

Specification

**EGTA for molecular biology**

**A0878**

<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A0878
<b>Product Name:</b>	EGTA for molecular biology
<b>Specifications:</b>	DNases/RNases/Proteases: not detectable Assay (titr.): min. 99 % Residue on ignition: max. 0.1 % Heavy metals (as Pb): max. 0.001 % Water: max. 1.0 % Fe: max. 0.001 %
<b>WGK:</b>	1
<b>Storage:</b>	RT
<b>Molecular Formula:</b>	$C_{14}H_{24}N_2O_{10}$
<b>M:</b>	380.35 g/mol
<b>CAS:</b>	67-42-5
<b>EINECS:</b>	200-651-2
<b>CS:</b>	29225000
<b>Comment</b>	<p>EGTA is a calcium specific chelator and can be used in the presence of <math>Mg^{2+}</math>, since its affinity is 1000 times lower for <math>Mg^{2+}</math>. EGTA inhibits metallo proteases at a concentration of 1 to 10 mM and is part of many inhibitor cocktails (3). The DNase from plant nuclei is efficiently inhibited by a combination of 160 mM L-lysine and 4 mM EGTA, enabling to isolate DNA fragments with sizes of mega bases (4) Solutions of EGTA are prepared with 1 g EGTA in 10 ml of 1 M NaOH and filled up to 100 with ddH<sub>2</sub>O (corresponds to a 26,29 mM solution).</p>
<b>Bibliography</b>	<p>(1)Berman, M.C. (1982) <i>J. Biol. Chem.</i> <b>257</b>, 1953-1957 Stimulation of calcium transport of sarcoplasmic reticulum vesicles by the calcium complex of ethylene glycol bis-(β-aminoethyl ether)-N,N'-tetraacetic acid. (2)Fuller, R.S. <i>et al.</i> (1989) <i>Proc. Natl. Acad. Sci USA</i> <b>86</b>, 1434-1438 Yeast prohormone processing enzyme (KEX2 gene product) is a <math>Ca^{2+}</math>-dependent serine protease. (3)Gegenheimer, P. (1990) <i>Methods Enzymol.</i> <b>182</b>, 174-193 Preparation of extracts from plants. (4)Liu, D. &amp; Wu, R. (1999) <i>BioTechniques</i> <b>26</b>, 258-261 Inhibition of DNase activity in plant nuclei with L-lysine and EGTA.</p>