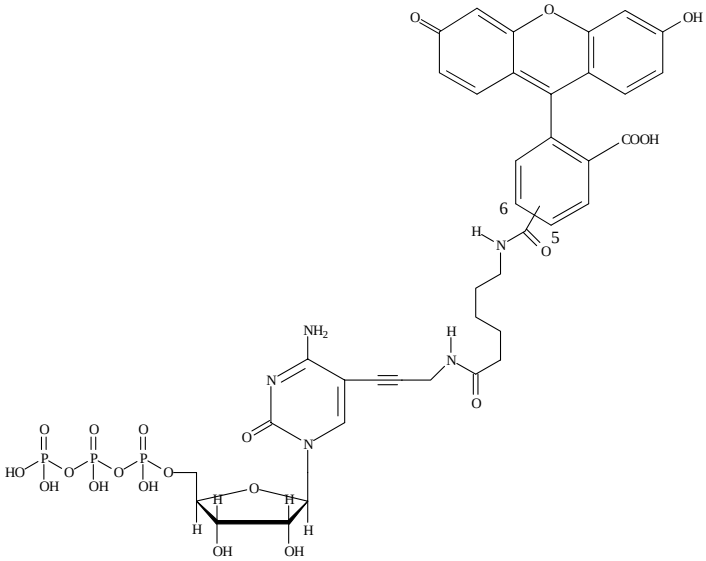
PerkinElmer Life and Analytical Sciences
549 Albany Street, Boston, MA 02118

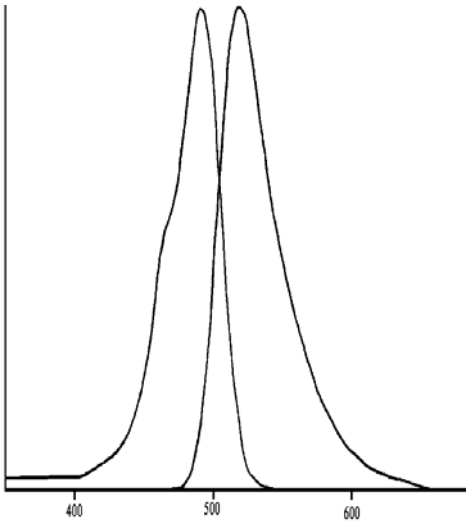
Technical Data
Certificate of Analysis

Caution: For Laboratory Use. A research chemical for research purposes only.

Fluorescein-12-CTP
NEL-434



QUANTITY: 25 nmol
FORM: 25 µL solution
CONCENTRATION: 1.0 mM
SOLVENT: 10 mM Tris-HCl, pH 7.6, 1 mM EDTA
FORMULA: $C_{39}H_{40}N_5O_{21}P_3$ **FW** = 1007
COLOR: U/C analogs more yellow than A/G
EXTINCTION COEFFICIENT: 30,000 $M^{-1}cm^{-1}$
(494 nm, Phosphate buffer, pH = 7)



WAVELENGTH: (Maxima) EXCITATION 494nm
EMISSION 517nm

PC0125 - 0105

INTRODUCTION

Fluorescent nucleotide analogs[1,3] are biologically active with a variety of DNA and/or RNA polymerizes. Labeling methods such as: nick translation, random priming, polymerase chain reaction, 3'-end labeling, or transcription of RNA using SP6, T3, or T7 RNA polymerases may be used. Some analogs demonstrate variations in relative performance depending upon nucleotide and fluorophore selected due to enzyme preferences. Labeled probes may be used in applications including (but not limited to) chromosome mapping[2]. These analogs are intended to be detected directly by their fluorescence properties. **For additional information: call 1-800-762-4000 or visit our WEB site at http://www.perkinelmer.com/nucleotide_analogs.**

QUALITY CONTROL

The nucleotide analog is purified by HPLC chromatography. Analytical HPLC is used as a quality control check to ensure chemical purity >95%. UV/VIS absorption spectra are obtained in aqueous phosphate buffer to determine concentration. Relative fluorescence quantum yields are not necessarily the same for the four different base nucleotide analogs.

STABILITY AND STORAGE CONDITIONS

Nucleotides labeled with fluorophores should be protected from extended exposure to light. These nucleotide analogs are stable kept in a refrigerator or colder for at least 1 year. Minimizing freeze-thaw cycles and exposure to light are most critical factors to consider for long term usage.

For Research Use Only:

[1]This product or the use of this product may be covered by one or more patents owned by PerkinElmer LAS, Inc. including U.S. Patent Nos. 5,047,519; 5,151,507; 5,558,991, and 5,608,063. Those products incorporating a cyanine dye are covered under the following issued US Patent Nos. 114,350, 6197, 956, 6,204,389, and 6,224,644 on the cyanine dye precursors, uses, and labeled moieties.

[2]This product may not be used for DNA sequencing unless (a) used with a DNA sequencer instrument purchased from PerkinElmer LAS, Inc. or its sublicensees, or (b) a separate license for such use is obtained from Applied Biosystems, Inc., Foster City, CA.

[3]The use of this product for primer extension may be covered by one or more of the following US patents (or their foreign counterparts) – 5,888,819, 5,952,174, 6,004,744, 6,013,431 and to the extent covered may not be used unless a separate license for such use is obtained from Beckman Coulter, Inc. of Fullerton, CA.