Biotium

supplier of fluorescent and related biochemical reagents for life science research and drug discovery
Glowing Products for Science™

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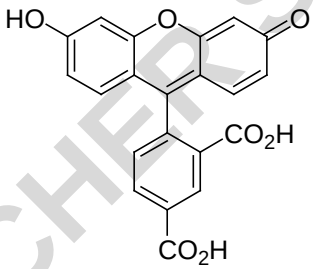
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# PRODUCT AND SAFETY DATA SHEET

**PRODUCT NAME:** **5-Carboxyfluorescein (5-FAM, single isomer)**

**CATALOG #:** **51019**

**MOLECULAR INFORMATION:** $C_{21}H_{12}O_7$
Mwt: 376
[76823-03-5]




**PROPERTIES:**

| | |
|---|---|
| **Color & Form** | Yellow orange solid |
| **Purity** | ≥ 98% by HPLC |
| **Solubility** | Soluble in pH>6.5 $H_2O$ (carboxyfluorescein is not soluble in pure water but highly soluble in a >pH 6.5 buffer. Please note that the buffering strength of the buffer has to be sufficient so that the pH stays the same after the dye is dissolved. Alternatively, you may suspend the solid dye in pure water and then add 1 to 2 equivalent of a base (such as NaOH) to dissolve the dye). |
| **$\lambda_{ex}\backslash\lambda_{em}$** | 492nm\514nm (pH 9) |
| **$pK_a$** | 6.5 |
| **Extinction Coefficient (ε)** | 82,000 (pH 9) |

**STORAGE AND HANDLING:** Stored desiccated at 4 °C upon receipt. Protect from light, especially when in solution. Solution of the dye may be stored at 4 or –20 °C for at least 3 months.

**APPLICATION:** 5-Carboxyfluorescein has a $pK_a$ of 6.5 and can be used as a pH sensor. The excitation spectrum of the dye responds to pH similarly to that of BCECF. Carboxyfluorescein can also be used as a tracer dye. The dye is membrane-impermeant and can be loaded into cells by microinjection or scrape loading.

Ref: Weinstein, J.N., et al. *Methods Enzymol.* **128**, 65(1986) .

**TOXICITY:** Unknown

**FIRST AID:** Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

**Disclaimer:** *Materials from Biotium are sold for research use only, and are not intended for food, drug, household, or cosmetic use. Biotium is not liable for any damage resulting from handling or contact with this product.*

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