Iron Analysis (Community)

- **Purpose:** To determine the Iron concentration in drinking water. Determination will be done by using a test strip method.

Naturally occurring Iron is present in meat and meat products, as swell as potatoes and vegetables. Iron is absorbed by the body, and is essential an essential part of hemoglobin which gives our blood the red colouring agent that transports oxygen through our bodies.

The direct health implications of iron are very limited, there are however indirect problems some of which are; Colour, which comes from iron in a particulate form which is too small to filter so you get "coloured water", Iron bacteria, this is when bacteria and Iron III form a slime which can lead to poor pipe flow, this occurs when the iron concentration exceeds 0.3 mg/L (Canadian Drinking Water Guideline).

A 0.3 mg/L Iron Canadian Guideline for Iron will be included for quality control purposes; this is the limit for Iron, according to the Canadian Drinking Water Guidelines**.**

Materials:

- 1 - 0.3 mg/L Canadian Guideline Limit Sample (CGLS).
- 2 - Test strip packets with colour charts printed on packet.
- 2- 10 mL disposable beakers.

Method:

1. Label the two beakers sample, and CGLS.
2. Put 10 mL of sample or (CGLS) in the beakers.
3. Dip one test strip in beaker for 30 seconds with a constant back and forth motion.
4. Wait for 2 minutes, and then match with closest colour to determine the Total Iron concentration in mg/L or parts per million (ppm).

Results:

The Canadian Guideline Limit Sample for Iron should give a result very close to the 0.3 mg/L guideline; a darker colour means that the water **Does Not** meet Canadian Drinking Water Guidelines.

Visit the Safe Drinking Water Foundation Website www.safewater.org to learn more about issues affecting safe drinking water.