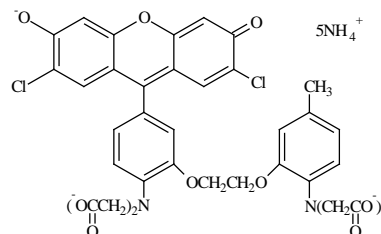


PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: FLUO-3, Pentaammonium Salt**CATALOGUE #:** 50010**MOLECULAR INFORMATION:** C₃₆H₄₅Cl₂N₇O₁₃
MWt: 854.7
[134907-84-9]**PROPERTIES:**

Color & Form	Orange red solid
Purity	≥ 95% by TLC
Solubility	Soluble in DMSO or water (pH>6)
$\lambda_{ex} \backslash \lambda_{em}$	506nm/526nm (low or high [Ca ²⁺])
Dissociation (K_d)	450 nM
Extinction Coefficient (ε)	80,000 M ⁻¹ cm ⁻¹ (506 nm)

STORAGE AND HANDLING:

Store desiccated at 4 °C upon receipt. Protect from light, especially in solution.

APPLICATION:

Fluo-3 has its absorption maximum at 506 nm, thus making it excitable by the argon-ion laser. Unlike fura-2 and indo-1, neither the excitation nor the emission maximum of the sensor shifts significantly before and after Ca²⁺ binding. As a result, the ratioing technique is not applicable to fluo-3. Fluo-3 is essentially nonfluorescent without Ca²⁺ present, but the fluorescence increases at least 40 times on Ca²⁺ binding. Also, because fluo-3 binds Ca²⁺ more weakly (higher K_d) than do fura-2 and indo-1, it is more useful for measuring high transient Ca²⁺ concentration during Ca²⁺ spikes.

Fluo-3 Pentaammonium Salt is membrane-impermeant but can be loaded into cells via microinjection or scrape loading.

Ref: 1) Zucker, R.S., et al. *Cell Calcium*. **13**, 29(1992); 2) Merritt, J.E., et al. *Biochem. J.* **269**, 513(1990); 3) Lattanzio, F.A., et al. *Biochem. Biophys. Res. Comm.* **171**, 102(1990); 4) Jaffe, L. et al. *Proc. Natl. Acad. Sci. USA* **88**, 9883(1991). 5) Minta, A., et al. *J. Biol. Chem.* **264**, 8171(1989); 6) Kao, J.P.Y., et al. *J. Biol. Chem.* **264**, 8179(1989)

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.
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