

Manganese Facts



Information for Pierce County Residents

Environmental Health Division
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What is Manganese?

Manganese is a dull grayish metal that is widely distributed in nature. Plants and animals contain trace amounts of manganese. The earth's crust is composed of 0.085% manganese. It occurs naturally in both surface and ground waters that come into contact with manganese-bearing soils. The two most common minerals that manganese is found in are manganosite and braunite. Manganese is used in the manufacture of steel.

Manganese and Health

Like iron, we consider manganese a "secondary" contaminant.

Manganese doesn't cause disease by being consumed, and is considered to be a nuisance. Even in low levels it will cause the staining of porcelain fixtures and laundry. Food cooked in water containing high levels of manganese may become discolored. Discoloration does not mean the food is unsafe to eat. Manganese may give water a musty or metallic taste or odor.

Effects of Manganese

Manganese forms deposits consisting of a black powder that does not dissolve in water. These deposits build up in tanks, on filters, and in pipes that make up the water systems. This can result in clogged or "fouled" water distribution systems. When there is a change in water pressure, or some disruption in the water system, manganese deposits are knocked loose from the pipe, causing the water to become cloudy or colored. Sometimes manganese "flakes" can be seen floating in the water.

How Can I Get Rid of Manganese?

Manganese can be removed from water by filtration and oxidation, followed by filtration, depending on whether the manganese is in the dissolved or un-dissolved form.

Regulations in Drinking Water

The limit for manganese in drinking water is 0.05 milligrams per liter. A milligram per liter is the same as a part per million. This limit is not based on health effects, but on the fact that at this low level, manganese causes the staining of sinks and discolors the water.

Get it tested!

The only way to know the amount of manganese in your household water is to have your water tested by a certified laboratory. Visit www.tpchd.org/certifiedlabs for a list of certified laboratories.

If you have additional questions or want more information about your responsibilities as a public water system manager, please contact Tacoma-Pierce County Health Department's Drinking Water Program at (253) 798-6470, option 2, or email us at EHDrinkingWater@tpchd.org