**Experiments Name: Determination of total solid & solid non fat in milk.**

Total solid content of milk: Total solid content is the entire residue left after complete evaporation of water from milk. Includes: fat, protein, lactose& mineral matter Solid constituents in milk: as mechanical mixture

**Mterials & chemicals required:**

* Balance machine
* Desicator
* Porcelain
* Hot air oven
* Tong
* Heat proof gloves
* Centrifuge machine
* Hot water bath butyrometer
* Pipette
* Gerber sulphuric acid
* Iso-amyle alcohol

**Procedure:**

**Step No: 01**

Determination of moisture content:

* Take flat bottomed 50 cm diameter porcelain crucible or petridish.
* Clean & dry crucible in hot air oven.
* Note weight of Petridis
* Add 10g of milk sample in Petridis
* Weight milk sample in the dish
* Put cruicible in hot air oven for 90 min at 1100c.
* Remove dish from oven & cool in desiccators
* Note down its weight
* Make sure the milk sample is completely dried
* Once we get dry weight, calculate moisture percent.

**% of moisture content**=Ws-(w2-w1)/Ws

**Step No: 02**

* Determination of fat content:
* Take 10.75ml of milk in a butyrometer tube
* Add 10 ml Gerber sulphuric acid
* Add 5ml of iso amyle alcohol.
* Tube is closed with a lid
* Rotate the tube so that the different contents can be mixed.
* Heat tube in a hot water bath at 65c for 5 min.
* Centrifuge for 5 min at 1100rpm
* Milk fat% is read ace to label on the butyrometer

**Step No: 03**

Calculation

.Total solid%=Total solid%-total moisture%

**Total solid non fat:** Total solid lacking any fat.

S.N.F%=Total solid%-fat %