WATERS - Detection, Preservation and Sampling Requirements

Test	Routine Detection	Bottle	Volume	Preservation	RHT	Reference
Alkalinity/ Acidity	1 ppm or mg/L	P/G	100ml	Cool to 4˚C	14d	APHA
Bacto (natural)	1cfu/100ml	P	100ml	Cool to 4˚C	1d	AS
Bacto (town)	1cfu/100ml	P	100ml	Cool to 4˚C + Sodium Thiosulphate	1d	AS
BOD	1ppm	P/G	500ml	Cool to 4˚C	2d	APHA
Boron	0.01ppm	P	50ml	Nil, No headspace	28d	AS
BTEX (C6-C9)	1-2ppb	Vial	2 x 40ml	ph <2 H_2SO_4 or HCL + Cool to 4˚C	14d	AS
Carbon (TOC/ DOC)	1ppm	P/G	50ml	Cool to 4˚C + Dark	28d	USEPA
Chlorophyll a	0.005ppm	P/G	500ml	Cool to 4˚C + Dark or Filter/Freeze	2d/28d	APHA
Chlorine Residual	0.01	P/G	20ml	Analyse Immediatley	15 min	APHA
Chloride	1ppm	P/G	100ml	Nil	28d	APHA
COD	5ppm	P/G	100ml	ph <2 H_2SO_4 + Cool to 4˚C	28d	APHA
Colour	0.5ppm	P/G	100ml	Cool to 4˚C + Dark	2d	APHA
Conductivity	0.005mS/cm	P/G	20ml	Cool to 4˚C	28d	USEPA
Cyanide	0.01ppm	P/G	50ml	pH (> NaOH) + Cool to 4˚C + Dark	14d	APHA
Ferrous Iron	0.005ppm	P/G	100ml	PH < 2 (HCL) no headspace	7d	ISO
Fluoride	0.01ppm	P	20ml	nil	28d	AS
Hardness	1ppm	P	50ml	pH<2 (HNO3)	28d	APHA
Herbicides	0.1ppb	G	1000ml	Cool to 4˚C	7d	USEPA
Hexavalent Cr	0.01ppm	P/G	100ml	Cool to 4˚C	1d	AS
Iodide	5ppb	P/G	50ml	Cool to 4˚C	28d	AS
MBAS (surfactants)	0.1ppm	G	100ml	Cool to 4˚C	2d	APHA
Metals - preserves	1ppb, 5ppb Fe/Al	P/G	50ml	pH < 2 (HN03)	6mths	USEPA
Metals - fresh	1ppb, 5ppb Fe/Al	P/G	50ml	Cool to 4˚C	6mths	USEPA
Mercury	0.5ppb	P/G	50ml	pH < 2 (HN03)	28d	USEPA
N - Ammonium	0.005ppm	P/G	20ml	Site filter & cool/site filter and freeze	1d/28d	AS
N - Nitrate	0.005ppm	P/G	20ml	Cool to 4˚C	2d	APHA
N - Nitrite	0.001ppm	P/G	20ml	Filter on site and freeze	2d	APHA
N - Total	0.01ppm	P/G	120ml	Freeze	28d	AS
OC/OP or PCB	0.2/0.2/2ppb	G	1000ml	Cool to 4˚C	7d	USEPA
Oils and Grease	2ppm	G	500ml	ph <2 H_2SO_4 or HCL + Cool to 4˚C	28d	APHA
pH	..	P/G	20ml	Cool to 4˚C	6hrs	A
Phenols - Speciated/ Total	0.02/0.05ppm	G	1000ml	filter and Cool to 4˚C	7d	USEPA
Phosphate - Dissolved	0.005ppm	P/G	20ml	Filet and freeze	2d	APHA
Phosphorus - total	0.01ppm	P/G	50ml	Freeze	28d	AS
Sulfate	1ppm	P/G	100ml	Cool to 4˚C	28d	APHA
Sulfite	2ppm	P/G	100ml	1ml EDTA/100ml(2.5g EDTA to 100ml)	2d	AS
Sulfide	0.5ppm	P/G	100ml	Cool + add drops 2N ZnAc/100ml	7d	APHA
SVOC	10-100ppb	G	1000ml	Cool to 4˚C	7d	USEPA
TSS	1ppm	P/G	100ml	Cool to 4˚C	7d	APHA
TPH (C10-C36)	50/100/100ppb	G	1000ml	Cool to 4˚C	7d	NIL
TPH (C6-C9)	1/1/1/2/1ppb	Vial	2 x 40ml	ph <2 H_2SO_4 or HCL + Cool to 4˚C	14d	USEPA
THM	1ppb	Vial	2 x 40ml	ph <2 H_2SO_4 or HCL + Cool to 4˚C	14d	USEPA
Turbidity	0.1PtCo	P/G	50ml	Store in Dark	2d	APHA
VOC	1-10ppb	Vial	2 x 40ml	ph <2 H_2SO_4 or HCL + Cool to 4˚C	14d	USEPA

Notes:

1. ppm = mg/L; ppb = µg/L; 1% = 10,000ppm
2. References: APHA=Standard Methods for Examination of Waters and Wastewaters, 22nd Ed. AS= Australian Standard 5667.1:1998 Water Quality Sampling; ISO=ISO 5667.3 2008; USEPA= USEPA SW846; NEPM = Schedule B(3) 1999.

Environmental Analysis Laboratory, Southern Cross University,
Tel. 02 6620 3678, website: scu.edu.au/eal