SAMPLES MUST BE PROTECTED FROM FREEZING WHILE IN TRANSIT TO PREVENT BREAKAGE.

8. IN GENERAL SAMPLES SHOULD BE SHIPPED BY A METHOD THAT WILL INSURE THEIR ARRIVAL IN THE LABORATORY WITHIN 24-48 HOURS OF COLLECTION.

9. IF YOU HAVE ANY QUESTIONS REGARDING SAMPLING, ANALYSIS OR FEES PLEASE CONTACT THE LABORATORY.

PRIORITY POLLUTANT BASE/NEUTRAL AND ACID FRACTIONS IN WATER

1. 3 - ONE QUART GLASS CONTAINERS ARE PROVIDED

   TWO OF THESE ARE TO BE FILLED WITH SAMPLE, THE THIRD IS LABELED "FIELD BLANK" AND IS TO BE HANDLED DIFFERENTLY DEPENDING ON THE SAMPLING TECHNIQUE.

   IF A "GRAB" SAMPLE IS TO BE COLLECTED THE FIELD BLANK WILL CONTAIN WATER WHEN RECEIVED AND SHOULD NOT BE OPENED, JUST RETURN IT WITH THE SAMPLES.

   IF A "COMPOSITE" SAMPLE IS TO BE COLLECTED USING AN AUTOMATIC SAMPLER THE FIELD BLANK CONTAINER IT SHOULD BE FILLED WITH THE DISTILLED WATER USED TO FLUSH THE AUTOMATIC SAMPLER LINES BEFORE STARTING TO SAMPLE.

2. IF THE ANALYSIS IS FOR PRIORITY POLLUTANT ANALYSIS OF AN EFFLUENT, IT SHOULD BE COLLECTED TO BE REPRESENTATIVE OF THE EFFLUENT. IF THE ANALYSIS IS A PROBLEM SOLVING EFFORT LOOKING FOR THESE COMPOUNDS, THE SAMPLE SHOULD BE OF THE WATER MOST LIKELY TO BE CONTAMINATED.

PRIORITY POLLUTANT AND OTHER VOLATILE ORGANICS IN WATER

1. THE SAMPLE IS COLLECTED IN A 40 mL VIAL CAPPED WITH A TEFLON FACED SEPTUM.

2. COLLECT SAMPLES IN TRIPLICATE; YOU WILL RECEIVE 4 VIALS, ONE OF WHICH ALREADY CONTAINS WATER AND IS LABELED FIELD BLANK, DO NOT OPEN THIS VIAL; RETURN IT TO THE LABORATORY WITH THE SAMPLE VIALS.

3. RUN THE FAUCET OR WATER OUTLET FOR AT LEAST 30 SECONDS, CAREFULLY FILL BY ALLOWING WATER TO TRICKLE DOWN THE SIDE OF THE VIAL. DO NOT AERATE THE WATER. OVERFILL SO THE EXCESS FORMS A BEAD OVER THE LIP OF THE VIAL. SLIDE THE SEPTUM, WHICH IS EASILY REMOVED FROM THE PLASTIC CAP, OVER THE LIP. BE SURE THE WHITE SIDE IS IN CONTACT WITH THE WATER. SCREW THE CAP ON BEING CAREFUL NOT TO DISLODGE THE SEPTUM.

4. INVERT THE VIAL AND TAP LIGHTLY TO ENSURE NO AIR BUBBLES ARE IN THE VIAL. IF BUBBLES ARE PRESENT EMPTY THE VIAL AND REPEAT THE COLLECTION PROCEDURE.

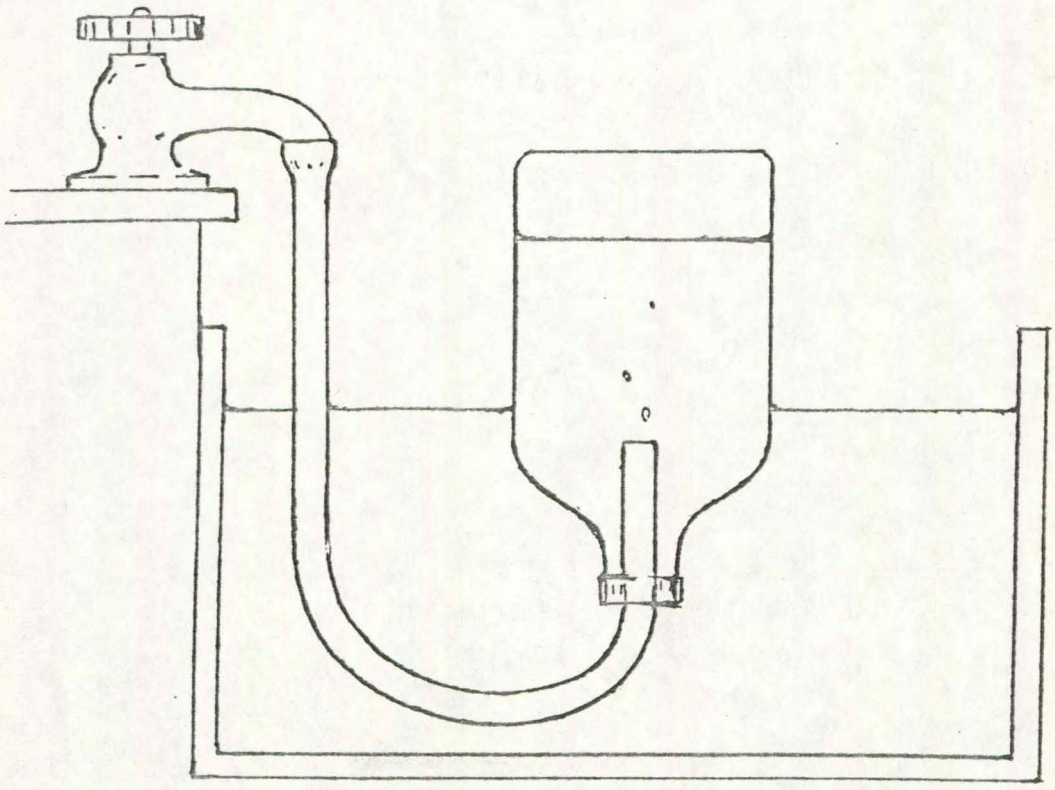
5. FILL OUT INFORMATION FORM AND RETURN TO THE LABORATORY WITH THE SAMPLE.

6. SAMPLES MUST BE ICED OR REFRIGERATED IMMEDIATELY AFTER COLLECTION AND MAINTAINED COLD DURING SHIPMENT. PREVENT THE SAMPLES FROM FREEZING IN WINTER.

GASES IN WATER

1. MATERIALS NEEDED - 1) ONE GALLON CLEAN GLASS JUG
   2) A LARGE PAN WITH MORE THAN 3 INCHES OF WATER IN IT
   3) A HOSE

2. FILL THE JUG WITH THE WATER IN QUESTION AND INVERT IT IN THE PAN OF WATER WITH NO AIR BUBBLES. INSERT THE HOSE INTO THE NECK OF THE JUG - KEEPING IT UNDER WATER. TURN ON THE FAUCET TO A LOW FLOW AND LET ANY GASES IN THE WATER ACCUMULATE IN THE JUG (A BUBBLE SHOULD FORM AS THE GAS ACCUMULATES). WHEN THE JUG IS 25-50% FULL OF GAS REMOVE THE HOSE AND CAP THE JUG WHILE THE MOUTH IS STILL UNDER WATER. MAINTAIN THE JUG IN THE INVERTED POSITION AND TRANSPORT TO THE LABORATORY INVERTED.



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SOLIDS, SLUDGES, SLURRIES AND SEDIMENTS

1. In general a one-quart glass jar is the preferred sample container.

2. The sample should be either representative of the material being sampled or a portion that is most likely contaminated. Indicate which type of sample on the sampling information form.

3. List any known components on the information form.

4. Place the sample in the jar using a method to minimize possible contaminants. This will vary depending on the material. If the sample is to be analyzed for volatile compounds limit the exposure to air.

5. Wipe the threads so the cap will seal tightly.

6. Fill out the sampling information form.

7. Send to the laboratory.

ANALYSES AVAILABLE

1. PRIORITY POLLUTANTS

ACIDIC COMPOUNDS

2-CHLOROPHENOL
2,4-DICHLOROPHENOL
2,4-DIMETHYLPHENOL
4,6-DINITRO-O-CRESOL
(2-METHYL-4,6-DINITROPHENOL)
2,4-DINITROPHENOL
2-NITROPHENOL
4-NITROPHENOL
P-CHLORO-M-CRESOL
(4-CHLORO-3-METHYLPHENOL)
PENTACHLOROPHENOL
PHENOL
2,4,6-TRICHLOROPHENOL

BASE/NEUTRAL COMPOUNDS

ACENAPHTHENE
ACENAPHTHYLENE
ANTHRACENE
BENZIDINE
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
2,4-BENZOFLUORANTHENE
BENZO(G,H,I)PERYLENE
BENZO(K)FLUORANTHENE
BIS-(2-CHLOROETHOXY)METHANE
BIS-(2-CHLOROETHYL)ETHER
BIS-(2-CHLOROISOPROPYL)ETHER
BIS-(2-ETHYLHEXYL)PHTHALATE
4-BROMOPHENYL PHENYL ETHER
BUTYL BENZYL PHTHALATE
2-CHLORONAPHTHALENE
4-CHLOROPHENYL PHENYL ETHER
CHRYSENE
DIBENZO(A,H)ANTHRACENE
1,2-DICHLOROBENZENE
1,3-DICHLOROBENZENE
1,4-DICHLOROBENZENE
3,3'-DICHLOROBENZIDINE
DIETHYL PHTHALATE
DIMETHYL PHTHALATE
DI-N-BUTYL PHTHALATE
2,4-DINITROTOLUENE
2,6-DINITROTOLUENE
DI-N-OCTYL PHTHALATE
1,2-DIPHENYLHYDRAZINE
FLUORANTHENE
FLUORENE
HEXACHLOROBENZENE
HEXACHLOROBUTADIENE
HEXACHLOROCYCLOPENTADIENE
HEXACHLOROETHANE
INDENO(1,2,3-CD)PYRENE
ISOPHORONE
NAPHTHALENE
NITROBENZENE
N-NITROSODIMETHYLAMINE
N-NITROSODI-N-PROPYLAMINE
N-NITROSODIPHENYLAMINE
PHENANTHRENE
PYRENE
1,2,4-TRICHLOROBENZENE

VOLATILE COMPOUNDS

ACROLEIN
ACRYLONITRILE
BENZENE
BIS(CHLOROMETHYL)ETHER
BROMOFORM
CARBON TETRACHLORIDE
CHLOROBENZENE
CHLORODIBROMOMETHANE
CHLOROETHANE
2-CHLOROETHYLVINYL ETHER
CHLOROFORM
DICHLOROBROMOMETHANE
DICHLORODIFLUOROMETHANE
1,1-DICHLOROETHANE
1,2-DICHLOROETHANE
1,1-DICHLOROETHYLENE
1,2-DICHLOROPROPANE
1,3-DICHLOROPROPYLENE
ETHYLBENZENE
METHYL BROMIDE
METHYL CHLORIDE
METHYLENE CHLORIDE
1,1,2,2-TETRACHLOROETHANE
TETRACHLOROETHYLENE
TOLUENE
1,2-TRANS DICHLOROETHYLENE
1,1,1-TRICHLOROETHANE
1,1,2-TRICHLOROETHANE
TRICHLOROETHYLENE
TRICHLOROFLUOROMETHANE
VINYL CHLORIDE

2. PETROLEUM PRODUCTS

GASOLINE
DIESEL OIL
FUEL OIL
OTHER OILS (LUBRICATING, TRANSMISSION, ETC)
TETRAETHYL LEAD
PETROLEUM DISTILLATES
NAPHTHA
VM + P NAPHTHA
STODDARD SOLVENT
DECANE
NONANE
OCTANE
HEPTANE

3. CHLORINATED AND/OR BROMINATED HYDROCARBONS

CHLOROMETHANE
METHYLENE CHLORIDE
CHLOROFORM
CARBON TETRACHLORIDE
CHLOROETHANE
DICHLOROETHANE
DICHLOROPROPANE
CHLOROETHYLENE (VINYL CHLORIDE)
DICHLOROETHYLENE
TRICHLOROETHANE
TRICHLOROETHYLENE
TETRACHLOROETHANE
TETRACHLOROETHYLENE (PERCHLOROETHYLENE
CHLOROBENZENE
BROMOFORM
CHLORODIBROMOMETHANE
DICHLOROBROMOMETHANE
DICHLOROPROPYLENE
BROMOMETHANE
EPICHLOROHYDRIN

4. VOLATILE ORGANICS SCAN

THIS SCAN INCLUDES THE VOLATILE PRIORITY POLLUTANTS AND OTHER COMMONLY ANALYZED COMPOUNDS LISTED BELOW, BUT IS NOT NECESSARILY LIMITED TO THE COMPOUNDS LISTED:

METHYL ISOBUTYL KETONE (MIBK)
METHYL ETHYL KETONE (MEK)
ACETONE
N-BUTYL ALCOHOL
XYLENES
ISOPROPYL ALCOHOL
ACROLEIN
ACRYLONITRILE
N-AMYL MERCAPTAN
BENZENE
BIS(CHLOROMETHYL)ETHER
BROMOFORM
N-BUTYL MERCAPTAN
CARBON DISULFIDE
CARBON TETRACHLORIDE
CHLOROBENZENE
CHLORODIBROMOMETHANE
CHLOROETHANE
2-CHLOROETHYLVINYL ETHER
CHLOROFORM
DICHLOROBROMOMETHANE
1,1-DICHLOROETHANE
1,2-DICHLOROETHANE
1,1-DICHLOROETHYLENE
1,2-DICHLOROPROPANE
1,3-DICHLOROPROPYLENE
DURENE (1,2,4,5-TETRAMETHYLBENZENE)
EPICHLOROHYDRIN
ETHYLBENZENE
ISODURENE (1,2,3,5-TETRAMETHYLBENZENE)
METHYL BROMIDE
METHYL CHLORIDE
METHYLENE CHLORIDE
PREHNITENE (1,2,3,4-TETRAMETHYLBENZENE
1,1,2,2-TETRACHLOROETHANE
TETRACHLOROETHYLENE
TOLUENE
1,2-TRANS DICHLOROETHYLENE
1,1,1-TRICHLOROETHANE
1,1,2-TRICHLOROETHANE
TRICHLOROETHYLENE
VINYL CHLORIDE
OTHER ORGANIC SOLVENTS

5. Semivolatile Organics Scan

This scan includes the priority pollutant base-neutral compounds and hundreds of other compounds identifiable using these analytical conditions, not limited to those listed below:

Acenaphthene
Acenaphthylene
Aniline
o-Anisidine
p-Anisidine
Anthracene
Benzidine
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis-(2-chloroethoxy)methane
Bis-(2-chloroethyl)ether
Bis-(2-chloroisopropyl)ether
Bis-(2-ethylhexyl)phthalate
4-Bromophenyl phenyl ether
Butyl benzyl phthalate
2-Chloronaphthalene
4-Chlorophenyl phenyl ether
Chrysene
Dibenzo(a,h)anthracene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
Diethylamine
Diethyl phthalate
2-Dimethylaminoethanol
N,N-Dimethylaniline
2,4-Dimethylaniline
Dimethyl phthalate
1,4-Dimethyl piperazine
N,N-Dimethyl-p-toluidine
Di-n-butyl phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate(1)
1,2-Diphenylhydrazine
Ethylenediamine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Morpholine
Naphthalene
1-Naphthylamine
2-Naphthylamine
p-Nitroaniline
Nitrobenzene
Nitromorpholine
1-Nitropropane
2-Nitropropane
N-Nitro diethylamine
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Phenanthrene
Pyrene
N,N,N,N-Tetramethyl-1,3-butanediamine
o-Toluidine
Tributylamine

(1) dioctylphthalate

6. POLYNUCLEAR AROMATIC HYDROCARBONS (PNAs/PAHs)

NAPHTHALENE
QUINOLINE
2-METHYLNAPHTHALENE
1-METHYLNAPHTHALENE
ACENAPHTHYLENE
ACENAPHTHENE
FLUORENE
PHENANTHRENE
ANTHRACENE
ACRIDINE
CARBAZOLE
FLUORANTHENE
PYRENE
BENZOFLUORENE
BENZ(A)ANTHRACENE
CHRYSENE
TRIPHENYLENE
BENZO(E)PYRENE
BENZO(A)PYRENE
PERYLENE
DIBENZ(A,J)ACRIDINE
DIBENZ(A,I)CARBAZOLE
INDENO(1,2,3-CD)PYRENE
DIBENZANTHRACENE
BENZO(G,H,I)PERYLENE
CORONENE
DIBENZPYRENES
(OTHER COMPOUNDS ON REQUEST)

7. PHENOLS

(INCLUDES PRIORITY POLLUTANTS ACID FRACTION PLUS OTHERS)

QUINONES
METHYL PHENOLS (CRESOLS)
ETHYL PHENOLS
2-CHLOROPHENOL
4-CHLOROPHENOL (P-CHLOROPHENOL)
CREOSOL(2-METHOXY-P-CRESOL)
M-CRESOL
O-CRESOL
P-CRESOL
2,4-DICHLOROPHENOL
2,4-DIMETHYLPHENOL
4,6-DINITRO-O-CRESOL(1)
2,4-DINITROPHENOL
O-ETHYL PHENOL
2,4-DINITROPHENOL
2-NITROPHENOL
4-NITROPHENOL
P-CHLORO-M-CRESOL(2)
PENTACHLOROPHENOL
PHENOL
2,4,6-TRICHLOROPHENOL
2,3-XYLENOL
2,4-XYLENOL

(1) 2-METHYL-4,6-DINITRO PHENOL
(2) 4-CHLORO-3-METHYLPHENOL

8. AROMATIC HYDROCARBONS (BTX)

BENZENE
TOLUENE
XYLENES
ETHYLBENZENE

9. TRIHALOMETHANES (THMs)

10. SOLVENTS

ACETONE
BENZENE
BUTYL ACETATE
N-BUTYL ALCOHOL
BUTYL CELLOSOLVE (2-BUTOXYETHANOL)
CARBON DISULFIDE
CARBON TETRACHLORIDE
CELLOSOLVE ACETATE (ETHYLENE GLYCOL MONOETHYL ETHER ACETATE)
CELLOSOLVE SOLVENT (2-ETHOXY ETHANOL)
CHLOROFORM
CYCLOHEXANE
CYCLOHEXANONE
DIACETONE ALCOHOL
P-DIOXANE
DIPROPYLENE GLYCOL MONOMETHYL ETHER
N-ETHYL ACETATE
ETHYLBENZENE
2-ETHYL HEXANOL
HEXANE
ISOPROPYL ACETATE
ISOPROPYL ALCOHOL
METHANOL
METHYL AMYL ALCOHOL
METHYL CELLOSOLVE (ETHYLENE GLYCOL MONOMETHYL ETHER)
METHYL CELLOSOLVE ACETATE (ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE)
METHYLENE CHLORIDE
METHYL ETHYL KETONE
METHYL ISOBUTYL KETONE
NAPHTHA
PETROLEUM DISTILLATES
N-PROPANOL
N-PROPYL ACETATE
STODDARD SOLVENT
TETRACHLOROETHYLENE
TOLUENE
TRICHLOROETHYLENE
TURPENTINE
VM & P NAPHTHA
XYLENES
O-XYLENES (DIMETHYLBENZENES)

11. GASES

ACETYLENE
BUTANE
CARBON DIOXIDE
CARBON MONOXIDE
ETHANE
ETHYLENE
ETHYLENE OXIDE
HYDROGEN SULFIDE
ISOBUTANE
MERCAPTANS
METHANE
METHYL BROMIDE
NITROGEN
OXYGEN
PROPANE
VINYL CHLORIDE

12. PESTICIDES

SAFE DRINKING WATER ACT PESTICIDE SERIES:

LINDANE
ENDRIN
METHOXYCHLOR
2,4-D
2,4,5-TP (SILVEX)

PRIORITY POLLUTANT PESTICIDE SERIES:

ALDRIN (HHDN)
ALPHA-BHC (α BENZENE HEXACHLORIDE)
BETA-BHC (β BENZENE HEXACHLORIDE)
DELTA-BHC (δ BENZENE HEXACHLORIDE)
GAMMA-BHC (LINDANE)
CHLORDANE
DDD (TDE)
DDE
DDT (DICHLORODIPHENYLTRI-
CHLOROETHANE)
DIELDRIN (HEOD)
ENDOSULFAN I (THIODAN I)
ENDOSULFAN II (THIODAN II)
ENDOSULFAN SULFATE
ENDRIN (ENDREX)
ENDRIN ALDEHYDE
HEPTACHLOR
HEPTACHLOR EPOXIDE
TOXAPHENE (POLYCHLOROCAMPHENE)
2,4-D
SILVEX

MISCELLANEOUS PESTICIDES:

DYFONATE®(FONOFOS)
COUNTER®(TERBUFOS)
LORSBAN®(CHLORPYRIFOS)
THIMET®(PHORATE)
MOCAP®(ETHOPROP)
ATRAZINE®(AATREX)
BLADEX®(CYANAZINE)
LASSO®(ALACLOR)
TREFLAN®(TRIFLURALIN)
SENCOR®(METRIBUZIN)
DUAL®(METOLACHLOR)
PROWL®(PENDIMETHALIN)
AMIBEN®(CHLORAMBEN)
BANVEL®(DICAMBA)

PESTICIDE CLASSES (EACH CLASS INCLUDES NUMEROUS PESTICIDES; ONLY EXAMPLES ARE GIVEN)

A. CHLORINATED HYDROCARBONS
E.G. DIELDRIN
DDT

B. ORGANOPHOSPHATES
E.G. THIMET
PARATHION

C. HERBICIDES
E.G. 2,4-D
2,4,5-T
2,4,5-TP
AMIBEN

D. OTHER
E.G. ATRAZINE
TREFLAN

13. POLYCHLORINATED BIPHENYLS (PCBs) AND
POLYBROMINATED BIPHENYLS (PBBs)

AROCHLOR - 1016
AROCHLOR - 1221
AROCHLOR - 1242
AROCHLOR - 1248
AROCHLOR - 1254
AROCHLOR - 1260
AROCHLOR - 1262

14. MISCELLANEOUS

AROMATIC AMINES
ETHYLENE GLYCOL
FORMALDEHYDE
FLUOROCARBONS (FREON, TMS)
METHYL METHACRYLATE
MDI (METHYLENE BISPHENYL ISOCYANATE)
MONOSODIUM GLUTAMATE
N-NITROSAMINES
ODOR AND/OR TASTE PROBLEMS
PHTHALATES
PROPYLENE GLYCOL
STRYCHNINE
STYRENE
TDI (TOLUENE-2,4-DIISOCYNATE)
TETRAETHYL LEAD
THIRAM

THESE LISTS ARE NOT MEANT TO BE ALL INCLUSIVE - CONTACT UHL FOR OTHER COMPOUNDS OF INTEREST.

SAMPLE CONTAINER REQUIREMENTS

SAMPLE CONTAINER REQUIRED

ANALYSIS	WATER*	SOLIDS*	AIR	OTHER	PRE-SERVE
PRIORITY POLLUTANT ACID FRACTION	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	ICE
PRIORITY POLLUTANT BASE NEUTRAL FRACTION	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	ICE
PRIORITY POLLUTANT VOLATILE FRACTION	40 ML VIAL	1 QT. GLASS	C.L.	C.L.	ICE
CHLORINATED AND/OR BROMINATED HYDROCARBONS	40 ML GLASS	1 QT. GLASS	C.L.	C.L.	ICE
POLYNUCLEAR AROMATIC HYDROCARBONS	1 QT. GLASS OR 1 GAL GLASS				
PHENOLS	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	ICE
TRIHALOMETHANES (THMS)	40 ML VIAL				
SOLVENTS**	40 ML OR 1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	ICE
GASES	C.L.	C.L.	C.L.	C.L.	C.L.
MISCELLANEOUS	C.L.	C.L.	C.L.	C.L.	C.L.

C.L. = CONTACT LABORATORY

*LAB FURNISHES CONTAINERS WITH TEFLON LID LINER

**DEPENDS ON SOLVENTS OF INTEREST

ANALYSIS	SAMPLE CONTAINER REQUIRED				
	WATER*	SOLIDS*	AIR	OTHER	PRE-SERVE
GASOLINE	40 mL VIAL	1 QT. GLASS	C.L.	C.L.	
DIESEL	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	
FUEL OIL	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	
OILS	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	
BTX (BENZENE, TOLUENE, XYLENES)	40 mL VIAL	1 QT. GLASS	C.L.	C.L.	ICE
VOLATILE ORGANICS SCAN	40 mL	1 QT. GLASS	C.L.	C.L.	ICE
PESTICIDES	1 QT. GLASS	1 QT. GLASS	C.L.	C.L.	
POLYCHLORINATED BIPHENYLS (PCB)	1 QT.	1 QT. GLASS	C.L.	C.L.	

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*LAB FURNISHES CONTAINERS

SAMPLING INFORMATION FORMS

THE FOLLOWING FORMS ARE INCLUDED FOR YOUR USE IN SENDING SAMPLES TO THE UNIVERSITY HYGIENIC LABORATORY. THESE FORMS ARE PERFORATED FOR EASE IN REMOVING THEM FROM THE BOOKLET. THE APPROPRIATE INFORMATION FORM FOR THE ANALYSIS DESIRED SHOULD BE FILLED OUT, USING A WATERPROOF MARKER OR PENCIL, AT THE TIME OF SAMPLE COLLECTION AND SHOULD ACCOMPANY THE SAMPLES WHEN SUBMITTED. BE SURE TO INCLUDE THE DATE OF SAMPLE COLLECTION AND NAME AND ADDRESS OF THE PERSON SUBMITTING THE SAMPLE. ALSO, ADDITIONAL PERTINENT INFORMATION ABOUT THE SAMPLE AND ITS COLLECTION IS APPRECIATED AND SHOULD BE INCLUDED ON THE BACK OF THE FORMS.

IF YOU NEED ADDITIONAL FORMS OR IF YOU HAVE SPECIAL REQUIREMENTS, PLEASE CONTACT:

ARMAND F. LANGE, PH.D.
UNIVERSITY HYGIENIC LABORATORY
OAKDALE CAMPUS
UNIVERSITY OF IOWA
IOWA CITY, IOWA 52242

UNIVERSITY HYGIENIC LABORATORY
THE UNIVERSITY OF IOWA
OAKDALE CAMPUS
IOWA CITY, IOWA 52242

SAMPLING INFORMATION FORM

REPORT TO

_____

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TELEPHONE NUMBER: _____

BILL TO

_____

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_____

TELEPHONE NUMBER: _____

DATE COLLECTED [ ]

PWSID # (IF APPROPRIATE) [ ]

SAMPLE COLLECTION LOCATION:

SPECIFIC LOCATION _____

_____

ADDRESS: _____

_____

_____

ANALYSIS DESIRED: _____

SAMPLE INFORMATION:

PLEASE GIVE AS MUCH INFORMATION AS POSSIBLE ABOUT THE SAMPLE AND ITS SURROUNDINGS. NOTE ANYTHING UNUSUAL, SUCH AS; APPEARANCE, ODOR, TASTE, ETC. DRAW DIAGRAMS OR MAPS AS APPROPRIATE. USE THE BACK AND OTHER SHEETS AS NECESSARY.

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UNIVERSITY HYGIENIC LABORATORY
THE UNIVERSITY OF IOWA
OAKDALE CAMPUS
IOWA CITY, IOWA 52242

SAMPLING INFORMATION FORM

REPORT TO

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TELEPHONE NUMBER: _____

BILL TO

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TELEPHONE NUMBER: _____

DATE COLLECTED [ ]

PWSID # (IF APPROPRIATE) [ ]

SAMPLE COLLECTION LOCATION:

SPECIFIC LOCATION _____

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ADDRESS: _____

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ANALYSIS DESIRED: _____

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