

**Product number: K7-545**  
**Product name: SeTau-425-NHS**

## General Data

- Molecular Mass:** 543.02  
**Solubility:** Water, alcohol, DMF, DMSO  
**Insoluble:** Acetone, chloroform, toluene  
**Storage:** Store in absence of light, desiccated and refrigerate

## Description

Hydrophilic, amine-reactive, long-lifetime fluorescent label containing one NHS-ester group.

## Applications

- Covalent labeling of proteins, peptides, amino-modified DNA, amino-modified oligo-nucleotides and lipids.
- Fluorescence lifetime assays.
- Measurement of high-molecular-weight antigens in Fluorescence Polarization Immunoassays (see below).

## Advantages

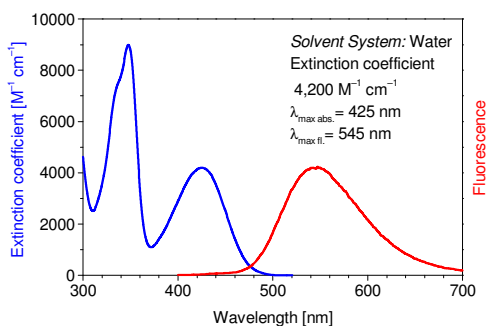
- Strongly fluorescent label for proteins and other biomolecules
- Long fluorescence lifetime of 26.2 ns in water
- Perfectly suited for excitation with the 380-nm, 404-nm and 436-nm diode lasers or the new 330-nm LED.
- Large Stokes' shift (> 100nm)
- Highly soluble in aqueous buffer

## Spectral Data

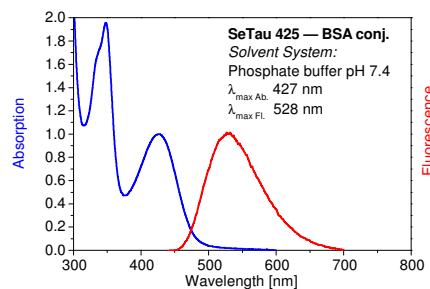
Sample	Dye-to-protein Ratio	Solvent System	Absorption max. [nm]	Extinction Coefficient [M <sup>-1</sup> ·cm <sup>-1</sup> ]	Fluorescence <sup>1</sup> max. [nm]	Q.Y. [%]	Luminescence Lifetime [ns]			Polarization [mP]
							τ <sub>1</sub>	τ <sub>2</sub>	Mean τ	
Free dye	—	water	425 340	4,200 9,000	545	39	26.2	—	26.2	
BSA conjugate 1	1	pH 7.4	427		528	16				165
BSA conjugate 2	5	pH 7.4	427		532	10				165

<sup>1</sup> Excitation at 400 nm

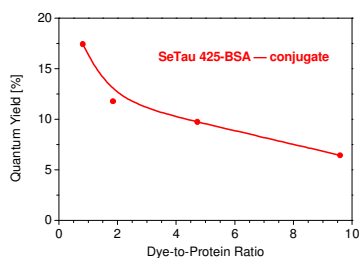
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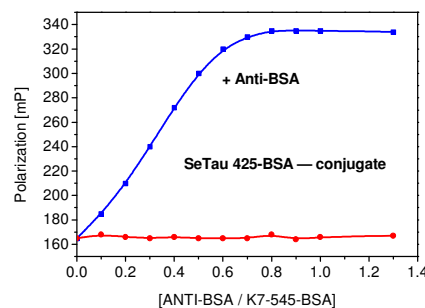
Absorption and emission spectra of **K7-545** in water



Absorption and emission spectra of **K7-545 — BSA conjugate** (Dye-to-protein Ratio 1.8) in phosphate buffer (pH 7.4)



Quantum Yield vs Dye-to-protein Ratio of **K7-545 — BSA conjugates**



Changes in Fluorescence Polarization of **SeTau 425-labeled BSA** (MW ~ 65 kDa) upon titration with anti-BSA. The labeled BSA has still a relatively low polarization of 165 mP and only upon addition of antibody the polarization increases gradually to its final value of 335 mP, which demonstrates the usefulness of this label for measurement of high-molecular-weight antigens in a Fluorescence Polarization Immunoassay (FPA)