

## 5 M Sodium Chloride (NaCl) Solution

DNase, RNase and protease-none detected

Catalog Number **ML 011-01**

Storage Temperature 15~30°C

### Product Description

5M Sodium chloride (NaCl) solution is a commonly used salt solution that enriches DNA and RNA to form precipitate in an aqueous environment. This product is commonly used when SDS is present in the (SDS remains receptive in 70% ethanol). The product is used with ethanol at low temperatures (0°C) to retrieve about 20 mg/ml of DNA or RNA. Nucleic acid sedimentation occurs as ethanol exposes hydrated phosphate groups to Na<sup>+</sup>, which bonds to the phosphate group and thus disables the repulsive force between nucleic acid molecules, forcing them to cluster into large particles. Therefore, for ethanol mediated nucleic acid precipitation to occur, a sufficient amount of cations (Na<sup>+</sup>) need to be present; on general, adding 1/25 of the test solution's volume (final volume) worth of 3 M Sodium Acetate and adjusting the concentration to 0.3 M is sufficient enough.

<e.g.> Mix 450 µl of nucleic acid solution with 20 µl of 5 M sodium chloride solution. Add 1 ml (twice the solution's volume) of ice-cold 100% ethanol and leave at 0°C for 15 ~ 30 minutes. When the nucleic acid of interest is small in size (<100 nucleotides) or quantity (0.1 µg/ml), an additional hour should be given for sufficient settlement to occur. Isolate the precipitate by micro-centrifuging for 10 minutes and rinse with 70% ethanol. Dry and re-suspend in an appropriate buffer solution (TE buffer or Tris-Cl buffer).

**ML 011-01** contains 292.2 g/L sodium chloride in Ultra Pure Water (**ML019-02**).

### Storage/Stability

The concentrated 5 M Sodium Chloride solution should be stored at 15~30°C. Deterioration of the solution may be recognized by (1) precipitate or particulate matter throughout the solution, (2) cloudy appearance, (3) color change, and/or (4) pH change. Product label bears expiration date.

### Precautions

For *In Vitro* Use Only

		g/L
<b>Components</b>		<b>ML 011-01</b>
Sodium Chloride		292.2
<b>Product Profile</b>		
Appearance	Clear colorless solution	
Molecular Formula	NaCl	
Molecular Weight	58.44	
DNase, RNase, and Proteinase	None Detected	
Sterility	Sterilized by autoclaving (121°C, 20 min) and 0.2 µm filtration system. Sterility tests are performed in accordance with protocols described in USP.	