



## Preparation of 5M Sodium Chloride (NaCl)

### Introduction :

- NaCl is highly soluble in water. Its aqueous solution is clear and colorless.
- A 5M NaCl solution is easy to prepare.
- One liter of 5M NaCl solution can be prepared by dissolving 292 grams of NaCl powder in water.
- 5M NaCl solution is stable at room temperature and can be sterilized by autoclaving.

### Requirements:

#### 1- Reagents

- ◆ Sodium chloride (NaCl)
- ◆ Deionized / Milli-Q water

#### 2- Equipment and disposables

- ◆ Measuring cylinder/volumetric flask
- ◆ Conical flask / Beaker
- ◆ Magnetic stirrer



### Preparation

**Step 1:** Weigh out 292.2 g of Sodium chloride in an appropriate size beaker or conical flask ( 2 L volume). Add 800 ml deionized water.

**Step 2:** Dissolve NaCl using a magnetic stirrer or manual shaking with a glass stirring rod.

**Step 3:** Transfer solution to measuring cylinder or a volumetric flask and adjust the volume 1000 ml with deionized water. Mix it again.

**Step 4:** Transfer the solution to an auto clavable bottle and sterilize it by autoclaving (20 minutes at 15 lb/sq.in. (psi) from 121-124°C on liquid cycle)