


Specification

**DTE BioChemica**

**A1102**

<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A1102
<b>Product Name:</b>	DTE BioChemica
<b>Specifications:</b>	Assay (iodometr.): min. 99 % Solubility (5 %; H <sub>2</sub> O): clear, colorless pH (0.1 M; H <sub>2</sub> O; 20°C): 4.0 - 6.0
<b>Hazard pictograms</b>	
<b>WGK:</b>	1
<b>Storage:</b>	2-8°C
<b>Signal Word:</b>	Attention
<b>GHS Symbols:</b>	GHS07
<b>H Phrases:</b>	H315 H319 H335
<b>P Phrases:</b>	P261 P280 P304+P340 P305+P351+P338 P405 P501
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>10</sub> O <sub>2</sub> S <sub>2</sub>
<b>M:</b>	154.25 g/mol

**AppliChem GmbH**

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Specification

**DTE BioChemica**

**A1102**

<b>CAS:</b>	6892-68-8
<b>EINECS:</b>	229-998-8
<b>CS:</b>	29309098
<p><b>Comment</b></p> <p>Dithioerythritol (DTE) is an isomere of dithiothreitol (DTT). In general, DTE and DTT are exchangeable. DTE has pK values of 9.0 and 9.9 and DTT of 8.3 and 9.5, respectively. Both reagents function in the ionized state only. Therefore the reducing activity is highest in the pH range of 7.0 - 9.5. At lower pH values DTT is more active than DTE. The reducing activity is stopped by acidifying the pH (e. g. acetic acid at pH 3; ref. 3). Proteins may oxidize during gel electrophoresis. This results in diffuse bands (decreased resolution) and a non-reproducible mobility (wrong estimation of molecular size). Reduction of the protein by DTE (0.25 M stock solution in water; 5 mM final concentration) and alkylation by iodoacetamide (0.25 M stock solution; 1 \: 20 diluted in the final concentration) solves the problem (2).</p>	
<p><b>Bibliography</b></p> <p>(1) Cleland, W.W. (1964) <i>Biochemistry</i> <b>3</b>, 480-482 Dithiothreitol, a new protective reagent for SH groups. (2) Lane, L.C. (1978) <i>Anal. Biochem.</i> <b>86</b>, 655-664 A simple method for stabilizing protein-sulfhydryl groups during SDS-gel electrophoresis. (3) Jocelyn, P.C. (1987) <i>Methods Enzymol.</i> <b>143</b>, 246-256 Chemical reduction of disulfides.</p>	

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