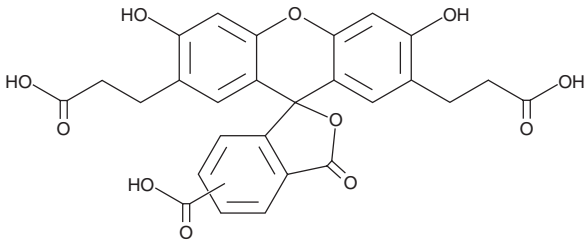
PRODUCT INFORMATION

BCECF

Item No. 17183

CAS Registry No.:	85138-49-4
Formal Name:	5(or 6)-carboxy-3',6'-dihydroxy-3-oxo-spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-2',7'-dipropanoic acid
Synonym:	2',7'-*bis*(carboxyethyl)-5(6)-Carboxyfluorescein
MF:	$C_{27}H_{20}O_{11}$
FW:	520.4
Purity:	≥90%
UV/Vis.:	λ_{max}: 210, 228, 280, 460, 491 nm
Ex./Em. Max:	440, 490/535 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

BCECF is supplied as a crystalline solid. A stock solution may be made by dissolving the BCECF in the solvent of choice, which should be purged with an inert gas. BCECF is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of BCECF in ethanol and DMF is approximately 5 mg/ml and approximately 15 mg/ml in DMSO.

BCECF is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BCECF should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. BCECF has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BCECF is a fluorescent probe commonly used to measure pH.[1] It is a dual-excitation ratiometric pH indicator with a pK_a of ~6.98. Measurements of pH are made by determining the ratio of emission intensity, detected at 535 nm, when excited at 490 nm versus the emission intensity when excited at 440 nm.[1] BCECF is membrane impermeable, whereas the acetoxymethyl ester, BCEBF-AM (Item No. 15922) is membrane permeant.

Reference

1. O'Connor, N. and Silver, R.B. Ratio imaging: Practical considerations for measuring intracellular Ca^{2+} and pH in living cells. *Methods Cell Biol.* **81**, 415-433 (2007).

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