

3 M Sodium Acetate Solutions

DNase, RNase and protease-none detected

Catalog Number **ML 010-01 (pH 5.2)**

ML 010-02 (pH 7.0)

Storage Temperature 15~30°C

Product Description

3 M Sodium acetate solution (pH 5.2) is a commonly used salt solution that enriches DNA and RNA and forms precipitate in an aqueous environment. The product is used with ethanol at low temperatures (0°C) to retrieve about 20 ng/ml of DNA or RNA. Nucleic acid sedimentation occurs as ethanol exposes hydrated phosphate group to Na⁺, 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⁺) need to be present; on general, adding one tenth of the test solution's volume (final volume) 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 50 µl of 3 M sodium acetate (pH 5.2). 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 010-01 contains 246.09 g/L sodium acetate, anhydrous in Ultra Pure Water (**ML019-02**). pH is 5.2.

ML 010-02 contains 246.09 g/L sodium acetate, anhydrous in Ultra Pure Water (**ML019-02**). pH is 7.0.

Storage/Stability

The concentrated 3 M Sodium Acetate solutions 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

Components	g/L	
	ML 010-01	ML 010-02
Sodium Acetate	246.09	246.09
pH	5.2	7.0

Product Profile	
Appearance	Clear colorless solution
Molecular Formula	C ₂ H ₃ O ₂ Na ₂
Molecular Weight	82.03
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.