**Physical Properties**

Cheese is a dairy product obtained through coagulation or milk curdling, followed by draining and, for some varieties, fermentation. Curdling can occur spontaneously in the presence of certain bacteria or by the presence of enzyme (rennet) from the stomach of ruminants.

**Objective**

Classify cheeses according to their physical properties

**Safety**

Make sure the students don’t taste the cheese

**Material**

|  |  |
| --- | --- |
| * Petri dish
* Graduated cylinder
* Scale
 | * Cheese samples
* Cream cheese
* White cheddar
* Yellow cheddar
* Gruyere
* Parmesan
 |

**Method**

1. Classify the cheeses by **colour**;
2. Classify the cheeses by **smell**;
3. Classify the cheeses by **firmness**;
4. Classify the cheeses by **texture**;
5. Classify the cheeses by **density**. Weigh the cheese and determine the volume of the cheese by displacement of water.

**Observations**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Food** | Cheese 1 | Cheese 2 | Cheese 3 | Cheese 4 | Cheese 5 |
| Colour  |  |  |  |  |  |
| Smell |  |  |  |  |  |
| Firmness |  |  |  |  |  |
| Texture |  |  |  |  |  |
| Weight |  |  |  |  |  |
| Volume |  |  |  |  |  |
| Density |  |  |  |  |  |

**Analysis**

1. Since all the cheeses are made from the same ingredients, what explains the different physical characteristics?
2. Find a cheese classification method based on the observed criteria.
3. Is the production of cheese from milk a physical or chemical phenomenon? Explain your answer.
4. Compare the classification method with one of the classification methods used in the cheese industry (see presentation).