


Specification

Ethidium Bromide *BioChemica*

A1151

Solubility:	40 g/L (H ₂ O)
Physical Description:	Solid
Product Code:	A1151
Product Name:	Ethidium Bromide <i>BioChemica</i>
Specifications:	<p>Assay (titr.): min. 95.0 %</p> <p>λ_{max} (MeOH): 524 - 527 nm</p> <p>Solubility (1 %; H₂O): clear, red</p> <p>Loss on drying: max. 10 %</p> <p>NH₄Br: max. 0.1 %</p>
Hazard pictograms	
UN:	2811
Class/PG:	6.1/I
ADR:	6.1/I
IMDG:	6.1/I
IATA:	6.1/I
WGK:	3
Storage:	RT
Signal Word:	Danger
GHS Symbols:	<p>GHS06</p> <p>GHS08</p>

AppliChem GmbH

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Specification

Ethidium Bromide *BioChemica*

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H Phrases:	H302 H330 H341
P Phrases:	P281 P302+P352 P304+P340 P305+P351+P338 P309 P310
Molecular Formula:	C ₂₁ H ₂₀ BrN ₃
M:	394.33 g/mol
CAS:	1239-45-8
EINECS:	214-984-6
CS:	29339980
Index Nr.:	612-278-00-6
Comment	<p>Ethidium bromide is the most commonly used dye for staining DNA during or after polycrylamide or agarose gel electrophoresis. Excitation with light at a wave length of 254 nm is absorbed by the DNA and transferred to ethidium bromide. Excitation at 366 nm directly excites the dye (3). An aqueous stock solution is prepared at a concentration of 10 mg/ml and employed at 0.2 - 0.5 µg/ml (5). Staining is performed after the gel run (especially PAGE) or during the gel run (agarose). The latter allows the observation of the gel run by control under UV light. Ethidium bromide is added to the agarose solution. Please note, that 'prestaining' may lead to artifacts (4). In another application, ethidium bromide may be used to sensitively quantify DNA by spectrofluorimetry. Excitation at 250 nm with UV light and an emission at 605 nm, the sensitivity is even better as compared to the dye Hoechst 33258. At a concentration of 0.5 µg/ml EtBr, the detection limit of 10 ng/ml DNA is reached with a linear range of measurement from 20 to 1250 ng/ml (6). Store the stock solution at +4°C protected from light. Caution: Ethidium bromide is a powerful mutagen and is moderately toxic. Gloves should be worn when working with solutions that contain this dye, and a mask should be worn when weighing ethidium bromide.</p>

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Bibliography

(1)Waring, M. (1975) in *Antibiotics Vol. III* , 141-165 (J.W. Corcoran & F.E. Hahn eds.) Springer - Verlag; Review article about ethidium and propidium. (2)Lunn, G. & Sansone, E.B. (1987) *Anal. Biochem.* **162**, 453-458Ethidium bromide\ Destruction and decontamination of solutions. (3)Sambrook, J., Fritsch, E.F. & Maniatis, T. (1989) *Molecular Cloning\ A Laboratory Manual*. 2nd Edition. Cold Spring Harbor Laboratory Press. Cold Spring Harbor, New York. (4)Gärtner, U. *et al.* (1996) *Anal. Biochem.* **243**, 194-196Apparent degradation of cleaved genomic DNA may be an ethidium bromide prestaining artifact. (5)Lucey, M.J. *et al.* (1997) *BioTechniques* **23**, 780-782Reducing the ethidium bromide quantity in agarose gel electrophoresis. (6)Bonasera, V. *et al.* (2007) *BioTechniques* **43**, 173-176Protocol for high-sensitivity/long linear-range spectrofluorimetric DNA quantification using EtBr.