


Specification

**Guanidine Hydrochloride *BioChemica***

**A1499**

<b>Solubility:</b>	2000 g/L (H <sub>2</sub> O)
<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A1499
<b>Product Name:</b>	Guanidine Hydrochloride <i>BioChemica</i>
<b>Specifications:</b>	<p>Assay (titr.): min. 99 %</p> <p>pH (5 %; H<sub>2</sub>O; 25°C): 4.0 - 6.0</p> <p>Insoluble matter: passes test</p> <p>Water: max. 0.5 %</p> <p>Ammonium: max. 0.05 %</p> <p>Fe: max. 0.0005 %</p> <p>Pb: max. 0.0005 %</p> <p>A (1 cm/50 % in water HPLC grade)</p> <p>260 nm: max. 0.1</p> <p>280 nm: max. 0.05</p>
<b>Hazard pictograms</b>	
<b>WGK:</b>	1
<b>Storage:</b>	RT
<b>Signal Word:</b>	Attention
<b>GHS Symbols:</b>	GHS07
<b>H Phrases:</b>	<p>H302+H332</p> <p>H315</p> <p>H319</p>
<b>P Phrases:</b>	P261

**AppliChem GmbH**

Ottoweg 4 • D-64291 Darmstadt • Phone +49 6151 9357 0 • Fax +49 6151 9357 11 • [info.de@itwreagents.com](mailto:info.de@itwreagents.com) • [www.itwreagents.com](http://www.itwreagents.com)  
 CEO Joan Roget • Commerzbank Darmstadt • Bank 508 800 50 • Account 0186989900 IBAN DE24 5088 0050 0186 9899 00 • Swiftcode DRESDEFF508 • Finanzamt Darmstadt 07 228 16476 • Register court Darmstadt HRB Nr. 7340

Specification

**Guanidine Hydrochloride *BioChemica***

**A1499**

	P280 P302+P352 P304+P340 P305+P351+P338
<b>Molecular Formula:</b>	$\text{CH}_5\text{N}_3 \cdot \text{HCl}$
<b>M:</b>	95.53 g/mol
<b>CAS:</b>	50-01-1
<b>EINECS:</b>	200-002-3
<b>CS:</b>	29252900
<b>Index Nr.:</b>	607-148-00-0
<b>Comment</b>	<p>Guanidine hydrochloride denatures proteins and inhibits nucleases. It is applied at high concentrations for the isolation of non-degraded RNA (e. g. stock solution 7.5 M; ref. 1). <math>\beta</math>-Mercaptoethanol or DTT increase the denaturing activity of guanidine hydrochloride, since they break intramolecular disulfide bonds. Guanidine thiocyanate acts even stronger than guanidine hydrochloride as a denaturant and is used for 'valuable' samples/assays. Strongly hydrophobic proteins, like the membrane protein lipophilin will not be denatured by guanidine hydrochloride (2).</p>
<b>Bibliography</b>	<p>(1)MacDonald, R.J. <i>et al.</i> (1987) <i>Methods Enzymol.</i> <b>152</b>, 219-227Isolation of RNA using guanidinium salts. (2)Cockle, S.A. <i>et al.</i> (1978) <i>J. Biol. Chem.</i> <b>253</b>, 8019-8026Resistance of lipophilin, a hydrophobic myelin protein, to denaturation by urea and guanidinium salts.</p>

**AppliChem GmbH**

Ottoweg 4 • D-64291 Darmstadt • Phone +49 6151 9357 0 • Fax +49 6151 9357 11 • [info.de@itwreagents.com](mailto:info.de@itwreagents.com) • [www.itwreagents.com](http://www.itwreagents.com)  
 CEO Joan Roget • Commerzbank Darmstadt • Bank 508 800 50 • Account 0186989900 IBAN DE24 5088 0050 0186 9899 00 • Swiftcode  
 DRESDEFF508 • Finanzamt Darmstadt 07 228 16476 • Register court Darmstadt HRB Nr. 7340