DELFIA® Enhancer C500-100

INTENDED USE

The DELFIA® Enhancer is a chelating detergent solution intended for *in vitro* use in the quantitative determination of terbium (Tb^{3+}) and dysprosium (Dy^{3+}) in dissociation-enhanced time-resolved fluorometry. It is used in combination with DELFIA Enhancement Solution (prod. no. 1244-104 or 1244-105) which dissociates all the label ions (e.g. Eu^{3+}, Sm^{3+} or Tb^{3+} or Dy^{3+}) used. After possible measurement of Eu^{3+} and Sm^{3+}, DELFIA Enhancer is added to create fluorescent Tb^{3+}- and Dy^{3+}-chelates for highly sensitive measurement.

PACKAGE CONTENTS

50 mL of ready for use DELFIA Enhancer, containing:

- Cetyltrimethylammonium bromide
- Sodium acetate
- Tris
- Chelator

Store preferably at +18 - +25°C. When stored in lower temperatures white precipitation may be seen. In such case warm up the solution to dissolve the precipitate. Protect from light when not in regular use. Refer to bottle label for expiry date.

PRODUCT USE

Allow the bottle to reach room temperature before use.
Avoid contamination of any kind by minimizing contacts with the solution.
Use e.g. an "Eppendorf Multipette" type of pipette (prod. no. 1296-014) with 0.5 mL Combitips (Eppendorf prod. no. 0030048.008).

After performing the specific binding reaction with lanthanide-labelled reagents (e.g. antibodies) wash the solid phase with neutral wash solution. Add 200 µL of DELFIA Enhancement Solution (prod. no. 1244-104 or 1244-105) directly from the reagent bottle to each well using **the recommended Eppendorf Multipette** after flushing the Combitip once with Enhancement Solution. Refill the Combitip and discard the first aliquot. Avoid touching the edge of the well or its contents. Shake the frame slowly for 5 minutes (immunoassays) or 25 minutes (hybridization assays). If used for multi-label assays, measure Eu^{3+} and Sm^{3+} fluorescence normally. For enhancing Tb^{3+} and Dy^{3+} fluorescence dispense additional 50 µL of the DELFIA Enhancer, shake for 5 minutes, equilibrate for an additional 5 minutes and measure the fluorescence.

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In the table below are given the recommended measuring parameter groups for Tb^{3+} and Dy^{3+}. Wallac 1420-002 VICTOR has ready installed filters for these labels. Wallac 1234 Fluorometer is equipped with terbium filters only.

	Tb^{3+}	Dy^{3+}
- excitation filter	340 nm	340 nm
- emission filter	545 nm (2)	572 nm
- counting (excitation) cycle time	2000 µs (2 ms)	1000 µs (1 ms)
- counting delay time	500 µs	30 µs
- counting window	1400 µs	30 µs

PRODUCT SPECIFICATION

Linear measurement range = 10^{-13} - 10^{-8} mol/L of Tb^{3+}
Maximum Tb^{3+} background in solution is below 10^{-12} mol/L

REFERENCE

Hemmilä, I., Mukkala, V.-M., Latva, M., Kiilholma, P. (1993): Di- and tetracarboxylate derivatives of pyridines, bipyridines and terpyridines as luminogenic reagents for time-resolved fluorometric determination of terbium and dysprosium. J. Biochem. Biophysic. Methods **26**, 283 - 290.

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