

Jupiter in a Test Tube

Just like Jupiter's atmosphere has multiple layers of colour, you too can create amazing coloured layers in a test tube or tall glass at home. See how the power of density can help you in your quest!



Materials

- 1 Jug of water, 4 cups
- 2 Food colouring
- 3 Sugar cubes, pipettes
- 4 1 x Terrific Test Tube

Method

1. Mix a different food dye in 4 separate cups and place the sugar cubes beside each cup.
1 cube-yellow cup, 3 cubes -red cup, 6-cubes green cup and 9 cubes -blue cup
2. Place the cubes into each of the cups of water and mix until dissolved.
3. Add the blue solution first to the tube (or glass) using a pipette or dropper, then green, red and lastly yellow.
4. When adding the coloured solutions CAREFULLY, a good tip is to tilt the tube on its side.
5. Keep adding each colour until you have the lightest solution on the top (yellow).

What's Going On?

The solutions that have more sugar cubes, have a greater density and therefore sink to the bottom of the tube. Those with less sugar, have a lighter density and hence float on top of the heavier layers. The sinking & floating of the layers are due to each liquids different **density**.

Take it further

This experiment with pictures is found on our website. If you want to stretch your brain cells further by changing variables, graphing etc, then explore these features through our Bright Spark Guides, subscriptions to our Crazy Science Club videos and more. Please see our website for further details.

