Specification

DAPI *BioChemica* A1001

Physical Description:	Solid
Product Code:	A1001
Product Name:	DAPI *BioChemica*
Specifications:	Assay (HPLC): min. 98 % Solubility (1 %; H_2O): clear N: min. 18 % UV spectrum $\lambda_{max.}$: 223 nm, 261 nm, 342 nm $\lambda_{min.}$: 246 nm, 282 nm
WGK:	1
Storage:	2-8°C protected from light
Molecular Formula:	$C_{16}H_{15}N_5 \cdot 2HCl$
M:	350.25 g/mol
CAS:	28718-90-3
EINECS:	249-186-7
CS:	29339980

AppliChem GmbH
Ottoweg 4 • D-64291 Darmstadt • Phone +49 6151 9357 0 • Fax +49 6151 9357 11 • **info.de@itwreagents.com** • **www.itwreagents.com**
CEO Joan Roget • Commerzbank Darmstadt • Bank 508 800 50 • Account 0186989900 IBAN DE24 5088 0050 0186 9899 00 • Swiftcode DRESDEFF508 • Finanzamt Darmstadt 07 228 16476 • Register court Darmstadt HRB Nr. 7340

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Comment

DAPI is an excellent dye for the staining of DNA. Originally, only the specific binding to AT-base pairs without an intercalation was known (2), but later on, the intercalation into GC-base pairs was shown (3). The most popular application of DAPI is its use as a reagent to **detect mycoplasma** or **virus DNA** (e. g. vaccinia infection or 'unwanted' viral contamination of cell culture cells) in the cell culture.**AppliChem recommends the following simple procedure**: Grow cells on a coverslip in a cell culture dish to reach approx. 70 % confluence. Pour off the medium from the cells. Wash the coverslip once with 1 µg/ml DAPI in methanol. Incubate the cells on the coverslip at 37°C for 15 minutes in 1 µg DAPI/ml in methanol. Pour off the staining solution and wash the coverslip once with methanol. Put it up-side-down on a slide with PBS or glycerol as mounting medium. Do not use water. Examine the cells under a microscope (excitation: 365 nm; emission maximum at 450 nm). Prolonged incubation with DAPI increases the nuclear fluorescence, shorter incubation time leads to a weaker nuclear staining, which facilitates the examination of the cytoplasmic fluorescence.**Solubility / Stability**: Dissolve DAPI in double-distilled water to a final concentration of 1 - 5 mg. The maximum solubility in water is approx. 25 mg/ml. DAPI is insoluble in PBS. Do not use any buffers. Dilute the stock solution with methanol to a final concentration of 1 µg/ml. Solutions are stable at room temperature for 1 - 2 weeks (4), at \+4°C up to 6 months and frozen between 6 and 12 months (1 ml aliquots). If the solution becomes turbid, DAPI is hydrolyzed. DAPI bleaches quickly in contact with light, even if it is quite stable against UV-light. Incubate your samples in the dark. If your samples are stored at \+4°C for one day, fluorescence is stabilzed.

Bibliography

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