CREATIVE BIOMART®
Assay Kit

Quantum Yield Fluorescence Determination Kit

Product Information

Cat.No. Kit-2084

Size

1 kit

Description

When a fluorophore absorbs a photon of light, an energetically excited state is formed. The fate of this species is varied, depending upon the exact nature of the fluorophore and its surroundings, but the end result is deactivation (loss of energy) and return to the ground state. The main deactivation processes which occur are fluorescence (loss of energy by emission of a photon), internal conversion and vibrational relaxation (non-radiative loss of energy as heat to the surroundings), and intersystem crossing to the triplet manifold and subsequent non-radiative deactivation. The fluorescence quantum yield is the ratio of photons absorbed to photons emitted through fluorescence. In other words the quantum yield gives the probability of the excited state being deactivated by fluorescence rather than by another, non-radiative mechanism. The kit provides all the essential components for fluorescence quantum yield determination for biological conjugates. It is optimized for determining the fluorescence quantum yields of fluorescent conjugates of proteins, peptides, nucleotides and nucleic acids.

Storage

Keep in freezer. Avoid exposure to light.

Kit Components

Components Amount Fluorescence Quantum Conjugates Labeled with the Following Yield in Water (Φs value) Dyes or the Dyes of Similar Wavelength (for the Reference Standard Selection)Reference A 1 ml 0.98 FAM, 6-TET, 6-HEX, 6-JOE, FITC, Cy®2, iFluor™® 488 and 514, iFluor™ 488 and 514, DyLight™ 488 or other dyes that have emission of 500 ± 50 nm Reference B 1 ml 0.20 Cy3®, iFluor™® 514, 532, 546 and 555, iFluor™ 514, 532 and 555, DyLight™ 555, TRITC or other dyes that have emission of 550 ± 50 nm Reference C 1 ml 0.44 Texas Red®®, Texas Red®®-X, iFluor™® 594, iFluor™ 594, California

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Red™, DyLight™ 594 or other dyes that have emission of 600 ± 50 nmReference D 1 ml 0.24 Cy5®, Cy5.5®, Cy7®, iFluor™® 633, 647, 700 and 750, iFluor™ 633, 647, 700 and 750, DyLight™ 650, 680 and 755 or other dyes that have emission of 650 ± 50 nm

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