

Specification

Urea BioChemica

A1360

Solubility:	1000 g/L (H ₂ O)
Physical Description:	Solid
Product Code:	A1360
Product Name:	Urea BioChemica
Specifications:	<p>Assay (from N): min. 99 %</p> <p>Heavy metals (as Pb): max. 0.001 %</p> <p>Loss on drying: max. 0.5 %</p> <p>Chloride: max. 0.005 %</p> <p>Sulfate: max. 0.005 %</p> <p>Fe: max. 0.001 %</p> <p>A (1 cm/8 M in H₂O)</p> <p>260 nm: max. 0.05</p> <p>280 nm: max. 0.02</p>
WGK:	1
Storage:	RT
Molecular Formula:	NH ₂ CONH ₂
M:	60.06 g/mol
CAS:	57-13-6
EINECS:	200-315-5
CS:	31021010
Comment	<p>RNA or DNA denature at 7 M urea in polyacrylamide gels. Molecules with chain lengths larger than 150 - 200 nucleotides do not completely denature at room temperature in 7 M urea, so it is necessary to use polyacrylamide gels containing 98 % formamide to size larger molecules. Separation of proteins according to their size and charge requires a concentration of 6-8 M urea in the probe and in the stacking and separation gel. At alkaline pH values urea decomposes and forms cyanate ions. These ions may react with the amino group and form stable carbamylated derivatives with a changed migration pattern during electrophoresis. Solutions containing urea should not be stored for longer periods, should not be heated and gels containing urea should prerun to remove cyanate ions before loading the gel.</p>

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Bibliography

(1)Maniatis, T. & Efstratiadis, A (1980) *Methods Enzymol.* **65**, 299-305Fractionation of low molecular weight DNA or RNA in polyacrylamide gels containing 98 % formamide or 7 M urea. (2)Soulié, S. *et al.* (1996) *Anal. Biochem.* **236**, 363-364Urea reduces the aggregation of membrane proteins during SDS-PAGE. (3)Lippincott, J. & Apostol. I. (1999) *Anal. Biochem.* **267**, 57-64Carbamylation of cysteine in hemoglobin by urea.