EATING NAILS FOR BREAKFAST

Next: Materials and Explanations

Step-by-Step Photo Sequence

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Use a magnet to prove that there really is iron in your breakfast cereal. The next time you're eating a big bowl of breakfast cereal, take a closer look at the ingredients. You'll find that your cereal contains more than just wheat and corn. Look closely and you might find iron... you know, the metal... the stuff used to make nails. Here's an experiment to see if there really is metallic iron in your breakfast cereal. All you need is a magnet strong enough to separate the meal from the metal.

Materials
• Small box of Total® cereal
• Ceramic bar magnet
• Zipper-lock bag
• Water

EXPERIMENT
1. It's time to mix up a batch of cereal soup to investigate the claim of iron in your breakfast cereal. Pour the contents of the box of Total® cereal into the zipper-lock bag.
2. Fill the bag 3/4-full with water. Carefully seal the bag, leaving an air pocket inside. You can mix the cereal and the water by squeezing and smooshing the bag until the contents become a brown, soupy mixture. Allow the mixture to sit for an hour.
3. Make sure the bag is tightly sealed! (Double bag it if you think it is needed.) Put the magnet in the palm of one of your hands and lay the bag of cereal soup flat on top of the magnet.
4. Put your other hand on top of the bag and slowly slosh the contents of the bag in a circular motion for 15 or 20 seconds. The idea is to attract any tiny bits of metallic iron in the cereal to the magnet.
5. Flip the bag and magnet over so the magnet is on top. Gently squeeze the bag to lift the magnet a little above the cereal soup. Don't move the magnet just yet. Look closely at the edges of the magnet where it's touching the bag. You should be able to see tiny black specks on the inside of the bag around the edges of the magnet. That's the iron! Keep one end of the magnet touching the bag and move it in little circles. As you do, the iron will gather into a bigger clump and be much easier to see. Few people have ever noticed iron in their food, so you can really impress your friends with this one. When you're finished, simply pour the cereal soup down the drain and rinse the bag.

HOW DOES IT WORK?
Many breakfast cereals are fortified with food-grade iron particles (metallic iron) as a mineral supplement. Total® cereal is currently the only major brand of cereal that claims to contain 100% of your recommended daily allowance (RDA) of iron. The chemical symbol for iron is Fe. Metallic iron is digested in the stomach and eventually absorbed in the small intestine. If all of the iron from your body was extracted, you'd have enough iron to make only two small nails.
HERE IS WHAT YOU NEED

TOTAL CEREAL
STRONG MAGNET
PLASTIC BAG
WATER
1. Open the box and pour the cereal into the bag (1/2 cup).

2. Fill the bag 3/4 full with water.
LET SIT FOR AT LEAST 1 HOUR

PLACE THE MAGNET IN YOUR HAND AND PUT THE BAG ON TOP
4
SWISH THE BAG AROUND FOR 15-20 SECONDS

5
FLIP THE BAG SO THE MAGNET IS NOW ON TOP
EXAMINE WHAT HAS COLLECTED BENEATH THE MAGNET AND SEE IF YOU CAN MOVE IT AROUND.
WHY IS THERE IRON IN CEREAL