Provincial Laboratory

Environmental Services

Environmental Services is operated by Saskatchewan Health as part of the Provincial Laboratory. The primary function of Environmental Services is to analyse water samples for bacteriological, physical and chemical parameters. Environmental Services also offers testing for health-related metals and combination panels of tests.

Ensuring our drinking water and water sources are as safe as possible for the public is of critical importance. As announced in the provincial government's March 31st, 2004 budget speech, it is necessary for Environmental Services Section to introduce new fees for water testing. Effective July 1, 2004, fees will apply to all samples submitted to the Provincial Laboratory for testing. Fees will recoup approximately 70% of the actual testing costs.

Shipping costs for all samples to the Provincial Laboratory are a client's responsibility. Samples can be submitted by bus, courier, Canada Post, or in person. The laboratory has daily delivery from the STC bus depot in Regina.

All water samples for microbiological analysis will be discarded immediately once testing has been completed. All other water samples will be discarded after results are reported unless otherwise specified by the client.

For further information please contact Environmental Services.

Contact Information

General Information	Water Lab	1-866-450-0000	webmaster@health.gov.sk.ca
Environmental Services Director	Dr. Phillip Bailey	(306) 787-3140	pbailey@health.gov.sk.ca
Section Manager	Allan Kasick	(306) 787-3336	akasick@health.gov.sk.ca
Sample Reception	Brenda Perras	(306) 787-7138	bperras@health.gov.sk.ca
Request for Bottles	Shipping Dept.	(306) 798-0071 FAX	(306) 787-3192
Mailing Address for submitting water samples for testing Provincial Laboratory Environmental Services Section 3211 Albert Street Regina, Saskatchewan S4S 5W6			
Regular Work Hours: Monday to Friday from 8:00 am to 5:00 pm			

Bacteriological Testing

Parameter	Maximum Acceptable Concentration	Price include 6% GST – Effective July 1, 2006
Total Coliforms and E. coli	No organism detectable per 100 mL	$21.20
Fecal Streptococci	N/A	$21.20
Heterotrophic Plate Count	<200	$31.80
Iron Bacteria	N/A	$21.20
Sulphur Bacteria	N/A	$21.20
Pseudomonas	N/A	$21.20

Sampling and Shipping for Bacteriological Testing: Specially prepared sterilized bottles and shipping containers for bacteriological analysis are available throughout the province from municipal and regional health offices at no cost. These bottles must be used when collecting water samples for any of the bacteriological tests listed above. It is very easy to contaminate sterile containers and therefore special care should be taken when handling the collection bottle and collecting water samples. Read the instructions on the reverse side of the requisition form for sample collection and shipment details. Samples **will be rejected** if instructions are not followed.

Since bacteria are living organisms, the number of bacteria present in a water sample can change with time. To ensure accurate testing results, it is critical that water samples be processed within 48 hours of sample collection. After this period of time, it is likely that the bacterial population has changed. In some cases, bacteria may perish resulting in a false negative, i.e. no bacteria detected when in fact there were initially living organisms present.

To maintain sample integrity, samples should be submitted in insulated coolers with ice packs to ensure they are cool but not frozen during overnight transportation. When samples are dropped off at the lab within 6 hours of collection, a cooler is not needed – **be sure to drop off samples before 3:00 pm Monday to Friday**. To ensure the return of cooler and ice packs, please include a return address. The lab will pay the cost of returning the coolers. For cooler and coolant requirements, please go to http://www.saskh2o.ca/WaterServices_WaterTesting.asp or contact Environmental Services Section at 1-866-450-0000.

It is best to submit samples Monday to Wednesday to allow for transportation time to the Provincial Laboratory.

Physical Parameter Testing

Parameter	Aesthetic Objective [1]	Price includes 6% GST – Effective July 1, 2006
Conductivity	N/A	$10.60
pH	6.5-8.5 (pH unit)	$10.60
Chlorophyll A	N/A	$21.20
Total Suspended Solids	N/A	$21.20
Turbidity	1 (NTU)[2]	$10.60

Chemical Parameter Testing

Parameter	Aesthetic Objective (mg/L)[1]	Price includes 6% GST – Effective July 1, 2006
Alkalinity (as calcium carbonate)	500	$10.60
Ammonia	N/A	$10.60
Biochemical oxygen demand (BOD)	N/A	$26.50
Calcium	N/A	$10.60
Chemical oxygen demand (COD)	N/A	$21.20
Chloride	250	$10.60
dissolved organic carbon (DOC)	N/A	$21.20
Fluoride	1.5	$10.60
Hardness (total; as calcium carbonate)	800	$10.60
Magnesium	200	$10.60
Nitrate	45	$10.60
Phosphorus, ortho	N/A	$10.60
Phosphorus, total	N/A	$19.08
Potassium	N/A	$10.60
Sodium	300	$10.60
Sulphate	500	$10.60
Total Kjeldahl nitrogen (TKN)	N/A	$19.08
Total trihalomethanes	0.1	$74.20

[1] Information taken from Saskatchewan's Drinking Water Quality Standards and Objectives. EPB207 /2002

[2] information taken from Summary of Guidelines for Canadian Drinking Water Quality. April 2002

Health Related Metals

Parameter	Maximum Acceptable Concentration (mg/L) [1]	Price includes 6% GST – Effective July 1, 2006
Aluminium	0.1	$10.60
Arsenic	0.025	$21.20
Barium	1	$10.60
Boron	5	$10.60
Copper	1	$10.60
Iron	0.3	$10.60
Lead	0.01	$21.20
Manganese	0.05	$10.60
Mercury (in water)	0.001	$21.20
Mercury (in fish)	N/A	$42.40
Selenium	0.01	$21.20
Zinc	5	$10.60

Sample Containers: Water samples for physical and chemical parameter analyses should be collected in clean plastic containers with screw cap lids. **A minimum 2.5 litre sample should be submitted.** Proper collection containers are available at no cost from municipal and regional health offices. All water samples for metal analysis, except mercury, should be collected in clean plastic containers. **A minimum 100 mL per metal is required.** Proper collection containers are available at no cost at municipal and regional health offices.

The lab provides specially prepared containers for mercury and total trihalomethane tests. To request containers contact the lab at (306) 787-3161.

Panel Tests

Group Test Name	Parameters Included	Price includes 6% GST – Effective July 1, 2006
Water Potability Analysis	total coliforms, E. coli and nitrate	$26.50
Livestock Analysis	calcium, conductivity, nitrate, sulphate	$31.80
Irrigation Analysis	calcium, conductivity, chloride, magnesium, nitrate, pH, sodium, sodium adsorption ratio (calculated), sulphate, total alkalinity.	$74.20
Major Ion Analysis	bicarbonate, calcium, carbonate, chloride, conductivity, fluoride, iron, magnesium, manganese, nitrate, pH, potassium, sodium, sulphate, total alkalinity, total hardness,	$95.40

	total dissolved solids.	
General Chemical Analysis	bicarbonate, calcium, carbonate, chloride, conductivity, fluoride, magnesium, nitrate, pH, potassium, sodium, sulphate, total alkalinity, total hardness, total dissolved solids.	$106.00
Monitor Well Analysis	bicarbonate, calcium, carbonate, chloride, conductivity, fluoride, magnesium, nitrate-nitrogen, pH, potassium, sodium, sulphate, total alkalinity, total dissolved solids, total hardness, total Kjeldahl nitrogen, total phosphorus	$121.90
Pollution Analysis	ammonia, bicarbonate, biochemical oxygen demand (BOD), carbonate, chloride, conductivity, dissolved organic carbon (DOC), nitrate-nitrogen, ortho phosphorus, pH, suspended solids (total, fixed, volatile), total coliform / E. coli, total Kjeldahl nitrogen, total phosphorus	$159.00
Wastewater/Receiving Water Analysis	bicarbonate, biochemical oxygen demand (BOD), calcium, carbonate, chloride, conductivity, magnesium, nitrate-nitrogen, pH, potassium, sodium, sulphate, total & phenol alkalinity, total hardness, total Kjeldahl nitrogen, total phosphorus, dissolved organic carbon (DOC), ortho phosphorus, suspended solids (total, fixed, volatile), total coliform / E. coli.	$212.00

Sample Containers: Water samples for the Irrigation, Livestock, Major Ion, or General Chemical analyses should be collected in clean plastic containers (avoid metal-lined caps). A minimum of 1 litre of water is required. Water samples required for Monitor Well, Pollution, Wastewater, and Receiving Water analyses should be collected in clean plastic containers (avoid metal-lined caps). A minimum of 2.5 litre sample is required. Provincial Laboratory distributes1 and 2.5 litre plastic containers and requisition forms. These are available from municipal and regional health offices.

Water Sample Collection information: Testing results only reflect compositions of the samples submitted. Therefore, it is very important to collect a representative water sample in the field. A sample collected at a particular time and place gives only a snapshot of the situation. When a water source is known to vary with time, samples collected at time intervals and analysed separately can document the extent, frequency and duration of these variations. For example, samples that are taken from a river system at appropriate time intervals during a year will show peak concentrations, as well as the water quality variation during this time. When the water source composition varies in space, collecting samples from different locations gives a general picture of spatial distribution of these variations. For example, stratification in lakes causes uneven distribution of substances depending on depth. A composite water sample can also be submitted for testing. A composite sample is a combination of samples collected either at different times or from different locations, or both.

Before collecting samples for physical, chemical and metal testing, rinse the container twice with the source water. After rinsing, collect enough water to fill the container. Cap the container tightly; label the container. Complete the requisition form and submit the sample and requisition to the lab as soon as possible.