PRODUCT INFORMATION

Hoechst 33342 (hydrochloride)
Item No. 15547

CAS Registry No.: 875756-97-1
Formal Name: 2’-(4-ethoxyphenyl)-5-(4-methyl-1-piperazinyl)-2,5’-bi-1H-benzimidazole, trihydrochloride
Synonyms: Bisbenzimidide, HOE 33342, NSC 334072
MF: C_{27}H_{28}N_{6}O • 3HCl
FW: 561.9
Purity: ≥98%
UV/Vis.: \( \lambda_{\text{max}}^* \): 239, 272, 355 nm
Ex./Em. Max: 350/461 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hoechst 33342 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the Hoechst 33342 (hydrochloride) in the solvent of choice. Hoechst 33342 (hydrochloride) is soluble in the organic solvent DMSO, which should be purged with an inert gas. The solubility of Hoechst 33342 (hydrochloride) in DMSO is approximately 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of Hoechst 33342 (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of hoechst 33342 (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hoechst 33342 is a cell-permeable, benzimidazole dye that stains DNA by binding to the minor groove of adenine and thymine-rich sequences.\(^1\) It emits blue fluorescence (excitation 350 nm/emission maximum 461 nm) when bound to double stranded DNA and is useful as a marker of nuclei for cell cycle studies and to distinguish nuclear morphology in apoptotic cells.\(^2-4\)

References