MycoLight™ Green JJ98 and JJ99

Ordering Information	*Storage Conditions*	*Instrument Platform*
Product Numbers: 24000 and 24001	Keep in freezer Protect from moisture and light	Fluorescence microscope Flow cytometry

Biological Applications

MycoLight™ Green JJ98 and JJ99 are cell-permeant nucleic acid stains that show a large fluorescence enhancement upon binding nucleic acids. They can be used to stain RNA and DNA in both live and dead eukaryotic cells, as well as in Gram-positive and Gram-negative bacteria. The nucleic acid -bound MycoLight™ Green JJ98 and J99 have excitation and emission spectra very close to those of fluorescein (FAM) or SYTO® 9, making the dyes compatible with instruments equipped with the 488 nm argon laser or any visible light excitation with wavelength in the region. The MycoLight™ Green JJ98 and JJ99 nucleic acid stain have been evaluated for diverse applications from staining DNA spotted on microarrays to staining live and dead Gram-positive and Gram-negative bacteria. They do not act exclusively as nuclear stains in live cells and should not be equated with DNA-selective compounds such as DAPI (Cat#17507, 17510) or Hoechst 33342 (Cat# 17530, 17535), which stain nuclei in live and dead mammalian cells.

Spectral Properties

Ex/Em = 485/498 nm when bound to DNA, and 486/501 nm when bound to RNA

Sample Protocol for Cell Staining

Note 1: The following protocol can be adapted for most cell types. These conditions require adjustment for each cell type and experimental system. Growth medium, cell density, the presence of other cell types and factors may influence staining. Residual detergent on glassware may also affect staining of many organisms, and cause brightly stained material to appear in solutions with or without cells present.

Note 2: Use plastic tubes when diluting MycoLight™ Green JJ98 and JJ99, because the diluted stain adheres to glass. In general, the best results are obtained in buffers that do not contain phosphate.

1. Adherent cells in culture may be stained *in situ* on coverslips. Pellet cells in suspension by centrifugation and resuspend in buffered salt solution or water.
2. Dilute the MycoLight™ Green JJ98 or JJ99 with non-phosphate buffer such as Hepes buffer or buffer of your choice. Add MycoLight™ Green JJ98 or JJ99. Using the concentrations listed below Table 1 as a guideline. In initial experiments, it may be best to try several dye concentrations over the entire suggested range to determine the concentration that yields optimal staining.

Table1. Suggested conditions for staining cells with MycoLight™ Green JJ98 and JJ99

Application	Concentration	Staining Conditions
Bacterial cells	50 nM – 20 µM	Vortex to mix, then incubate for 1–30 minutes.
Eukaryotic cells	10 nM – 5 µM	Incubate for 10–120 minutes.
Microarrays	50 nM in TE buffer	Incubate for 5 minutes, rinse and then dry.

3. Stained eukaryotic cells generally show diffuse cytoplasmic staining as well as nuclear staining. Particularly MycoLight™ Green JJ98 and JJ99 intense staining of intranuclear bodies are frequently observed.

Disclaimer: *This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact our technical service representative for more information.*

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