

Certificate of Analysis

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Product Name: Hoechst 33342

Catalog No.: 5117

Batch No.: 3

CAS Number: 875756-97-1

EC Number: 245-690-6

IUPAC Name: 2'-(4-Ethoxyphenyl)-5-(4-methyl-1-piperazinyl)-2,5'-bi-1*H*-benzimidazole trihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₇H₂₈N₆O.3HCl.3.75H₂O

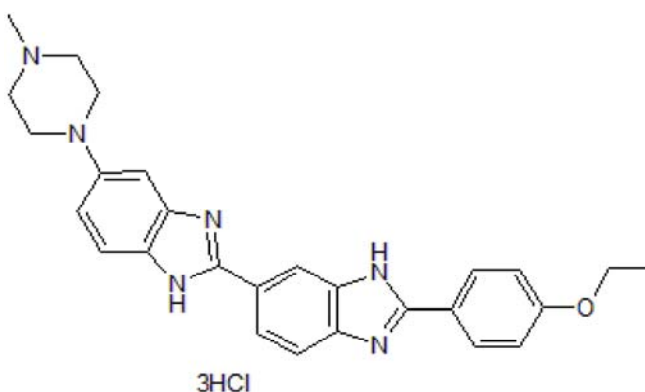
Batch Molecular Weight: 629.49

Physical Appearance: Yellow/green solid

Solubility: water to 50 mM
DMSO to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.52	6.16	13.35
Found	51.16	5.96	13.04

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

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IUPAC Name: 2'-(4-Ethoxyphenyl)-5-(4-methyl-1-piperazinyl)-2,5'-bi-1*H*-benzimidazole trihydrochloride

Description:

Hoechst 33342 stains and binds minor groove of AT-rich regions. Used to quantify DNA in viable cells. Cell permeable fluorescent DNA dye.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₇H₂₈N₆O.3HCl.3.75H₂O

Batch Molecular Weight: 629.49

Physical Appearance: Yellow/green solid

Solubility & Usage Info:

water to 50 mM

DMSO to 50 mM

Minimum Purity: ≥98%

Stability and Solubility Advice:

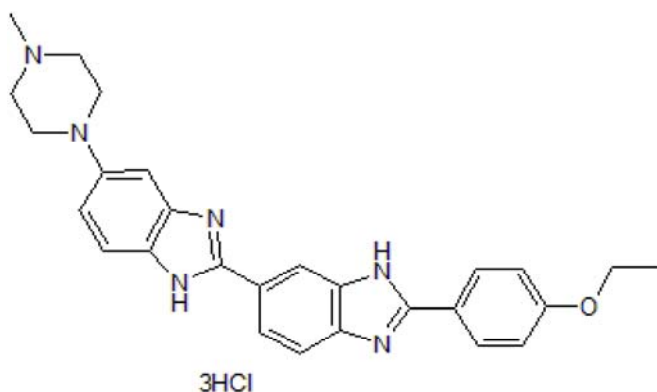
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Batch Molecular Structure:



References:

Portugal and Waring (1988) Assignment of DNA binding sites for 4',6-diamidine-2-phenylindole and bisbenzimidazole (Hoechst 33258). A comparative footprinting study. *Biochim.Biophys.Acta.* **949** 158. PMID: 2449244.

Loken (1980) Simultaneous quantitation of Hoechst 33342 and immunofluorescence on viable cells using a fluorescence activated cell sorter. *Cytometry* **1** 136. PMID: 7028425.

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North America

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