









# GI-150 SAMPLE BOTTLE GUIDE

\* Holding times as per Standard Methods, 22<sup>nd</sup> Edition, 2012  
 \*\* Holding times as per AS/NZS5667.1:1998  
 \*\*\* No stated holding time in Standard Methods or AS/NZS5667, deliver to lab As Soon As Possible (ASAP) or as stated

## CHEMICAL ANALYSIS – INORGANIC <http://www.awqc.com.au/AWQC/>









## BIOLOGICAL

GENERAL	RADIOACTIVITY	HEAVY METALS	MERCURY	NUTRIENTS - TOTAL	NUTRIENTS - FILTERABLE	ALGAL & ODOURS	CHLOROPHYLL
<b>Sample Container</b> 250mL Plastic (PT250) 	<b>Sample Container</b> 1.25L Plastic (PT1250) 	<b>Sample Container</b> 250mL Plastic (PT250) 	<b>Sample Container</b> 100mL Glass (GL100) 	<b>Sample Container</b> 355mL Plastic (PT355) 	<b>Sample Container</b> 120mL Plastic (PT120) 	<b>Sample Container</b> 250mL Plastic (PT250) 	<b>Sample Container</b> 1 L Black Plastic (BLKPT1) 
<b>Label</b> PT250 – None – None – No Air Gap, Ice	<b>Label</b> PT1250 – None – None – No Air Gap, Ice	<b>Label</b> PT250 – Acid Washed – None – No Air Gap, Ice	<b>Label</b> GL100 – Acid Washed – None – No Air Gap, Ice	<b>Label</b> PT355 – None – None – No Air Gap, Ice	<b>Label</b> A. PT120 – None – None - Filtered — Air gap, Ice B. PT120 – None – None - Air gap, Ice	<b>Label</b> PT250 – None – None – Air Gap, Ice	<b>Label</b> BLKPT1 – None – None – Air Gap, Ice
<b>Analytes &amp; Holding Times</b> <b>All water types</b> General Cations (7 days) **pH (6 hours) *Conductivity (28 days) *Colour (48hrs), *Turbidity (24hrs) *Alkalinity (24 hours)	<b>Analytes &amp; Holding Times</b> <b>All water types</b> **Gross Alpha & Beta (28 days)	<b>Analytes &amp; Holding Times</b> <b>All water types</b> *All Metals (excluding Mercury) (28 days) Includes cations Calcium, Magnesium, Sodium and Potassium	<b>Analytes &amp; Holding Times</b> <b>All water types</b> *Mercury (28 days)	<b>Analytes &amp; Holding Times</b> <b>All water types</b> *Chloride (28 days) *Fluoride (28 days) *OXN (28 days) *Ammonia (28 days)	<b>Analytes &amp; Holding Times</b> <b>All water types</b> *TKN (28 days) *Total P (28 days)	<b>Analytes &amp; Holding Times</b> <b>All water types</b> ***Blue Green Algae, see preservation below ***Odour Test	<b>Analytes &amp; Holding Times</b> <b>All water types</b> *Chlorophyll (48 Hours)
<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> Air Gap	<b>Sampling Requirements</b> Air Gap	<b>Sampling Requirements</b> Air Gap
<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative.  <b>Containers to be double bagged with zip locks' to avoid lids being contaminated.</b>	<b>Storage and Preservation</b> Iced or chilled to 4°C Algae holding time increased to 28 days when preserved with Lugol's solution <ul style="list-style-type: none"> <li>Freshwater samples 1:100 by volume</li> <li>Marine samples 1:200 by volume</li> </ul>	<b>Storage and Preservation</b> Iced or chilled to 4°C No preservative
<b>Notes</b> No container preparation	<b>Notes</b> No container preparation	<b>Notes</b> Container is pre acid washed with Green Lid	<b>Notes</b> Container is pre acid washed with Blue Lid	<b>Notes</b> No container preparation	<b>Notes</b> Filtered Sample will require filter equipment	<b>Notes</b> No container preparation	<b>Notes</b> No container preparation

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**WASTEWATER** <http://www.awqc.com.au/AWQC/>

GENERAL AND BOD	CYANIDES	SULPHIDES	GREASE & OILS	PHENOLS	SLUDGES, SOLIDS, & SOILS	SLUDGE & SEDIMENTS (Microbiological analyses)	GIARDIA & CRYPTOSPORIDIUM (wastewater only)
<b>Sample Container</b> <b>1.25L Plastic (PT1250)</b> 	<b>Sample Container</b> <b>600mL Plastic (PT600)</b> 	<b>Sample Container</b> <b>355mL Plastic (PT355)</b> 	<b>Sample Container</b> <b>1L Glass (GL1000)</b> 	<b>Sample Container</b> <b>1L Amber Glass (AG1000)</b> 	<b>Sample Container</b> <b>500mL Plastic Pot (PP500)</b> 	<b>Sample Container</b> <b>Plastic Pot (PT600)</b> 	<b>Sample Container</b> <b>2 x1.25L Plastic (PT1250)</b> 
<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>
PT1250 – None – None – No Air Gap, Ice	PT600 – None – NaOH – No Air Gap, Ice	PT355 –None – Zinc Acetate – No Air Gap, Ice	GL1000 – None – None – Air Gap, Ice	AG1000 – None – None –No Air Gap, Ice	PP500 –None– None – None	PT600 – Sterile – Sodium Thio – Air Gap, Ice	PT1250 – Sterile – Sodium Thio – Air Gap, Ice
<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>
<b>All water types</b> *Biological Oxygen Demand *Suspended Solids (24 hrs) *Chemical Oxygen Demand (28 days)	<b>All water types</b> *Cyanide (24 hours)	<b>All water types</b> *Sulphides, 28 days for preserved samples 24 hours for non preserved samples	<b>All water types</b> *Grease (28 days) *MBAS (48hrs)	<b>**All water types (24 Hours)</b>		<b>All water types</b> #E.coli (24 hours), #Coliforms (24 hours) Filamentous bacteria Amoebae – Naegleria fowleri (48hrs as per in-house valid.)	Cryptosporidium and Giardia (48 hours as per USEPA 1623)
<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>
No Air Gap	No Air Gap	No Air Gap	Air Gap	No Air Gap	No Air Gap	Air Gap	Air Gap
<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>
Iced or chilled to 4°C No preservative	Iced or chilled to 4°C NaOH pellet dosed	Iced or chilled to 4°C Zinc Acetate Dosed	Iced or chilled to 4°C No preservative	Iced or chilled to 4°C No preservative	No preservative	Iced or chilled to 4°C Sodium Thiosulphate Dosed	Iced or chilled to 4°C Sodium Thiosulphate Dosed
<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>
No container preparation	Samples to be taken in pre-dosed container. Do not rinse. Fill initially with small air gap, invert to mix pellets, squeeze out remaining air.	Samples to be taken with the minimum amount of aeration and the bottle completely filled	No container preparation	No container preparation	Caution to not overfill container Pot to be double bagged' with zip locks'	Aseptic preparation is mandatory Bottle to be double bagged' with zip locks' for storage on ice	Aseptic Preparation is mandatory 2x1.25L Pet Bottles be used

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## CHEMICAL ANALYSIS – ORGANIC <http://www.awqc.com.au/AWQC/>

PHENOL Halogenated	VFA	NDMA	MX	GENERAL	ALGAL TOXINS MIB/GEOSMIN, TCA	DOC, TOC, MIB, GEOSMIN, TCA, HAAFP, THMFP, GLYPHOSATE	DISINFECTION by PRODUCTS
<b>Sample Container</b> 600mL Plastic (PT600) 	<b>Sample Container</b> 120mL Plastic (PT120) 	<b>Sample Container</b> 1 L Black Plastic (APT) 	<b>Sample Container</b> 10L Plastic (JC1) 	<b>Sample Container</b> 1L Glass (GL1000) 	<b>Sample Container</b> 600mL or 1.25L Plastic (PT600 or PT1250) 	<b>Sample Container</b> 355mL Plastic (PT355) 	<b>Sample Container</b> 355ml Plastic (PT355) 600ml Plastic (PT600) 
<b>Label</b> PT600 – None - Ammonium Chloride –No Air Gap, Ice	<b>Label</b> PT120 – None – None - Air gap, Ice	<b>Label</b> APT-TS-NO-NI- 1000 – None – Sodium Thio – No Air Gap, Ice	<b>Label</b> JC1 –None– Ascorbic Acid – No Air Gap, Ice	<b>Label</b> GL1000 – None – None –No Air Gap, Ice	<b>Label</b> PT600/1250 – None – None – No Air Gap, Ice	<b>Label</b> PT355 – None – None – No Air Gap, Ice	<b>Label</b> PT355/PT600 –None – Ammonium Chloride – No Air Gap, Ice
<b>Analytes &amp; Holding                      Times</b> All water types ***Halogenated Phenols (ASAP)	<b>Analytes &amp; Holding                      Times</b> All water types *VFA (ASAP)	<b>Analytes &amp; Holding Times</b> ***NDMA (ASAP)	<b>Analytes &amp; Holding Times</b> All water types ***MX (ASAP)	<b>Analytes &amp; Holding Times</b> All water types ***Organochlorides (ASAP) ***Organophosphates (ASAP) ***Acid herbicides (ASAP) ***GCMSSCANs (ASAP) ***Diesel , VOC, BTEX, MTBE, Fipronyl , Haloxyfop (ASAP) ***Atrazine ‘metabolites’, Simazine (ASAP) ***Formaldehyde TPH/TRH (ASAP)	<b>Analytes &amp; Holding                      Times</b> All water types ***MIB , GEOSMIN (ASAP) ***TCA (ASAP) are performed by CLSA for lower detection limits. ***Algal Toxins (ASAP)	<b>Analytes &amp; Holding Times</b> All water types ***Dissolved Organic Carbon, Total Organic Carbon (ASAP) ***Total Carbon (ASAP) ***MIB, GEOSMIN, TCA (ASAP) ***Glyphosate (ASAP) ***Formation Potential of THM and HAA (ASAP)	<b>Analytes &amp; Holding Times</b> All water types ***Haloacetic Acids (ASAP) ***Chloroacetic Acids (ASAP) ***DBP_551 (ASAP) ***THM (ASAP) ***VCH (ASAP)
<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap	<b>Sampling Requirements</b> No Air Gap
<b>Storage and                      Preservation</b> Iced or chilled to 4 <sup>o</sup> C 100mg/L Ammonium Chloride dosed	<b>Storage and                      Preservation</b> Iced or chilled to 4 <sup>o</sup> C No preservative.	<b>Storage and Preservation</b> Iced or chilled to 4 <sup>o</sup> C 150mg/L Sodium Sulphite for Chloramine < 4.0mg/L	<b>Storage and Preservation</b> Iced or chilled to 4 <sup>o</sup> C 5g Ascorbic Acid dosed	<b>Storage and Preservation</b> Iced or chilled to 4 <sup>o</sup> C No preservative	<b>Storage and                      Preservation</b> Iced or chilled to 4 <sup>o</sup> C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4 <sup>o</sup> C No preservative	<b>Storage and Preservation</b> Iced or chilled to 4 <sup>o</sup> C 100mg/L Ammonium Chloride dosed
<b>Notes</b> No container preparation	<b>Notes</b> No container preparation	<b>Notes</b> Wrap entire bottle in foil. Amber glass bottles or black plastic bottles can be used.	<b>Notes</b> No container preparation	<b>Notes</b> No container preparation Amber glass bottle can also be used.	<b>Notes</b> No container preparation	<b>Notes</b> No container preparation	<b>Notes</b> Single analysis 355mL bottle is sufficient for > 2 analyses 600mL bottle required

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 # Holding times as per AS/NZS2031

**MICROBIOLOGICAL** <http://www.awqc.com.au/AWQC/>

GENERAL	LEGIONELLA	SULPHITE & SULPHATE REDUCING BACTERIA	CAMPYLOBACTER & SALMONELLA	ICE	AMOEBAE	CRYPTOSPORIDIUM & GIARDIA
<p><b>Sample Container</b> 600mL Sterile Plastic (PT600)</p> 	<p><b>Sample Container</b> 600mL Sterile Plastic (PT600)</p> 	<p><b>Sample Container</b> 600mL Sterile Plastic (PT600)</p> 	<p><b>Sample Container</b> 2 x 600mL Sterile Plastic (PT600)</p> 	<p><b>Sample Container</b> Plastic Pot (PT600)</p> 	<p><b>Sample Container</b> 600mL Sterile Plastic (PT600)</p> 	<p><b>Sample Container</b> 2 x10L Plastic (JC1)</p> 
<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>	<b>Label</b>
PT600 – Sterile – Sodium Thio – Air Gap, Ice	PT600 – Sterile – Sodium Thio – Air Gap, Ice	PT600 – Sterile – Sodium Thio – No Air Gap, Ice	PT600 – Sterile – Sodium Thio – Air Gap, Ice	PT600 – Sterile – Sodium Thio – Air Gap, Ice	PT600 – Sterile – Sodium Thio – Air Gap, No Ice	JC1 – Sterile – Sodium Thio – Air Gap, Ice
<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>	<b>Analytes &amp; Holding Times</b>
<p><b>All water types</b>                      #E.coli (24 hours)                      #Faecal Coliforms (24 hours)                      #Coliforms (24 hours)                      #Enterococcus (24 hours)                      #Iron Bacteria (24 hours)                      #Pseudomonas (24 hours)                      #Plate Counts (24 hours)                      #Bacteriophages and f RNA phage ( 24 hours)</p>	<p><b>All water types</b>                      #Legionella (24 hours)  <b>Samples from Warm or Hot Water Systems require NO FLUSHING or flame sterilisation of sample tap prior to sampling.</b></p>	<p><b>All water types</b>                      #Sulphite reducing Clostridia including <i>Clostridium perfringens</i> (24 hours)                      #Sulphate Reducing Bacteria (24 hours)</p>	<p><b>All water types</b>                      #Campylobacter (<i>C.jejuni</i>, <i>C.coli</i>) (24hours)                      #Salmonella spp.(24 hours)</p>	<p>#E.coli (24 hours),                      #Coliforms (24 hours)</p>	<p><b>All water types</b>                      ***Amoebae – <i>Naegleria fowleri</i> (96 hours as per in-house validation)  <b>AMOEBAE samples are not to be chilled</b></p>	<p><b>All water types</b>  <i>Cryptosporidium</i> and <i>Giardia</i> (96 hours as per USEPA 1623)</p>
<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>	<b>Sampling Requirements</b>
Air Gap	Air Gap	No Air Gap	Air Gap	Air Gap	Air Gap	Air Gap
<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>	<b>Storage and Preservation</b>
Iced or chilled to 4°C Sodium Thiosulphate Dosed	Iced or chilled to 4°C Sodium Thiosulphate Dosed	Iced or chilled to 4°C Sodium Thiosulphate Dosed	Iced or chilled to 4°C Sodium Thiosulphate Dosed	Iced or chilled to 4°C Sodium Thiosulphate Dosed	<b>Not Iced or chilled</b> Sodium Thiosulphate Dosed	Iced or chilled to 4°C Sodium Thiosulphate Dosed
<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>	<b>Notes</b>
Aseptic preparation is mandatory. Bottle to be double bagged' with zip locks' for storage on ice.	Aseptic preparation is mandatory. Bottle to be double bagged' with zip locks' for storage on ice.	Aseptic preparation is mandatory. Bottle to be double bagged' with zip locks' for storage on ice.	Aseptic preparation is mandatory. Bottle to be double bagged' with zip locks' for storage on ice. <b>2x 600mL bottles to be used.</b>	Aseptic preparation is mandatory. Bottle to be double bagged' with zip locks' for storage on ice.	Aseptic preparation is mandatory. Bottle to be double bagged' with zip locks'.	Aseptic Preparation is mandatory. 2x10L Plastic Containers (jerry cans) to be used.