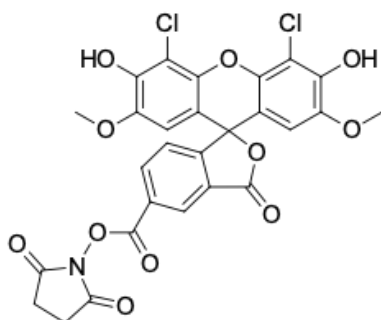


## JOE NHS ester, 5-isomer

<http://www.lumiprobe.com/p/joe-nhs-ester-5>

JOE is a fluorescein-derived xanthene dye containing methoxy groups and chlorine atoms. Its absorption and emission spectra are between FAM and TAMRA/ROX channels. For this reason, this fluorophore is often used for multiplex detection, including DNA sequencing.

This derivative is an activated N-hydroxysuccinimide ester used to label proteins, peptides, amino-modified oligonucleotides, and other target molecules via conjugation with amines.



**Structure of JOE NHS ester, 5-isomer**

### General properties

Appearance:	orange powder
Molecular weight:	602.33
CAS number:	113394-24-4
Molecular formula:	$C_{27}H_{17}Cl_2NO_{11}$
Quality control:	NMR $^1H$ and HPLC-MS (95+%)
Storage conditions:	12 months after receipt at $-20^{\circ}C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. Avoid prolonged exposure to light.

### Spectral properties

Excitation/absorption maximum, nm:	533
$\epsilon$ , $L \cdot mol^{-1} \cdot cm^{-1}$ :	75000
Emission maximum, nm:	554
Fluorescence quantum yield:	0.61
$CF_{260}$ :	0.36
$CF_{280}$ :	0.28