

Information on Drinking Water for Passmore Lab Clients

The information below is for folks concerned about their drinking water. We occasionally see Coliform Bacteria and are asked – is the water safe to drink? What does this mean?

Total Coliforms are not specifically associated with human infection. However, their presence means the water is susceptible to contamination from other (possibly more dangerous) organisms like *Giardia* or *Cryptosporidium*.

The presence of **Fecal Coliforms** or **E. Coli** means recent contamination by human or warm blooded animal contamination. This is an indication that the water is not safe to drink as these bacteria can be pathogens.

If you are getting counts of Total Coliforms or Fecal Coliforms, you may want to consider treating your water. Below are some suggestions on how to make your water safe:

If you are on **Well Water**: you can “shock” the well using [instructions attached](#). It is important to re-test your water to ensure “shocking” has addressed your issue.

If you are using **Surface Water**, the *Guidelines for Canadian Drinking Water* suggest that part of keeping your drinking water safe is to use at least two forms of treatment. There are 3 common ways to make surface water safe for drinking:

1. Bring it to a full boil for one minute. You can then transfer the water to a clean jar and refrigerate.
2. Filtration works well and is the least expensive way to go. You can choose to install the filter next to your kitchen tap (a **point of use** [POU] system), or you can install a **point of entry** [POE] system which would treat all of the water entering your house. Examples:
 - a. **Rainfresh Drinking Water System 1** from Canadian Tire – Costs ~\$130, and includes a 0.3 micron (absolute) filter which needs to be changed annually, or when the unit is clogged. This is a POU

system. Rainfresh also offers a product called “Drinking Water System 2”, which includes a 3-stage filter system. It is recommended to install a system with more filters if you have a problem with sediment. The first stages of the filter system remove large sediment and will allow the finer filter to last longer as it is not filtering out the large particles.

- b. **Vecta-Pure** – Costs ~\$250, includes a charcoal filter that removes minerals as well as the bacteria. It consists of a bank of three cartridges – 1 pre-filter, 1 charcoal, and 1 filter for removing bacteria. The cartridges need to be changed approximately once a year.
3. Ultraviolet (UV) Sterilization: UV is an effective way to treat surface water. However, the water must be very thoroughly filtered – down to less than 10-micron particle size. The light won’t work if there is turbidity in the water. Also, the light has to be cleaned regularly. UV disinfection is effective for inactivating *Giardia* and *Cryptosporidium* if the system can provide a dose rate of 40mJ/cm² (look for this dose rate if you are looking for a UV system!). Examples:

Rainfresh Whole House Ultraviolet (UV) Water Disinfection System is available from Canadian Tire for ~\$420 and provides a pre-filter and UV lamp with 40mJ/cm² dose rate.

You can also purchase units from plumbing suppliers like Andrew Sherret in Castlegar.

Regarding installation: It is important to choose the right system to address your specific needs. You can look for a system and install it yourself or if you want to consult with a professional:

Pure Solutions (Ian Bourne) - Nakusp,
250.265.443

Wild West Drilling Inc (Chris Barling) – Creston,
250.428.0137

Valhalla Refrigeration – Castlegar,
250.687.0271

AquaDiversities – Nelson,
250.509.2222