Revised: August 13, 2012

Activated Charcoal Decontamination Bags

Catalog Number: 22007

Unit Size: 25 per pack

Storage and handling: Store at room temperature.

Product Description

Activated charcoal bags are used to adsorb harmful mutagenic dyes such as ethidium bromide from gel staining or electrophoresis solutions prior to disposing of solutions down the drain. The charcoal bags containing the adsorbed dye are then disposed as solid hazardous waste for incineration. Biotium's activated charcoal decontamination bags have a total capacity of at least 10 mg ethidium bromide.

The bags also can be used to adsorb Biotium's GelRed™ and GelGreen™ nucleic acid stains. While GelRed™ and GelGreen™ are classified as non-hazardous by California EPA Title 22 for disposal in regular trash or down the drain, your local waste disposal regulations may vary.

Directions

For solutions of EtBr, add one bag to 1L solution and incubate overnight without stirring, or four hours with constant stirring using a magnetic stir-bar. For solutions of GelRed™ and GelGreen™, add one bag to 1L solution and incubate at least 4 hours with constant stirring. Monitor the reduction in dye concentration by measuring the absorbance of the solution using a spectrophotometer. Absorbance is proportional to dye concentration.

Dye solution	Wavelength	Absorbance
0.5 ug/mL Ethidium Bromide	285 nm	0.05
3X GelRed™	280 nm	0.28
3X GelGreen™	503 nm	0.5

Related Products

Cat.#	Product Name	Unit Size
41003	GelRed™ Nucleic Acid Gel Stain, 10,000X in water	0.5 mL
41005	GelGreen™ Nucleic Acid Gel Stain, 10,000X in water	0.5 mL
40042	Ethidium Bromide, 10 mg/mL in H_2O	10 mL
41006	TBE Buffer, 5X	4 L
31021	1 kb DNA Ladder	30 ug
31022	Ready-to-Use 1 kb DNA Ladder	150 applications
31009-T	AccuBlue™ Broad Range dsDNA Quantitation Solution (for quantitating 2-2000 ng dsDNA)	Trial Size, 200 assays
31008-T	AccuBlue™ High Senstivity dsDNA Quantitation Solution (for quantitating 0.2-100 ng dsDNA)	Trial Size, 200 assays
31027-T	AccuClear™ Ultra High Sensitivity dsDNA Quantitation Solution (for quantitating 0.03-250 ng dsDNA)	Trial Size, 200 assays
31000-T	EvaGreen® dye, 20X in water	1 mL
31003-T	Fast EvaGreen® qPCR Master Mix	100 reactions
31020-T	Fast Plus EvaGreen® qPCR Master Mix	100 reactions
31005-T	Fast Probe Master Mix	100 reactions

Please visit **www.biotium.com** to view our full selection of products featuring bright and photostable fluorescent CF™ dyes, including secondary antibodies and Mix-n-Stain™ antibody labeling kits, and R-PE dye conjugates. Biotium also offers a variety of apoptosis and cell viability assays for flow cytometry analysis, including mitochondrial membrane potential dyes, fluorescent Annexin V conjugates, and NucView™488 Caspase-3 Substrate for live cells.

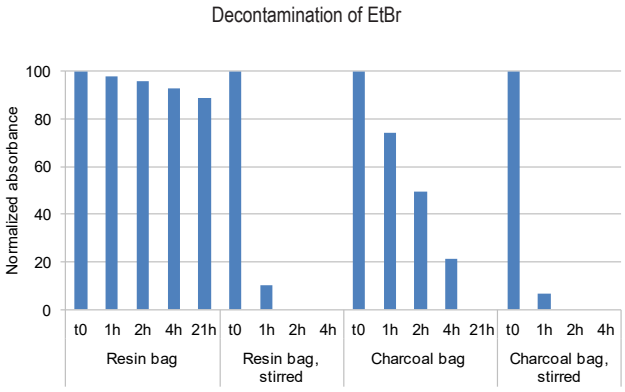

Figure 1. Decontamination of ethidium bromide with Biotium's activated charcoal bags compared to resin decontamination bags from another supplier. One decontamination bag was added to 1L of 0.5 ug/mL ethidium bromide in TBE. Solutions were protected from light and either left still or stirred constantly using a magnetic stir-bar during decontamination. An aliquot of solution was removed for absorbance measurement before adding the decontamination bag (t0) and 1, 2, 4, and 21 hours after adding the bag. The absorbance at each time point was normalized to time 0. The resin bag required stirring to efficiently remove EtBr, while the charcoal bag removed all measurable EtBr after overnight incubation without stirring, or 2h incubation with stirring.

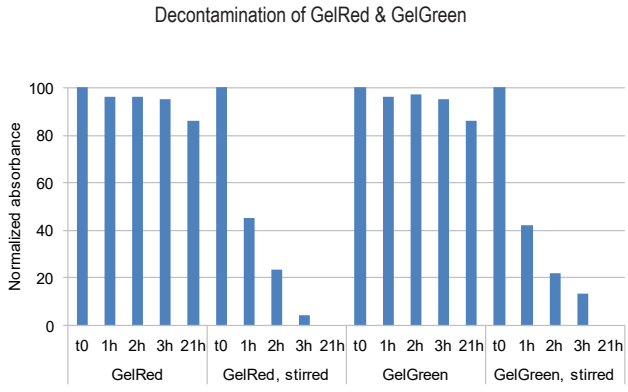

Figure 2. Decontamination of GelRed and GelGreen using Biotium's activated charcoal bags. One decontamination bag was added to 1L of 3X GelRed 0.1M NaCl or 3X GelGreen in 0.1M NaCl. Solutions were protected from light and either left still or stirred constantly using a magnetic stir-bar during decontamination. An aliquot of solution was removed for absorbance measurement before adding the bag (t0) and 1, 2, 3, and 21 hours after adding the bag. The absorbance at each time point was normalized to time 0. Decontamination of GelRed and GelGreen was not efficient without stirring, however, one bag removed all measurable GelRed or GelGreen after 3 hours with constant stirring.