

Acknowledgement:

This Fact Sheet is one of a series developed by an Interagency Committee with representatives from Saskatchewan Health, Regional Health Authorities, Saskatchewan Watershed Authority, Saskatchewan Agriculture, Agriculture and Agri-Food Canada – PFRA and Saskatchewan Environment.

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May/08



Government of
Saskatchewan

Zinc

(For Private Water and Health Regulated Public Water Supplies)

What Is Zinc?

Zinc in its elemental form is a bluish-white metal. Zinc is found naturally at low concentrations in many rocks and soils principally as sulphide ores and to a lesser degree as carbonates.

How Does Zinc Get Into Water?

Zinc can be introduced into water naturally by erosion of minerals from rocks and soil, however since zinc ores are only slightly soluble in water. Zinc is only dissolved at relatively low concentrations. High natural levels of zinc in water are usually associated with higher concentrations of other metals such as lead and cadmium.

Most zinc is introduced into water by artificial pathways such as by-products of steel production or coal-fired power stations, or from the burning of waste materials. Zinc is also used in some fertilizers that may leach into groundwater. Older galvanized metal pipes and well cribbings were coated with zinc that may be dissolved by soft, acidic waters.

How Does Zinc Affect My Health?

Zinc is an essential nutrient for body growth and development, however drinking water containing high levels of zinc can lead to stomach cramps, nausea and vomiting.

Other Considerations (optional section)

Water with a zinc concentration of more than 5 mg/L may start to be become chalky in appearance with a detectable deterioration in taste.

How Can I Remove Zinc From My Drinking Water?

The most efficient methods to remove zinc from water are distillation and reverse osmosis (RO). Boiling will not remove zinc.

What Is The Standard For Zinc In Drinking Water?

The Health Canada's Guidelines for Canadian Drinking Water Quality and Saskatchewan Environment's Drinking Water Quality Standards and Objectives have established an aesthetic objective (AO) of 5 mg/L. This is not a health based objective.

How Can I Find Out If There Is Zinc In My Water?

Most water quality testing laboratories can determine how much Zinc is present in a water supply. For information on sampling instructions and containers, you should contact an accredited laboratory. If using the Saskatchewan Disease Control Laboratory, sample containers are available from the laboratory, local Health Regions, or rural municipalities.

Need More Information?

Health Regulated Public Water Supply

For more information on this fact sheet and/or other water quality issues relating to health regulated public water supplies contact your local health region public health inspector.

Private Water Supply

For more information on how zinc impacts human health, contact your local health region office. For information on how zinc impacts agricultural operations contact Saskatchewan Ministry of Agriculture through your Regional Office or the Agricultural Knowledge Centre at 1-866-457-2377 or on the internet (<http://www.agriculture.gov.sk.ca/AKC>).

<p>Government of Saskatchewan Water Information website www.SaskH2O.ca</p>	<p>Water Inquiry Line Questions about water? Call 1-866-SASK H2O (1-866-727-5420) to be referred to proper agency.</p>
<p>Saskatchewan Ministry of Health http://www.health.gov.sk.ca/environmental-health Regional Health Offices Saskatoon: Saskatoon (306) 655-4605 Sunrise: Yorkton (306) 786-0600 Kelsey Trail: Melfort (306) 752-6310 Five Hills: Moose Jaw (306) 691-1500 Sun Country: Weyburn (306) 842-8618 Heartland: Rosetown (306) 882-6413 Prairie North: North Battleford (306) 446-6400 Prince Albert Parkland: Prince Albert (306) 765-6600 Cypress: Swift Current (306) 778-5280 Regina Qu'Appelle: Regina (306) 766-7755 Mamawetan Churchill River: La Ronge (306) 425-8512 Keewatin Yatthe: Buffalo Narrows (306) 235-5811</p>	<p>Saskatchewan Watershed Authority, Head Office, Moose Jaw (306) 694-3900 Website: www.swa.ca <i>Regional Offices:</i> http://www.swa.ca/AboutUs/Contact.asp?type=Offices</p> <p>Sask Water Corporation Head Office, Moose Jaw Customer Service 1-888-230-1111 Website: http://www.saskwater.com</p> <p>Prairie Farm Rehabilitation Administration (PFRA) - Agriculture and Agri-Food Canada Website http://www.agr.gc.ca/pfra/water/intro_e.htm <i>Regional Offices:</i> http://www.agr.gc.ca/pfra/sask_e.htm</p>
<p>Saskatchewan Ministry of Health Saskatchewan Disease Control Laboratory, Regina General Inquiry 1-866-450-0000 Phone: (306) 798-2125 // Fax (306) 798-0071 Website: http://www.health.gov.sk.ca/lab</p>	<p>Saskatchewan Ministry of Agriculture General Inquiry 1-866-457-2377 Agricultural Operations Regina (306) 787-4680 Irrigation Development Outlook (306) 867-5500 Website: www.agriculture.gov.sk.ca</p>
<p>Health Canada First Nation and Inuit Health Branch, Regina (306) 780-5434 Website: http://www.hc-sc.gc.ca</p>	<p>Saskatchewan Ministry of Environment Toll-Free 1-800-567-4224 Spill Emergency Toll-Free 1-800-667-7525 Website: http://www.environment.gov.sk.ca</p>