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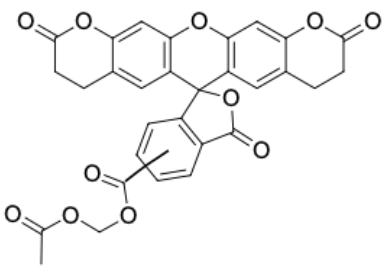
BCECF AM, green fluorescent pH indicator

http://www.lumiprobe.com/p/bcecf-am

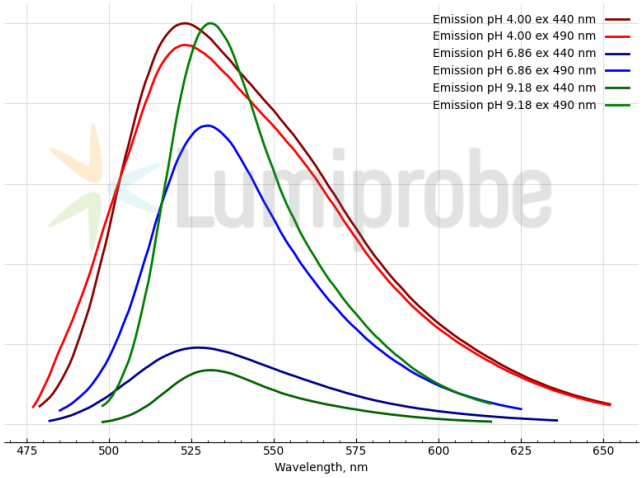
BCECF AM (2′,7′-bis-(2-carboxyethyl)-5-(and-6)-carboxyfluorescein acetoxymethyl ester) is a cell-permeant, dual-excitation ratiometric fluorescent indicator for measuring changes in the intracellular pH.

Cytosolic esterases hydrolyze BCECF AM to yield BCECF, a polar fluorescein derivative held by cells. BCECF is stable in the cells and has an efflux half-life of over two hours. Intracellular pH is estimated by determining the pH-dependent ratio of emission intensity at 530 nm when the dye is excited at 490 nm vs. the emission intensity when excited at 440 nm. This approach can be carried out using spectrofluorometry or flow cytometry methods.

BCECF AM can also be used to investigate intracellular changes in other ions, including potassium.



Structure of BCECF AM



The pH-dependent fluorescence excitation spectra of BCECF measured at two wavelengths

General properties

Appearance:	white powder
Molecular weight:	556.47
CAS number:	117464-70-7
Molecular formula:	$C_{30}H_{20}O_{11}$
IUPAC name:	3',6'-bis[(acetyloxy)methoxy]-5(or 6)-[[(acetyloxy)methoxy]carbonyl]-3-oxo-spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-2',7'-dipropanoic acid, 2',7'-bis[(acetyloxy)methyl] ester.
Solubility:	DMSO, ethyl acetate, toluene, acetonitrile
Quality control:	NMR ^{1}H and HPLC-MS (95+%)
Storage conditions:	24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

Spectral properties

Excitation/absorption maximum, nm:	440; 490
Emission maximum, nm:	530