

Water Quality Parameters – Sampling Containers and Pre-treatments Required

Parameter Group	Parameter	Sample Container	Sample pre-treatment
General	Temperature	On-site analysis	On-site analysis
	Suspended Solids	1	None*
	Conductivity	On-site analysis	On-site analysis
	pH	On-site analysis	On-site analysis
	Dissolved Oxygen	2	7
	Dissolved Solids	1	None*
Nutrients	Ammonical Nitrogen	3	8
	Total Oxidised Nitrogen	3	8
	Total Phosphorus	4	None*
Organic Matter	Chemical Oxygen Demand	3	8
	Biochemical Oxygen Demand	2	4°C, Dark
Major Ions	Sodium	3	None*
	Potassium	3	None*
	Calcium	3	None*
	Magnesium	3	None*
	Carbonates and Bicarbonates	1	None*
	Chloride	1	None*
	Sulphate	1	None*
Other Inorganics	Silica	1	None*
	Fluoride	1	None*
	Boron	1	None*
Metals	Cadmium	3	9
	Mercury	4	9
	Zinc	3	9
Organics	Pesticide (Indicator)	5	4°C, Dark
	Synthetic Detergents	1	None*
	Organic Solvents	1	4°C, Dark
	Phenols	5	8
Microbiological	Total Coliform	6	4°C, Dark
Biological	Chlorophyll 'a'	1	4°C, Dark

NOTES:

Containers:

1. 1000 ml polyethylene bottle
2. Special BOD bottle (normally 300 ml)
3. 500 ml polyethylene bottle
4. 100 ml glass bottle
5. 1000 ml glass (or Teflon) bottle with Teflon lined caps
6. Strong thick-walled, screw -capped glass bottles (300 ml capacity). Only good quality will maintain a good seal after multiple sterilization in an autoclave

Preservation:

7. Samples for dissolved oxygen analysis are fixed by adding 1 ml of manganous sulphate solution, 1 ml of alkaline-iodide-azide solution and 1 ml of conc. Sulphuric acid to the sample and mixing. Care should be taken to ensure that no air bubbles to the sample during this process.
 8. Samples should be acidified with 2 ml of concentrated sulphuric acid
 9. Samples should be acidified with 2 ml of concentrated nitric acid
- *None: Ideally, all samples should be kept cool and in the dark after collection. If this is not possible, then at least samples for BOD, coliforms, chlorophyll, pesticides and other organics that are likely to volatilize MUST be kept at 4°C and dark. Remaining samples can have no preservation.