Specification

Iodoacetamide *BioChemica* A1666

Physical Description:	Solid
Product Code:	A1666
Product Name:	Iodoacetamide *BioChemica*
Headline Comment:	• **May darken in storage!**
Specifications:	Assay (HPLC): min. 99 % Water: max. 6 %
Hazard pictograms	
WGK:	1
Storage:	2-8°C
Signal Word:	Attention
GHS Symbols:	GHS07
H Phrases:	H315 H317 H319 H335
P Phrases:	P280 P302+P352 P304+P340 P305+P351+P338
Molecular Formula:	C_2H_4INO
M:	184.96 g/mol

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Specification

Iodoacetamide *BioChemica* A1666

CAS:	144-48-9
EINECS:	205-630-1
CS:	29241900

Comment

Iodoacetamide and Iodoacetate are well suited for the investigation of the active center of enzymes with sulfhydryl groups in its active center. The reaction conditions for the carboxymethylation may vary with every protein, which shall be modified by the corresponding reagents. Especially the optimal pH value and the concentration of the reagent (iodoacetamide, iodoacetate, chloroacetamide, chloroacetic acid) may vary (see table II in ref. 1).In SDS polyacrylamide gel electrophoresis, the oxidation of sulfhydryl-containing proteins during electrophoresis may become a problem. Oxidation may non-reproducibly change the mobility of these proteins. Relief may come through reduction with DTE and subsequent alkylation with iodoacetamide of the proteins before loading the gel (2).Iodoacetamide is used as a **protease inhibitor** too. It is added to several protease inhibitor cocktails in a concentration of 1 - 5 mM. At a concentration of 4 mM, e. g. the activity of the serine protease Cerastocytin has been inhibitied by more than 95 % (3). Please note, that this inhibitor, like iodoacetate and N-Ethylmaleimide, will be inactivated by reducing agents such as DTT. Especially for the preparation of plant cell extracts, high concentrations of reducing agents have to be added to the homogenizing buffers (4).Iodoacetamide may become yellowish upon longer storage!

Bibliography

(1)Gurd, F.R. (1972) *Methods Enzymol.* **25**, 424-438Carboxymethylation. (2)Lane, L.C. (1978) *Anal. Biochem.* **86**, 655-664A simple method for stabilizing protein-sulfhydryl groups during SDS-gel electrophoresis. (3)Marrakchi, N. *et al.* (1995) *Biochim. Biophys. Acta* **1244**, 147-156Cerastocytin, a new thrombin-like platelet activator from the venom of the tunisian viper *Cerastes cerastes*. (4)Gegenheimer, P. (1990) *Methods Enzymol.* **182**, 174-193Preparation of extracts from plants.

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