

Tetramethylrhodamine methyl ester, perchlorate

Instruction Manual

Catalog Number	PK-CA707-70017
Description	TMRM (Cat.No. PK-CA707-70017) and TMRE (Cat.No. PK-CA707-70016) are said to be the preferred dyes for quantitative measurements of membrane potentials using Nernst equation. The dyes do not form aggregates in cell membranes and interact with membrane proteins minimally. Thus, the transmembrane distribution of the dyes is directly related to the membrane potential via Nernst equation.
Quantity	25 mg
Excitation / Emission Maxima	$\lambda_{ex}/\lambda_{em}$ (in MeOH) = 549/573 nm; Extinction coefficient (548 nm, in MeOH) = 110,000
Molecular Structure	
Molecular Weight / Molecular Formula	501 Da; C ₂₅ H ₂₅ ClIN ₂ O ₇
Purity	>95% (as determined by HPLC)
Appearance / Formulation / Solubility	Red solid; soluble in DMSO or MeOH.
Storage & Stability	Store desiccated at $\leq 4^{\circ}\text{C}$. Protect from light, especially when in solution.
Applications	See Description
References	<ol style="list-style-type: none"> 1) Meth. Cell Biol. 38, 195 (1993) 2) Meth. Cell Biol. 30, 193 (1989) 3) Biophys. J. 56, 1053 (1989) 4) Biophys., J. 53, 785 (1988)
Caution	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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