

Product Name: ICG-d7

Catalog No.: 7749

Batch No.: 1

CAS Number: 2861905-57-7

IUPAC Name: Sodium 4-(2-(((1*E*,3*E*,5*E*,7*Z*)-7-(1,1-Dimethyl-3-(4-sulfonatobutyl)-1,3-dihydro-2*H*-benzo[*e*]indol-2-ylidene)hepta-1,3,5-trien-1-yl)-1,2,3,4,5,6,7-*d*₇)-1,1-dimethyl-1*H*-benzo[*e*]indol-3-ium-3-yl)butane-1-sulfonate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₃H₄₀D₇N₂O₆S₂Na

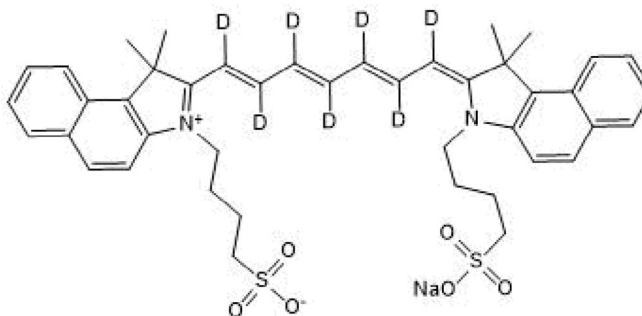
Batch Molecular Weight: 782.01

Physical Appearance: Red metallic solid

Solubility: water to 10 mM
DMSO to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.0% purity at 780nm

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 790 nm (DMSO)

λ_{em}: 816 nm (DMSO)

Atom %D: 97.4%

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Key information: ICG-d7 is a partially deuterated form of near-infrared fluorescent dye Indocyanine Green (ICG; Cat. No. 7510). Application: Fluorescence microscopy, in vivo imaging. Properties and Photophysical Data: ICG-d7 operates in the 700 - 900 nm wavelength range; also exhibits fluorescence emission in the shortwave infrared window (SWIR; 1,000 - 2,000 nm) which enables in vivo imaging. ICG-d7 shows improved stability in aqueous solutions over ICG with the same fluorescence brightness, and similar absorption and emission maxima in both DMSO and FBS. Excitation and emission maxima (λ) are 794 nm and 818 nm, respectively; quantum ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

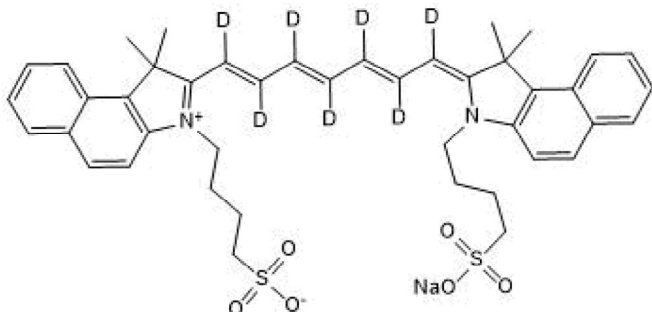
Batch Molecular Formula: C₄₃H₄₀D₇N₂O₆S₂Na

Batch Molecular Weight: 782.01

Physical Appearance: Red metallic solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Li and Smith (2021) Deuterated indocyanine green (ICG) with extended aqueous storage shelf-life: chemical and clinical implications. Chemistry 27 14535. PMID: 34403531.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 10 mM

DMSO to 10 mM

In solution, this compound undergoes slow deuterium/protium exchange such that the total Atom%D diminishes over time. It is therefore recommended that solutions are used immediately following preparation.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

Sold under license from the University of Notre Dame

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