Identify Unknown Substances

To drink or not to drink?

You find a glass of something that looks like milk, but how are you sure?

By using properties such as:

-Color

-Odor

-Texture

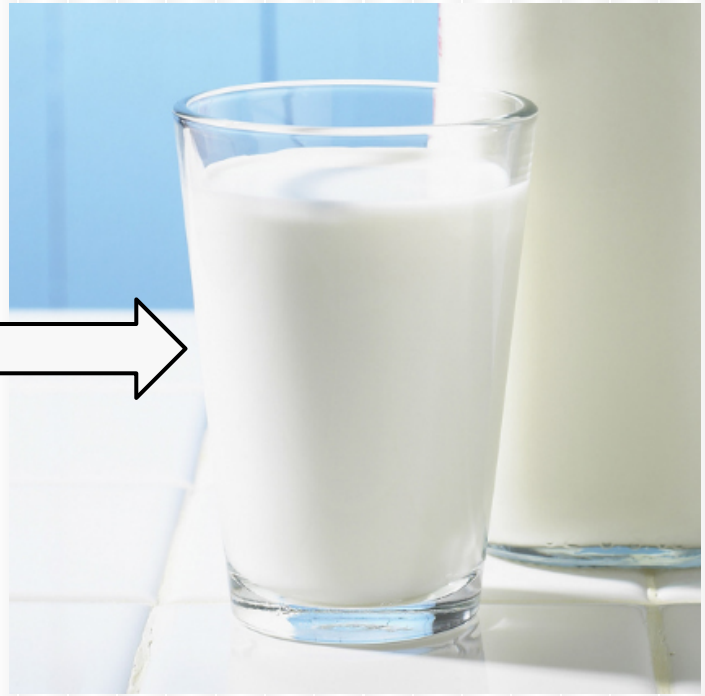
-Density - Degree of compactness of a substance

-Boiling point - Temperature at which a liquid boils and turns to vapor

-Freezing point - Temperature at which a liquid turns into solid when cool

Milk Properties

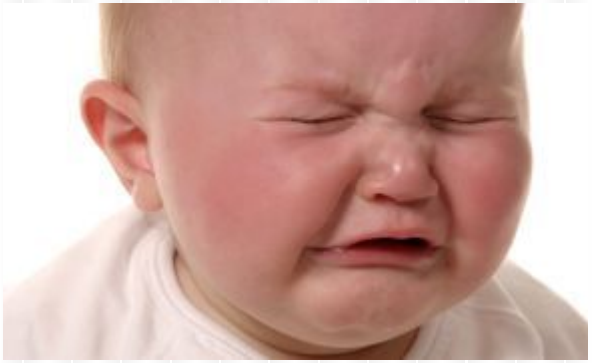
Color: white
Odor: Slight stench
Texture: Liquid, Creamy look, Smooth
Density: Thick, around 1.1 g/ml
Boiling point and Freezing point: unknown, but sets on fire at approximately 79 Celsius
pH: around 7.0

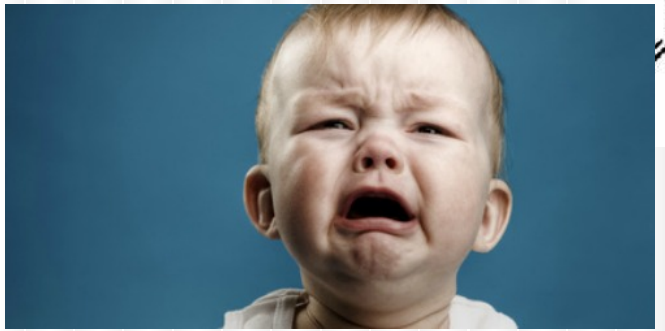


Odor: creamy
Texture: liquid, creamy look, smooth
Density: 1033 kg/m^3
Boiling point: about 100 Celsius
Freezing point: about -o.522 Celsius
pH: around 6.5-6.7

Conclusion

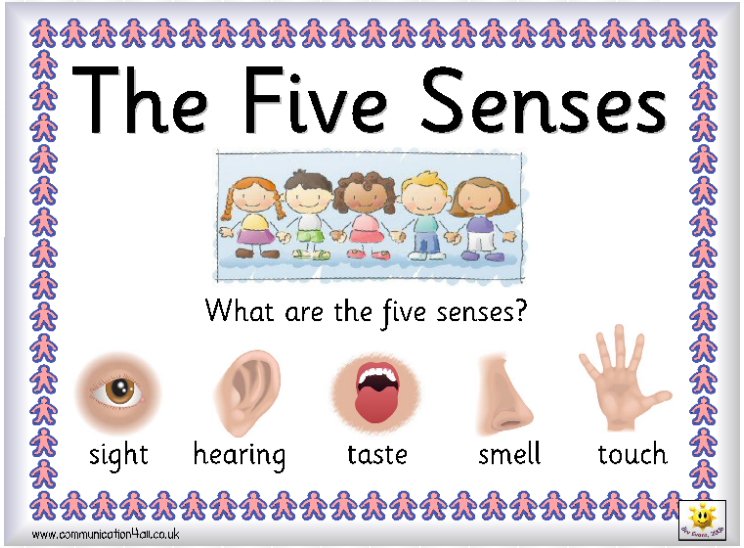
BASED ON OUR COLLECTED EVIDENCE THE WHITE SUBSTANCE IS NOT MILK, BUT GLUE.





To identify substances you must conduct an experiment.

Remember the SCIENTIFIC METHOD!



Safety and Objectives

- Practice proper lab methods, which prevent contamination and isolate variables during experiments.
- **WAFT :** technique used to smell substances
- Employ scientific vocabulary to give evidence for their conclusions.
- **Wear safety goggles!**
- Tie up long hair

Quiz!

1. Is ice melting to water a physical or chemical change?

2. List three chemical and physical properties each.

3. The scientific method is a process for experimentation that is used to explore observe and answer questions. What is the first step of the method?
A) Project experimentation
B) Hypothesis
C) Problem
D) Observation

4. Are acid/base reactions physical or chemical changes?