

EDTA Buffer

Product	Con.	Cat#	Size
EDTA Buffer	0.2M, pH 8.0	IBS-BE001	500ml
	0.25M, pH 8.0	IBS-BE001-1	500ml
	0.5M, pH 8.0	IBS-BE002	500ml
	0.5M, pH 8.0	IBS-BE002a	1 L
	1M, pH 8.0	IBS-BE008	500ml
	0.5M, pH 7.5	IBS-BE009	500ml
	0.5M, pH 7.4	IBS-BE009a	500ml
	1M, pH 8.5	IBS-BT021	500ml
	1M, pH 9.0	IBS-BT022	500ml

Components : x.xM EDTA (Ethylenediaminetetraacetic acid) buffer, pH x.x
pH adjusted with Sodium hydroxide (NaOH), sterile solution

Storage Conditions : Room Temperature

Stable for a minimum of 1 year from date of receipt at room temperature.

Introduction : Ethylenediaminetetraacetic acid, widely abbreviated as EDTA is a polyamino carboxylic acid and a colourless, water-soluble solid. Its conjugate base is named ethylenediaminetetraacetate. It is widely used to dissolve limescale. Its usefulness arises because of its role as a hexadentate ("six-toothed") ligand and chelating agent, i.e. its ability to "sequester" metal ions such as Ca²⁺ and Fe³⁺. After being bound by EDTA, metal ions remain in solution but exhibit diminished reactivity. EDTA is produced as several salts, notably disodium EDTA and calcium disodium EDTA

Application : In the laboratory, EDTA is widely used for scavenging metal ions: In biochemistry and molecular biology, ion depletion is commonly used to deactivate metal-dependent enzymes, either as an assay for their reactivity or to suppress damage to DNA or proteins. In analytical chemistry, EDTA is used in complexometric titrations and analysis of water hardness or as a masking agent to sequester metal ions that would interfere with the analyses. EDTA finds many specialized uses in the biomedical laboratories, such as in veterinary ophthalmology as an anticollagenase to prevent the worsening of corneal ulcers in animals. In tissue culture EDTA is used as a chelating agent that binds to calcium and prevents joining of cadherins between cells, preventing clumping of cells grown in liquid suspension, or detaching adherent cells for passaging. In histopathology, EDTA can be used as a decalcifying agent making it possible to cut sections using a microtome once the tissue sample is demineralised. EDTA is also known to inhibit a range of metalloproteinases, the method of inhibition occurs via the chelation of the metal ion required for catalytic activity.

EDTA can also be used to test for bioavailability of heavy metals in sediments.