JR-SCIENTISTS

MAKE YOUR OWN BUTTER

Delicious homemade butter is minutes away and all you need is one simple ingredient and your own two arms!

SUPPLIES

Heavy Whipping Cream
Mason Jar with Lid

INSTRUCTIONS

STEP 1: Fill your mason jar about 1/2 way with the cream and put the cover on tightly!

STEP 2: Shake it up! You will be shaking for at least 15 minutes!

STEP 3: Keep going and check in 5 minutes or at the 10-minute mark. Make sure to take a taste at this point if you want. Put the cover back on and keep shaking!

STEP 4: You will want to strain the solid (butter) from the liquid (buttermilk) and put it in a new container. Spread on bread and enjoy!

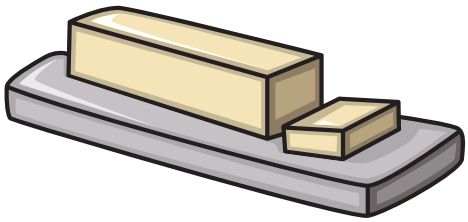
THE SCIENCE

Heavy cream has a good deal of fat molecules in a water-based solution. That's why it can make such delicious items. By shaking the cream several things happen. Of course, you are forcing air into the cream, but also the fat molecules begin to separate from the liquid and start to bind together. The more the cream is shaken the more these fat molecules clump together forming a solid which is the butter.

This extra shaking is what causes the final butter product to be a solid clump of fat molecules surrounded by a liquid. This liquid is called buttermilk. Drain out the buttermilk (reserve it for pancakes or waffles if you like), spread the butter on a piece of bread, and taste all of your hard work. Science can be fun to eat!

DIY Butter Observations

Use this worksheet to process and evaluate your work.



What do you think will happen when you shake whipping cream?

RECORD

What did you see?

Describe the substance after 5 minutes of shaking.

What type of molecules attached together to form the butter?

What do you call the liquid left over?