

Magnetism – Attractive Cereal

Did you eat your iron today? Can you use a magnet to find the iron in cereal?

Materials:

- 3 different cereals but make sure one is iron-enriched Cereal (1 cup – 250 mL)
- Blender or mortar and pestle
- 3 clear containers (large enough hold both the cereal and water)
- Plastic wrap or ziplock bag (small)
- Neodymium (Rare Earth, Ceramic, or cow (Alnico) magnet
- Spoon
- Water (warm 1 cup – 250 mL)



Procedure: (Remember to have your parent’s permission and have them watch and help you.)

- Add 1 cup of both water and cereal to the blender. Blend for 60 seconds. Or crush the dry cereal into smaller particles with a mortar and pestle. Add this and the water to the container.
- Pour this into your container and stir periodically throughout the day.
- Repeat this with the other cereals.
- The next day cover the magnet with plastic wrap or place it in a ziplock bag. This makes it easier to clean the magnet when you are done.
- Immerse the covered magnet into the mixture and swirl for 30 seconds.
- Remove the magnet from the mixture and examine the plastic carefully.
- Compare the results of the different cereals.

What's Happening:

Did you find iron in your cereals? If you did, which had the most?

Many processed foods are fortified with iron, sometimes in the form of iron salts (ferrous salts) and sometimes in the form of superfine particles of elemental iron. Elemental iron, also known as reduced iron, is used when iron salts may attract moisture that would cause a product to spoil. Common iron-enriched products include breakfast cereal, instant oatmeal, and infant cereal. Iron is an important nutrient as it is part of hemoglobin in blood and transports oxygen to our cells.

Extension:

Some finger nail polish contains iron particles. Paint a fingernail or some other surface and before it dries place your plastic covered magnet very close but not touching the wet polish to 10-15 seconds. The plastic help in case you accidentally touch the wet polish. If it contains iron particles a pattern will appear.

This activity is based on our Magnetism kit. The source for this lab was: <http://sciencemuse.com/2012/06/08/everyday-magnetism/>. Our teaching kits (described on our website) are loaned out FREE to provide classroom teachers and parents of home schooled children an opportunity to explore Science in interesting ways. Please consider volunteering as a classroom guest speaker or allow your business as a field trip location.

Lorne Cooper, Regional Executive Director

PRAXIS, “Making Science Fun”. Contact Praxis at praxis@praxismh.ca, www.praxismh.ca, Tweet or follow us @PraxisMedHat, or friend us on Facebook. Address: c/o 200 7th Street S.W., Medicine Hat, AB, T1A 4K1 Phone: 403-527-5365, Fax: 403-527-6570.