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 THAMES & KOSMOS

**WARNING** — THIS  
SET CONTAINS CHEMICALS  
THAT MAY BE HARMFUL IF  
MISUSED. READ CAUTIONS  
ON INDIVIDUAL CONTAINERS  
CAREFULLY. NOT TO BE  
USED BY CHILDREN EXCEPT  
UNDER ADULT SUPERVISION.

Make  
an oozy  
substance  
that acts  
like both a  
liquid and  
a solid!

**WARNING.** Not suitable for  
children under 3 years.  
Choking hazard —  
small parts may  
be swallowed or  
inhaled. Keep the  
packaging and  
instructions as they  
contain important  
information.



# Ooze Labs

Mix Your Own

# Quicksand Oozebleck

AGES  
6+



Ooze Labs: Quicksand Oozebleck  
No. 575010 KIN 161827  
Made in Taiwan

Master\_161827 575010-02-270120

## SAFETY INFORMATION

### **WARNING!**

Not suitable for children under 3 years. Choking hazard — small parts may be swallowed or inhaled. Keep packaging and instructions, as they contain important information.

### **Instructions for handling the chemicals**

**Corn starch powder, 9.5-10.5 g (0.33-0.37 oz.) each**

**Dye powder, 1-1.1 g (0.03-0.04 oz.)**

Do not ingest. Avoid breathing dust. Only perform experiments that are described in this instruction manual. Do not get in eyes, into the mouth or on clothing. Wash hands thoroughly after handling.

In case of eye contact: Wash out eye with plenty of water, holding eye open if necessary.

If swallowed: Wash out mouth with water,

drink some fresh water. Do not induce vomiting. In case of doubt, seek medical advice without delay. Take the oozebleck or powder and its packet / this manual with you. Store locked up. Keep out of reach of small children and animals.

Use the materials carefully, as they may stick to or stain fabric, wood, carpet, or other materials. Clean with water. Dispose of the empty bags and other remainders in the trash. Dispose of the oozebleck and unused dye powder in the household trash.

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## 1. SETTING UP THE OOZE TUBE

### CONTENTS

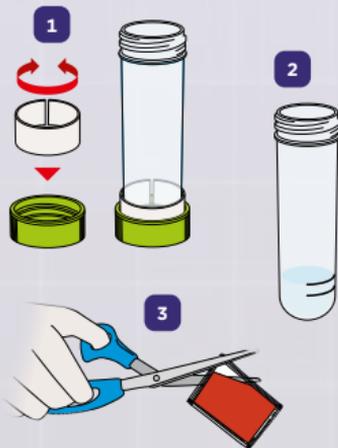
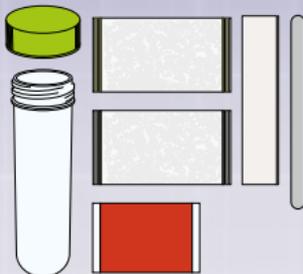
Test tube, lid, 2 corn starch packets (10 g each), dye packet (1 g), cardboard strip, stirring stick

### YOU WILL ALSO NEED

*Permanent marker, shallow bowl or pan, water, scissors, paper towels, spoon*

### HERE'S HOW

1. Use the cardboard strip and lid to make a test tube holder as shown. Place the test tube into the holder.
2. Fill the test tube with 10 ml of water. To measure this, use the test tube guide printed on the panel to the right to make marks on the test tube at the 5-ml and 10-ml lines.
3. Open the dye packet with scissors. Do not use your teeth.



## 2. MIXING THE DYE

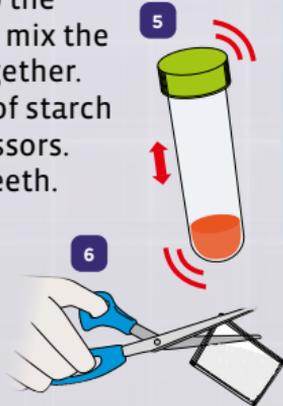
4. Sprinkle a small amount of the dye into the tube.

**CAUTION!** This is a highly concentrated dye powder. Be careful not to get it on your clothes or any other sensitive surfaces.



5. Screw the lid onto the tube and shake to mix the dye and water together.
6. Open one packet of starch using a pair of scissors. Do not use your teeth.

**CAUTION!** Be careful not to get the powder in your mouth or eyes!



**A note about the amount of water needed:** The oozebleck mixture requires just the right amount of water, which can be different depending on the humidity and the accuracy of the measured amounts of water and starch. For this reason, the instructions tell you to add the water in two steps, so that you don't add too much.

### TEST TUBE FILLING GUIDE

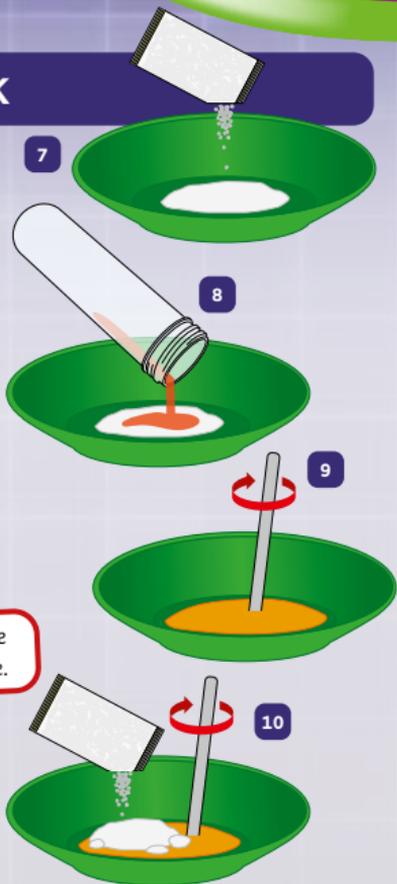


### 3. MIXING THE OOZBLECK

7. Pour all of the starch from the packet into a shallow bowl or pan.
8. Pour the 10 ml of colored water from the test tube onto the starch in the bowl.
9. Mix the starch and water together. It is best (and the most fun) to mix the material with your hands, but you can also use the stirring stick or a spoon if you don't want to get your hands messy. Your oozebleck should be very runny at this point.

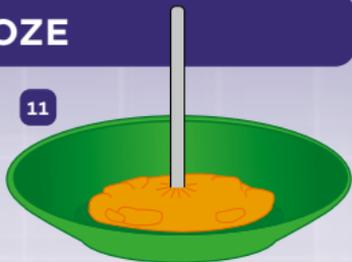
**Note:** If you mix it with your hands, it is normal to notice some temporary discoloration of your skin from the dye.

10. Open the second packet of starch, pour it into the bowl, and mix. Use a spoon if the mixture is too stiff to stir with the stirring stick.



## 4. MAKING THE PERFECT OOZE

11. Now, you should have very stiff, lumpy oozebleck. Observe how it behaves when you press on it with the stirring stick, or when you squeeze it in your hand. How does it behave when you don't apply any force to it?
12. Now, let's balance the amount of water and starch to get the perfect oozebleck! To do this, fill the test tube to the 5-ml line, pour about half of this over the oozebleck, and mix it together. If the oozebleck is still not runny enough, add the rest of the water and mix. The goal is to end up with a smooth mixture that is solid when you press on it and runny when you leave it alone.

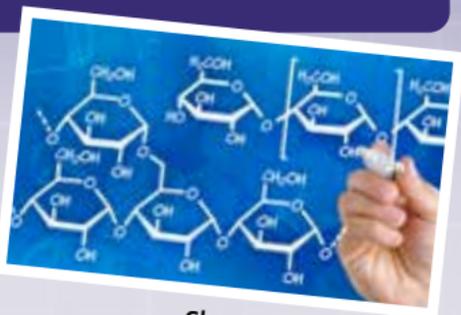


**Disposal:** Dispose of the oozebleck and unused dye powder in the household trash.

## WHAT'S HAPPENING?

You mixed starch, water, and dye to make a mud-like material commonly known as oobleck. The name oobleck comes from the Dr. Seuss book *Bartholomew and the Oobleck*, a fictional story in which a boy must save his kingdom from a slimy substance called oobleck.

Oobleck is a “non-Newtonian” fluid suspension that stiffens when pressure is applied to it and softens and flows when no pressure is applied. Sir Isaac Newton was a famous scientist who came up with a law about the behavior of fluids. Non-Newtonian fluids are fluids that don't follow Newton's law of viscosity, which is a measure of how a fluid flows and resists deformation. Most fluids get less viscous when force is applied to them, but oobleck gets more viscous, because the starch molecules in it get all tangled up and trap water molecules between them when they are pushed together under force.



Chemical diagram of starch molecules

## INFORMATION FOR PARENTS AND ADULTS

Dear Parents,

With this kit, you will be helping your child experiment with a fun, safe material commonly referred to as oobleck. Our name for it is **oozebleck**. It is a fascinating material because in some situations it behaves as a liquid and in others as a solid. Another material that behaves like this is **quicksand!** It is a great hands-on lesson in the different states of matter.

Please read these instructions together with your child, follow them and keep them for reference. Only carry out the experiments listed in the instructions. Do not allow the starch, dye powder, and the finished oozebleck to come into contact with the eyes or mouth. Please remind your child to wash his or her hands thoroughly after the experiments and after handling the materials. This set is for use only by children over 6 years. For use under adult supervision. Therefore, store it out of reach of children under 6 years old and animals. This includes the starch, dye powder, finished oozebleck, and other materials in the set.

Look for a good place to do the experiments. The area surrounding the experiment should be kept clear of any obstructions and away from the storage of food. Use a solid table with a top that can easily be cleaned. The working area should be cleaned up immediately after carrying out the activity. Also clean all equipment after use and thoroughly wash your hands. The starch powder should be used up (completely) during the course of the experiment. Open the packets of starch and dye with scissors — never with your teeth. While experimenting, please be careful not to create dust of the powder. Do not eat or drink in the experimental area and while doing the experiments. The oozebleck may cause stains that can't be washed out of clothing. Therefore, wear suitable clothes that can get stained and keep the materials away from tablecloths, curtains, and carpets. Store the finished oozebleck in the test tube to prevent it from drying out and getting stuck to anything. Dispose of the oozebleck and unused dye powder in the household trash.