



myQuestion@beakman.com

BY JOK CHURCH

BEAKMAN JAX

Google: sodium lauryl sulfate

Experiment #1

Dear Jax,
 Why does brushing your teeth make orange juice taste just awful?

Michelle Angrove
 Providence, Rhode Island

Beakman or Jax
 1130 Walnut Street
 Kansas City, MO 64106
 Questions, name & address

Dear Michelle,
 Nearly all toothpaste has a part that's there just to put you in a better mood. Even the natural toothpaste that comes from Maine has in it a foamy detergent that also messes up your sweet taste.

The chemical, sodium lauryl sulfate, makes toothpaste foam, even though foam does not clean your teeth. Foam is there just because it makes us feel like cleaning is going on.

Real cleaning is about rubbing something out. Toothpaste parts called abrasives are tiny chunks of rough stuff, like maybe chalk, grinding your brushing into the junk on your teeth to scrape it away.

Jax Place
 Jax Place

SO WHAT:

The oil spread out very thin when the toothpaste poked in. The detergent dissolved it. That can happen in your mouth, too. Your taste sensors are covered with a thin skin that is made out of stuff that's very close to being a fat.

The foaming stuff in toothpaste breaks that skin and changes the way your taste buds work. It shuts off the sweet taste and changes the sour/acid taste into the bitter taste. Since OJ is sweet **and** sour/acid, you end up tasting bitter only – what you called *just awful!*

Toothpaste



Oil On Water

WHAT YOU NEED: Toothpick - toothpaste - bowl of calm, warm water - 1 or 2 drops of cooking oil

WHAT TO DO:
 Drip the drop of oil onto the water. You'll get a small floating pool of oil.
 Stick just the tip of the toothpick into the end of your toothpaste tube. You want to thinly paint the point with toothpaste. You do not want a glob of the stuff.

Hold the toothpick with the toothpaste-end **up**, over the pool of floating oil. Poke the **clean and dry** tip of the toothpick into the oil. Do it gently and repeat it about 5 to 10 times. What happens?
 Turn the toothpick over with the toothpaste-end pointing **down** and repeat the poking thing. What happens?