

## Preparation of 1x DNase buffer instruction

- Firstly, prepare 100 mL of DNase buffer 10 X. To a glass bottle, add:
  - 10 mL 1M Tris-HCL pH 7.5 (autoclaved or filtered)

**1)** To prepare a stock of 200 mL 1M Tris-HCL pH 7.5, first calculate the molarity. For the current product number 93363-50G:  
 $g = \text{moles} \times \text{molecular weight (MW)}$   
 $g = 1 \text{ mol} \times 157.60 \text{ (g/mol)}$   
 $g = 157.60$

**2)** Add 157.6g of Tris-HCL in 100 mL of ddH<sub>2</sub>O and wait for dissolve. Slowly complete until final volume of 200 mL while adjust the pH for 7.5 (This solution will be 1M Tris-HCL pH 7.5)  
**3)** Autoclave or filter the solution before preparing the 10x DNase buffer (100 mM Tris-HCL pH 7.5, 25 mM MgCl<sub>2</sub>, 5 mM CaCl<sub>2</sub>).

- 2.5 mL 1M MgCl<sub>2</sub> (autoclaved or filtered) (Bioultra, 63069-100ML)
- 0.5 mL 1M CaCl<sub>2</sub> (autoclaved or filtered) (Bioultra, 21115-100ML)
- 87 mL ddH<sub>2</sub>O
- Autoclave and filter.
- Dilute from DNase buffer 10 X to DNase buffer 1 X.
- To have a final volume of 100 mL DNase buffer 1 X, for example:

$$C1 \times C2 = V1 \times V2$$
$$10X \times 1X = V1 \text{ mL} \times 100 \text{ mL}$$
$$V1 = 10 \text{ mL}$$

Interpretation: Add 10 mL of DNase buffer 10 X buffer in 90 mL of ddH<sub>2</sub>O to have a final dilution of DNase buffer 1 X.

**Supplementary Figure 1.** Protocol to prepare 1x DNase buffer.