

# Product Information

## Furaptra (Mag-Fura-2), tetrasodium salt

Catalog Number: M3001

Product Size: 1 mg

### Parameters

Appearance: Light yellow solid soluble in water (pH > 6)

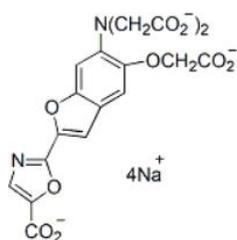
$\lambda$  Ex/ $\lambda$  Em (pH>6) = 369/511 nm (no Mg<sup>2+</sup>); 330/491 nm

(high Mg<sup>2+</sup>)

Molecular Formula: C<sub>18</sub>H<sub>10</sub>N<sub>2</sub>Na<sub>4</sub>O<sub>11</sub>

Molecular Weight: 523

Molecular Structure:



### Storage

Store at 4°C and protect from light. When stored as directed, product is stable for at least 12 months.

### Description

Mag-Fura-2 is a UV-excitable fluorescent indicator for magnesium with a K<sub>d</sub> 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<sup>2+</sup> but with a significantly higher K<sub>d</sub> than Fura-2 for Ca<sup>2+</sup>. An important application of Mag-Fura-2 is its use in detecting high, transient Ca<sup>2+</sup> concentration during Ca<sup>2+</sup> spikes. Mag-Fura-2, tetrasodium salt can be loaded into cells by microinjection or scrape loading.

### Notes

1. Usually when the concentration of calcium ion is in the range of 1-100  $\mu$ M or the concentration of magnesium ion is in the range of 0.1-10 mM, the fluorescence indicator effect of this product is the best.
2. Zn<sup>2+</sup>, Cd<sup>2+</sup> and Gd<sup>3+</sup> can also be combined with the fluorescent indicator, which may interfere with the experiment.

