THE DETERMINATION OF LACTIC ACID IN MILK :

_ COMPARISON BETWEEN FRESH MILK AND MILK LEFT IN THE OPEN AIR FOR 3 DAYS _

Objective : to compare fresh milk and fermented milk by a simple determination of the lactic acid CH_2-CH(OH)-COOH with a soda solution .

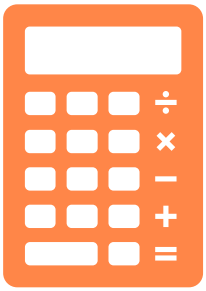
Note : the acidity of milk is conventionally expressed in Domic degrees : one Domic degree °D corresponds to 0,1g of lactic acid per litre of milk .

Materials and products :

- fresh milk and fermented milk
- distilled water, phenolphthalein soda solution of concentration Co=0.05M
- a magnetic stirrer, 2 Erlenmeyer flasks, a burette, volumetric pipettes (10mL, 20mL), pH meter, volumetric flask (50 mL), a test tube, a funnel and a stand

Procedure :

- take 20mL of milk in a volumetric pipette,
- introduce this volume into a 200mL Erlenmeyer flask, then complete with 100mL of distilled water,
- measure the pH,
- add a few drops of phenolphthalein,
- add to the burette a soda solution Co=0.05M. Let Ve1 be the volume poured at the equivalence.



$$M(\text{lactic acid}) = \frac{Co \times Veq \times 89}{20}$$