



## Sekuroka<sup>®</sup> DeconBags

Absorber bags for removing ethidium bromide from liquids.

### T856.1

Sekuroka<sup>®</sup> DeconBags constitute a simple method of removing ethidium bromide from solutions. The content consists of a special, activated carbon, which absorbs ethidium bromide efficiently and safely.

Also suitable for decontamination of PicoGreen<sup>®</sup>, SYBR<sup>®</sup> Green and propidium iodide.

Sekuroka<sup>®</sup> DeconBags are resistant against most organic solvents and their aqueous dilutions, such as acetone, chloroform, ethanol, isopropanol, n-butanol, and phenol.

#### **Application:**

- Add a fresh Sekuroka<sup>®</sup> DeconBag to the ethidium bromide staining solution. Make sure that the bag is well submerged and wetted. For moistening of the bags carefully knead it under water (e.g. water-tap water) for approx. 20 seconds, until the bag gets darker. This colour change is evidence for moistening of the paper and its contact to the active charcoal contained within.  
Note: Be sure to not damage the paper in the process.
- Incubate the solution under stirring for 24 hours at room temperature.
- Remove the bag with the aid of tweezers.
- **Dispose of the bag according to the regulations for hazardous waste.**
- Decontaminated solutions can be poured away into the sewerage. Be careful to clean the container and the magnetic follower thoroughly.

#### **Absorption capacity per bag:**

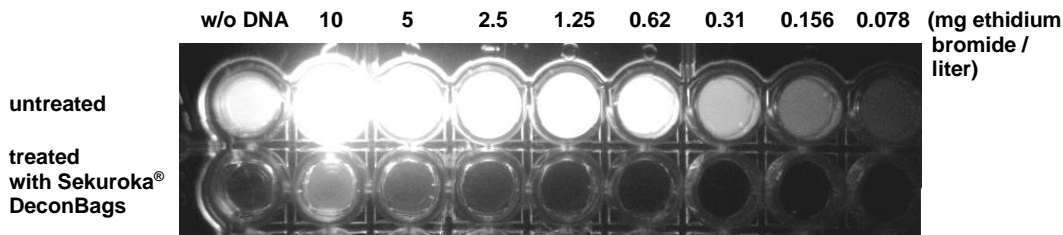
2.5 mg ethidium bromide from up to 10 l aqueous solution. This is equivalent to 5 l of a typical staining solution in accordance with Sambrook *et al.* with an ethidium bromide concentration of 0.5 mg/l.

Sekuroka<sup>®</sup> DeconBags are only suitable for **one-time application**.

The bags may not be reused even if they have not been used up completely. The absorption capacity for ethidium bromide sinks when used repeatedly. Effective decontamination can, therefore, no longer be guaranteed.

#### **Normation of decontaminating ethidium bromide solutions with Sekuroka<sup>®</sup> DeconBags.**

One bag can absorb 2.5 mg ethidium bromide from 250 ml aqueous solution within 24 hours (see figure 1). Efficiency is above 99 %.



**Fig. 1: Ethidium bromide content of a 1 x TAE-solution before and after treatment with Sekuroka® DeconBags.**

**Experiment:**

Ethidium bromide was dissolved at a concentration of 10 mg/l in 500 ml 1 x TAE. This is equivalent to an overall amount of 5 mg ethidium bromide. 5 ml were removed as a sample. **Two** Sekuroka® DeconBags were added to the remaining 495 ml. The preparations were incubated at room temperature under gentle stirring and away from direct sunlight for 24 hours. A binary series of aqueous dilutions was set up from both the preparations, 100 µl at a time transferred to UV-permeable titer plates, and 60 µg sheared calf thymus DNA was added. By adding DNA, the sensitivity of ethidium bromide detection is increased. The titer plate was photographed under UV-illumination (306 nm). The upper row of the diagram shows the series of dilutions of the untreated sample and the lower row of the treated sample. No DNA was added to the undiluted solutions in the arrays marked "-DNA". The concentration of diluted solution is indicated above the remaining arrays.

**Results:**

The treated solution contains less ethidium bromide than the 1:128 diluted, untreated solution (0.078 mg/l). Ethidium bromide is, even in the undiluted treated sample, no longer detectable and, therefore, lies below the quantity of ethidium bromide which reveals no increased mutagenesis in Ames' test. Decontaminated solutions may be poured away into the sewerage.

**Trouble shooting:**

If the absorption capacity does not completely meet the demands, this is, as a rule, due to an insufficient wetting of the bags. Please note our comments under 'Application'.

<b>Sekuroka® DeconBags</b>	10 bags	<b>T856.2</b>
	50 bags	<b>T856.1</b>
	250 bags	<b>T856.3</b>

**Carl Roth GmbH + Co. KG**

Schoemperlenstraße 3-5 • 76185 Karlsruhe  
P.O. Box 100121 • 76231 Karlsruhe  
Phone: +49 (0) 721/ 5606-0  
Fax: +49 (0) 721/ 5606-149  
info@carlroth.com • www.carlroth.com gh 03/2021

The company is a limited partnership with headquarters in Karlsruhe, reg. court Mannheim HRA 100055. Roth Chemie GmbH, with headquarters in Karlsruhe, reg. court Mannheim HRB 100428, is the personally liable partner. Chairman of the Board: Eberhard Gaul; Managing Director: André Houdelet. Sales tax identification number: DE 143621073.