Household Treatment

Information on Reducing Chlorination Disinfectant By-Products (CDBPs)

What are CDBPs?

Chlorination disinfectant by-products are formed when chlorine used for disinfection reacts with natural organic matter (e.g., decaying leaves and vegetation) in the water. These by-products have been found to have potential health effects such as cancer and reproductive issues. For more information see the *Health Impacts* factsheet.

What are the guidelines for CDBPs in Newfoundland and Labrador?

Levels based on the maximum acceptable concentration as per the Guidelines for Canadian Drinking Water Quality and are based on lifetime exposure.

- HAAs- 80 µg/L
- THMs- 100 µg/L

To find your communities levels of HAAs and THMs visit the Water Resources Portal: http://maps.gov.nl.ca/water/

Hate the taste of chlorine?

Leaving your water in a jug in the fridge allows for the chlorine to dissipate and reduces the taste of chlorine. However this does not reduce CDBPs. For options for reducing CDBPs see the next page.

"Efforts to reduce DBPs must not compromise the effectiveness of disinfection"

-Health Canada

Household options

THM removal standards are set by NSF International (NSF) or the American National Standards Institute (ANSI). Certification organizations make sure treatment filters and equipment meet these standards. Filters should be NSF Standard 53 certified for THM removal. To find products that meet these standards for THM removal see the NSF website: http://info.nsf.org/Certified/DWTU/ and select NSF 53 for "product standard" and TTHM reduction under the "Reduction Claims for Drinking Water Treatment Units - Health Effects" section. **Remember to change filters often** and always follow the manufacturer's instructions on how to use and maintain any home water treatment filters or equipment.

Type	Where you can buy it and price	More information
Point of entry systems (aka whole house system) and shower head faucet	There are no systems listed on the NSF site for point of entry systems or shower filter systems that are NSF Standard 53 certified with claims to reduce Total THMs.	

Undersink unit	• Rainfresh Twist Undersink System, ~$135
	  ○ Replacement filters, ~$20
	  ○ Canadian Tire
		• http://www.rainfresh.ca/qs1.php
		• http://www.env.gov.nl.ca/env/waterres/training/adww/treatmentalternatives/pres11_willard_deon_point_of_use.pdf

Tap faucet	• Brita Faucet Filitration System, ~$26
	  ○ Replacement filters, ~$18
	  ○ Walmart, Canadian Tire
	• PUR MineralClear Advanced Plus Horizontal Faucet Mount, ~$30
	  ○ Replacement filters, ~$16
	  ○ Walmart, Home Depot, Canadian Tire
		• http://www.hindawi.com/journals/jeph/2013/959480/
		• http://www.health.gov.nl.ca/health/publichealth/envhealth/chlorineandthms2009.pdf
		• http://hbg.psu.edu/etc/research/DBPPOU_Fact%20Sheet.pdf
		• http://www.pur.com

Although blending and boiling water will remove volatile (meaning easily evaporated) CDBPs such as THMs, they do not eliminate or necessarily reduce the health risks of other CDBPs that may not evaporate easily. As such, blending and boiling of water are not recommended by Health Canada as methods for reducing chlorination disinfection by-products (Government of NL, 2014, http://www.env.gov.nl.ca/env/faq/thm_facts.html).		

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