



# Psych Lab BTST – BLUE TONGUE SUPER TASTER Procedure

Be very careful with the food dye as it stains and check that you're not sensitive to its ingredients!

1. Place a cotton bud into your bottle of blue food dye until it is well coated. Stick your tongue out and, using a mirror for guidance, coat the front third of your tongue with the dye.
2. Next, carefully place a hole-punch reinforcer on to your tongue. You can stick two ring reinforcers together to help transfer it more smoothly. If you don't have any reinforcers you can use a hole-punch to create a hole in an index card.
3. The blue dye will stain the tongue but slide off the prominent pink bumps known as papillae. Each bump contains three to five taste buds.
4. Ask a friend to count how many pink bumps they can see on your tongue inside the ring reinforcer - try to keep your tongue still! They may find it easier using a magnifying glass.
5. Using your Chromebook or other device, take a photo of your tongue and zoom in on the image. Attach this to your Lab Report as proof of completion.
6. The chart below reveals how your sense of taste compares to the rest of the nation...Place a check mark in the table that best reflect your findings in the experiment, take a photo of your results and attach this to your Lab Report.



Number of papillae	Type of Taster	How common in population
Fewer than 15	Non-taster	One in four
15 - 35	Average taster	One in two
More than 35	Super-taster	One in four

# BBC SCIENCE

## How to: discover if you're a super-taster

**Are you a super-taster? Test your taste-buds to find out...**

Super-tasters experience the five basic tastes, especially bitter foods, with greater intensity. Work out if you are a super-taster by following Mark's simple step-by-step instructions.



One in four of us are super-tasters. Here is how you can test if you have a sensitive tongue...



Cover a cotton bud in blue food dye and paint the tip of your tongue



Then place a hole punch ring-reinforcer onto the dyed area of the tongue with tweezers



The tongue will take up the dye, but the papillae, tiny structures that house the taste buds, will stay pink.



Ask a friend to count the small pink bumps that emerge using a magnifying glass. Alternatively count them in a mirror or take a photo of your tongue.

## Things you'll need:

Bottle of blue food dye  
Cotton buds  
Tweezers  
Hole punch reinforcers  
Magnifying glass  
Taster chart (see below)  
Damp cloth or tissues

## How to do it:

### How does taste work?



When we eat food it comes into contact with our taste buds, which are bundled inside the small bumps on the tongue and soft palate called papillae.

Chemicals in the food, known as tastants, make contact with the 30-100 taster receptor cells inside each taste bud. These stimulate nearby sensory neurons, which send a signal to an area at the back of the brain. This process creates five main taste sensations - sweet, salty, sour, bitter and umami (savoury).

However, to experience flavour we combine taste with our other senses - especially smell and touch.

## Be very careful with the food dye as it stains and check that you're not sensitive to its ingredients!

1.

Place a cotton bud into your bottle of blue food dye until it is well coated. Stick your tongue out and, using a mirror for guidance, coat the front third of your tongue with the dye.

2.

Next, carefully place a hole punch reinforcer on to your tongue. You can stick two ring reinforcers together to help transfer it more smoothly. If you don't have any reinforcers you can use a hole-punch to create a hole in a small square of waxed paper.

3.

The blue dye will stain the tongue but slide off the prominent pink bumps known as papillae. Each bump contains three to five taste buds.

4.

Ask a friend to count how many pink bumps they can see on your tongue inside the ring reinforcer - try to keep your tongue still!  
They may find it easier using a magnifying glass.

Alternatively you can try and count them in the mirror or take a photo of your tongue and zoom in on the image.

The chart below reveals how your sense of taste compares to the rest of the nation...

**Number of papillae**  
Fewer than 15

**Type of Taster**  
Non-taster

**How common in population**  
One in four

15 - 35

Average taster

One in two

More than 35

Super-taster

One in four

Name: \_\_\_\_\_

## WHAT IS A SUPERTASTER?

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1. What are taste buds? Where are they located?

2. What is a supertaster?

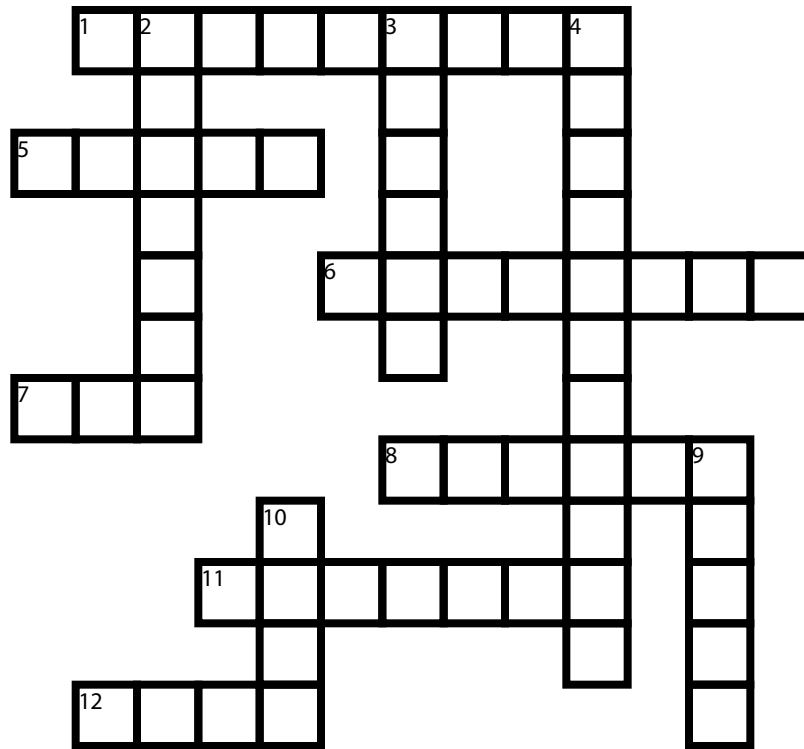
3. Sweet is one of the five basic tastes. What do you think the other tastes are?

4. Why might supertasters be picky eaters?

5. What evolutionary advantages might supertasters have over other people?

Name: \_\_\_\_\_

# WHAT IS A SUPERTASTER?



## Across

1. Taste buds contain taste \_\_\_\_\_.
5. Nerves carry taste information to the \_\_\_\_\_.
6. The shape of fungiform papillae
7. A substance that changes the color of something
8. Taste, sight, smell, touch, hearing
11. The outermost layer of something
12. Physical suffering

## Down

2. To inspect carefully
3. An organ in the mouth
4. A person with an unusually high number of tastebuds
9. The taste of sugar
10. The sensation caused by eating spicy food