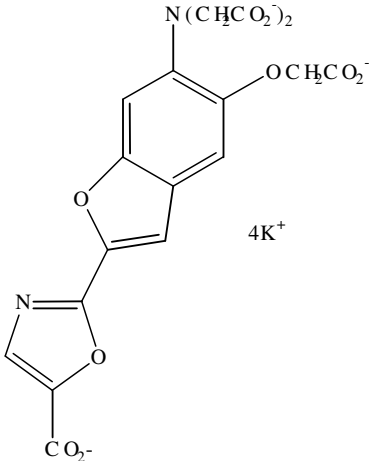


Instruction Manual

Catalog Number	PK-CA707-50035
Description	Furaptra, also called Mag-Fura-2, is a UV-excitable fluorescent indicator for magnesium with a K_d of 1.9 mM. Similar to Fura-2, the excitation wavelength of Mag-Fura-2 undergoes a blue shift from 369 nm to 330 nm. Mag-Fura-2 also responds to Ca^{2+} but with a significantly lower K_d than Fura-2 to Ca^{2+} . An important application of Mag-Fura-2 is its use in detecting high, transient Ca^{2+} concentration during Ca^{2+} spikes. The water-soluble Mag-Fura-2/tetrapotassium salt is useful for loading into cells by microinjection or scrape loading.
Quantity	1 mg
Excitation / Emission Maxima	$\lambda_{ex} \backslash \lambda_{em} = 369/511$ nm (in water); Extinction Coefficient: $22,000 \text{ M}^{-1} \text{ cm}^{-1}$
Molecular Structure	
Molecular Weight / Molecular Formula	587 Da; $C_{18}H_{10}K_4N_2O_{11}$
Purity	>95% (as determined by HPLC)
Appearance / Formulation / Solubility	Light yellow solid; soluble in water (pH>6).
Storage & Stability	Stored desiccated and protected from light at -20°C upon receipt. Stock solutions may be prepared in distilled water or aqueous buffers. These solutions should be stable for at least six months if stored frozen and protected from light.
Applications	Fluorescent calcium and magnesium indicator
References	<ol style="list-style-type: none"> 1) Pro. Natl. Acad. Sci. USA 86, 2981(1989) 2) Am. J. Physiol. 256, C540(1989) 3) Neuron 10, 21(1993) 4) Biophys. J. 68, 2156(1995)
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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