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GelStar™ Nucleic Acid Gel Stain

Filter Selection Tables

Introduction

GelStar[™] Gel Stain represents the latest advance in nucleic acid staining technology. This high performance dye allows sensitive fluorescent detection of DNA and RNA using a standard 300 nm UV transilluminator following gel electrophoresis. Alternatively, systems using laser excitation can be used. Gels can be documented with either Polaroid® or CCD-based camera systems. The charts below will assist you in choosing the best filter for your particular system.

Recommended filters for non-CCD based systems

Documentation System	Recommended Camera Filter	Other Suitable Camera Filters
Polaroid® type 667, 57 or 55 film using a gelatin filter	GelStar [™] Filter (Wratten® #9 filter) available from Lonza Rockland, Inc., catalog number 50536. This is a 75 x 75 mm gelatin filter that can be cut to size. For threaded glass filters will result in some loss filters, see below.	Ethidium Bromide (Wratten® #22 filter plus UV filter) or SYBR® green stain filter (Wratten® #15 filter). Use of either of these filters will result in some loss of sensitivity.
Other Polaroid® or standard photographic systems using a glass Tiffen® filter	Tiffen® yellow no. 2 filter (Y-2)	None

Recommended Filters for CCD-based systems

Documentation System	Recommended Camera Filter	Other Suitable Camera Filters
Alpha Innotech AlphaImager®	Ethidium bromide bandpass	None
2000 system	filter from Alpha Innotech	
Stratagene Eagle Eye® II	Eagle Eye® SYBR® Green filter	None
system	from Stratagene (#538DF75D509613)	
Hitachi FMBIO® or FMBIO II	505 Filter from Hitachi Software	None
system		
Molecular Dynamics	515 Long pass filter from the	None
Fluorimager® SI system	standard filter set	
Fuji Science Systems	Standard 510 nm cut-off filter	None
FLA-2000	provided with the system	
Fuji Science Systems	Standard 510 nm cut-off filter	None
LAS-1000	provided with the system	

To assist you with GelStar[™] Stain use on other systems, the following are the emission and excitation maxima for GelStar[™] Stain. There is a secondary excitation peak around 300 nm, which allows use of standard UV transillumination systems.

Excitation Wavelength	Emission Wavelength DNA (RNA)
493 nm	527 nm (532 nm)

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