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With **beakman & jax**

Google: sodium lauryl sulfate



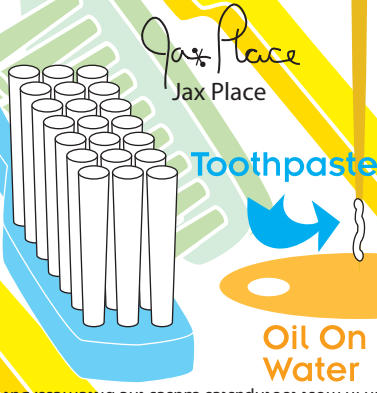
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### Experiment #1

**WHAT YOU NEED:** Blue food coloring - your sweet self - mirror  
**WHAT TO DO:** Put 1 drop of food coloring on your tongue. Close your mouth and roll your tongue around to spread out the color. Stick out your tongue and examine it in the mirror. You'll be able to see lots of little dots that are lighter blue than the rest of your tongue. Those little thingies

hold your taste buds. When foods touch them, your taste buds send signals to your brain.  
**SO WHAT:** If you can change the way your taste buds work, you can change the way foods taste. Your taste buds detect only 4 flavors: sweet, sour/acid, bitter and salty. Everything else you taste comes from the odors in the foods, sensed by your nose.

Dear Amber,  
A chemical in toothpaste makes our taste buds go crazy. The stuff I'm talking about is in most all toothpaste, even the natural kind that comes from Maine. It's sodium lauryl sulfate - a detergent. Its job in toothpaste is to foam up. Foam's only job is to fool us into feeling good. It's there to convince us that cleaning is going on. The real work of teeth cleaning is the brush scrubbing the teeth with fine, gritty abrasives like chalk.



### Experiment #2

**WHAT YOU NEED:** Toothpick - toothpaste - glass of warm water - 1 or 2 drops of cooking oil  
**WHAT TO DO:** Drop the 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 coat the point. Do not pull out 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. What

happens?  
**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 buds 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 on your taste buds 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 O.J. is sweet and sour/acid, you end up tasting bitter only - what you called yucky!

PS: from Beakman: The most common and incorrect answer to your question is that the saccharin in most toothpastes causes the bitterness. But it's really the detergent.

