

	WATER	WATER	WATER	WATER	WATER	AIR/GAS	WATER	SOLIDS
ANALYSIS	SEMI-VOLATILE ORGANICS (1000ML)	DISINFECTION BY-PRODUCTS (500ML)	ORGANICS — LCMS	AOX/TOX	VOCs	VOCs	DISSOLVED METHANE	PARTICLE SIZE OR ASBESTOS
ANALYTES	TPH(C ₁₀ -C ₄₀), PAH/phenols, OC/OP/PCB, pyrethroids, ultra-trace PAH, SVOC screen, unknown organics analysis	EDTA, nitrosamines, HAA/HAN/HAK	Standard level LCMS multi-pesticides, herbicides glyphosate, phenoxy acetic acids (2,4-D), triazine herbicides	AOX (1 bottle) EOX (2 bottles)	TPH/TRH (C ₆ -C ₁₀) plus BTEX, BTEXN, VOCs (MAHs, VHC and THMs) or alcohols or 1,4-dioxane, acrylonitrile and pyridine	VOCs by T014, T015 BTEXN, TRH, methane, gases, permanent gases, reduced sulfur compounds	Methane plus gases	Particle size distribution, presence of asbestiform matter.
SAMPLE BOTTLE	1000ml amber glass bottle with Teflon-lined cap	500ml amber glass bottle with Teflon-lined cap	100ml amber glass bottle with Teflon-lined cap	500ml amber glass bottle	40ml vial with preservative	Passivated canisters (1.4, 3 and 6L) or suitable gas bags	40ml vial, no preservative	500ml plastic bag double bagged to minimise the hazard
INSTRUCTIONS AND PRESERVATION	Fill completely to exclude air. Each analysis MAY require a separate bottle. TPH requires an additional 40ml vial filled completely (see VOCs). 2 additional bottles are required for QC samples. Chill to ≤ 6°C	2 additional bottles are required for QC samples. Chill to ≤ 6°C	Additional sample is not required for QC. Chill to ≤ 6°C	Fill completely to exclude air. Preserved with nitric acid (plus sodium thiosulfate for chlorinated water). Chill to ≤ 6°C	Do not rinse bottle, fill completely to exclude air. Chill to ≤ 6°C	3L and 6L canisters for ambient air. 1.4L canisters for soil gas. Canisters/bags must be returned to ChemCentre within 2 weeks of supply.	Do not rinse bottle, fill completely to exclude air. Chill to ≤ 6°C Transport upside down (lid down)	Transport in a rigid container. Ensure 'May contain Asbestos' is clearly marked on the outside of the container if asbestos is likely.
HOLDING TIME	7 days	7 days	7 days	6 Months	14 days preserved or 7 days if unpreserved	T014 and T015: 30 days Reduced sulfur compounds: 14 days	7 days	Indefinite
LABEL COLOUR	Black	Black	Black	Black	Black	Passivated Canister	Brown	Black on white

Important information

Colour-coded sample bottles (some with appropriate preservative added), eskies and cooler bricks can be provided by ChemCentre. These are provided free of charge for work that is sent to ChemCentre. Refer to the instructions and preservation guidelines for appropriate procedures.

Quality control

Our quality control (QC) protocols mean that we perform 1 in 10 analyses in duplicate and/or 1 in 20 samples with an analyte spike. Field blanks, field duplicates and blind controls may also be appropriate.

Sampling and preservation

Do not rinse out bottle prior to taking the sample. Refer to the instructions for necessary procedures, some measurements may need to be taken at the time of sample collection. Field filtration may be required. As a general rule samples should be chilled to <6 degrees (not frozen), stored in the dark and returned to the laboratory as quickly as practicable.

Health and safety

Some sample bottles contain preservative that may present a possible hazard. Appropriate safety procedures such as using gloves and safety glasses and training is mandatory. Full Safety Data Sheets can be supplied on request.

Holding times

The holding times in this document are based on current best practice (including legislative requirements where applicable) to allow for the analyses to be carried out properly and with confidence. Failure to comply with these holding times may compromise the validity of the analytical measurements. Samples should be submitted to the laboratory well within the holding time to ensure compliance.

Contact the laboratory for clarification if required.

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Sample Bottle Pocket Guide

ChemCentre is Western Australia's leading provider of specialised chemical and forensic science services

	WATER	WATER	WATER	WATER	WATER	WATER	WATER	SOLIDS	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
ANALYSIS	GENERAL CHEMISTRY	CYANIDE	SULFIDE/ HYDROGEN SULFIDE	BOD	DOC/TOC	COD	NUTRIENTS	SOILS	DISSOLVED METALS EXCLUDING MERCURY	FERROUS IRON, SPECIATED ARSENIC	MERCURY	HEXAVALENT CHROMIUM	OIL AND GREASE OR SURFACTANTS	PFOS/PFOA	MICROBIOLOGICAL	ALGAE OR CHLOROPHYLL
ANALYTES	Major cations/anions, pH, EC, silica, hardness, TDS/TSS, turbidity, colour	Free, WAD and total cyanide, amenable cyanide, cyanate	Sulfide, Hydrogen sulfide	BOD	TOC (<u>or</u> NPOC) <u>or</u> DOC (<u>or</u> NPDOC)	COD	Ammonia, nitrate, nitrite, SRP, total soluble N, total soluble P, total N, total P, reactive P	Organics: TPH, BTEX, OC/OP, pesticides, PAHs Inorganic: Heavy metals, pH, EC	Metals — dissolved	Ferrous iron, speciated arsenic	Mercury	Hexavalent chromium	Oil and grease, anionic surfactants (MBAS) and non-ionic surfactants (NIS) or alkyl-phenol ethoxylates (APE)	PFOS/PFOA/6:2 FTS extended PFAS suite This bottle is also suitable for paraquat and diquat	E. coli, coliforms and HPC <u>or</u> streptococci <u>or</u> HUB <u>or</u> legionella <u>plus</u> HPC <u>or</u> enterococci, pseudomonas	Total algae cyanobacteria <u>or</u> chlorophyll a, b, and c
SAMPLE BOTTLE	500ml plastic bottle	250ml black plastic bottle	250ml plastic bottle	500ml plastic bottle	40ml glass vial <u>or</u> 125ml plastic bottle	250ml plastic bottle	125ml plastic bottle	500ml glass jar 500ml plastic bottle for heavy metals	100ml acid-washed plastic bottle	60ml plastic bottle	100ml acid-washed brown glass bottle	60ml plastic bottle with trace hydroxide	1000ml amber glass bottles	60ml HDPE bottle, no Teflon lining in cap	250ml sterile plastic bottle (PathWest bottles)	250ml plastic bottle (algae) 2 x 500ml plastic bottle <u>or</u> filter paper (chlorophyll)
INSTRUCTIONS AND PRESERVATION	TSS requires additional 500ml bottle. Fill completely to exclude air. Chill to ≤ 6°C	Preserved with sodium hydroxide to pH>12. Keep in dark. Chill to ≤ 6°C	Do not rinse bottle, fill completely to exclude air. Preserved with zinc acetate and sodium hydroxide. Chill to ≤ 6°C	Keep in dark. Chill to ≤ 6°C	DOC must be filtered through 0.45 micron cellulose acetate membrane. Acidify with sulfuric acid to pH 1-2, refrigerate or freeze. Keep in dark.	Freeze	Filter through 0.45 micron membrane, except total N, total P. Fill to three-quarter full. Freeze	Keep in dark. Field moist. Chill to ≤ 6°C	Filter through 0.45 micron membrane and acidify to pH 1-2 with nitric acid. If unable to field filter, lab filtration for dissolved metals can be requested, please indicate either way. If total metals are required do not filter. Chill to ≤ 6°C	Fill completely to exclude air. Pre-acidified hydrochloric acid to pH 1-2. Chill to ≤ 6°C	Filter through 0.45 micron membrane, Pre-acidified to pH 1-2 with nitric acid and 2ml of 0.05% nitric acid potassium dichromate. If total mercury is required do not filter. Chill to ≤ 6°C	Filter through 0.45 micron membrane, adjust filtrate to pH 9.3-9.7. Chill to ≤ 6°C	Each type of analysis requires separate 1L bottle. Fill completely to exclude air. Oil and grease: Chill to ≤ 6°C and submit within 24 hours <u>or</u> acidify with sulfuric or hydrochloric acid to pH 1-2 and chill to ≤ 6°C. Surfactants: Anionic: acidify with sulfuric acid to pH 1-2, chill to ≤ 6°C. Non-ionic: add 40% (v/v) formaldehyde solution to give 1% v/v final concentration. Chill to ≤ 6°C	Fill completely to exclude air. Chill to < 4 °C	Fill to shoulder of bottle. Preserved with sodium thiosulfate. Chilled not frozen. Samples for amoeba must be submitted at ambient temperature.	Algae: preserve with Lugol's Iodine solution <u>or</u> submit chilled within 12 hours. Chlorophyll: Unfiltered: Chill to ≤6°C. Store in dark. Filtered: Store filter paper in dark at -20°C (Do not store in frost free freezer).
HOLDING TIME	pH: 6 hours Others: 2-7 days	14 days	7 days	24 hours or 1 month frozen	1 week or 1 month if frozen	1 month	28 days Nitrite: 2 days	pH/EC: 7 days Organics: 14 days Metals: 28 days	6 months	7 days	28 days	28 days	Oil and grease: 1 month preserved <u>or</u> 24 hours unpreserved Surfactants: anionic 2 days or non-ionic 1 month	30 days	24 hours	Algae: 6 months preserved, or 12 hours unpreserved Chlorophyll: 2 days unfiltered, or 28 days filtered
LABEL COLOUR	Green	Blue	Yellow	Pink	Grey	Pink	Purple	Brown/Black	Red	Orange	Red and Black Stripes	Blue	Brown	Black	Grey	Dark Green