

Ethidium Bromide Solution

Product	Con.	Cat#	Size
Ethidium Bromide solution	10mg/ml	IBS-BE003	20 ml

Components : 10 mg/ml Ethidium Bromide (EtBr) Solution

Storage Conditions : Cold

Storage of solutions at 2-8 °C will allow their use for up to 1 year

Introduction : Ethidium bromide (sometimes abbreviated as "EtBr") is an intercalating agent commonly used as a fluorescent tag (nucleic acid stain) in molecular biology laboratories for techniques such as agarose gel electrophoresis. When exposed to ultraviolet light, it will fluoresce with an orange color, intensifying almost 20-fold after binding to DNA. Under the name Homidium, it has been commonly used since the 1950s in veterinary to treat Trypan-osomosis in cattle, a disease caused by trypanosomes. Ethidium bromide may be a strong mutagen. It is also widely assumed to be a carcinogen or teratogen although this has never been carefully tested.

Applications : Ethidium bromide is commonly used to detect nucleic acids in the lab. In the case of DNA this is usually double-stranded DNA from PCRs, restriction digests, etc. Single-stranded RNA can also be detected, since it usually folds back onto itself and thus provides local base pairing for the dye to intercalate. Detection typically involves a gel containing nucleic acids placed on or under a UV lamp. Since ultraviolet light is harmful to eyes and skin, gels stained with ethidium bromide are usually viewed indirectly using an enclosed camera, with the fluorescent images recorded as photographs. Where direct viewing is needed, the viewer's eyes and exposed skin should be protected. In the laboratory the intercalating properties have long been utilized to minimize chromosomal condensation when a culture is exposed to mitotic arresting agents during harvest. The resulting slide preparations permit a higher degree of resolution, and thus more confidence in determining structural integrity of chromosomes upon microscopic analysis.