PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: Tetramethylrhodamine methyl ester, perchlorate (TMRM)
CATALOG NUMBER: 70017
MOLECULAR INFORMATION: 
- Molecular Formula: C_{25}H_{25}ClN_2O_7
- Molecular Weight (Mwt): 501

PROPERTIES:
- Color & Form: Red solid
- Purity: ≥ 95% by HPLC
- Solubility: Soluble in DMSO and MeOH
- λ_ex/λ_em: 549/573nm
- Extinction Coefficient (ε): 110,000 M^{-1}cm^{-1} (548 nm; in MeOH)

STORAGE AND HANDLING:
- Store desiccated at 4 °C and protect from light, especially in solution.

APPLICATION:
- TMRM (Cat# 70017) and TMRE (Cat# 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.


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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