

**Calbryte™ 520, potassium salt**Catalog number: 20656, 20658  
Unit size: 2x50 ug, 10x50 ug**Product Details**

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| Storage Conditions | Freeze (<-15 °C), Minimize light exposure |
| Expiration Date    | 12 months upon receiving                  |

**Chemical Properties**

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|------------------|------------------|
| Appearance       | Orange-red solid |
| Molecular Weight | 909.02           |
| Soluble In       | Water            |

**Spectral Properties**

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|-----------------------|--------|
| Excitation Wavelength | 493 nm |
| Emission Wavelength   | 515 nm |

**Applications**

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Calcium measurement is critical for numerous biological investigations. Fluorescent probes that show spectral responses upon binding calcium have enabled researchers to investigate changes in cellular free calcium concentrations by using fluorescence microscopy, flow cytometry, fluorescence spectroscopy and fluorescence microplate readers. Followed by Fluo-3 being introduced in 1989, Fluo-4, Fluo-8 and Cal-520 were later developed with improved signal/background ratio. However, there are still a few severe problems with Fluo-4. For example, as for Fluo-3, in all most all the intracellular calcium assays with Fluo-4, probenecid is required to prevent the cell-loaded Fluo-4 from leaking out of cells. The use of probenecid with Fluo-4-based calcium assays compromise the assay results since probenecid is well-documented to have a variety of complicated cellular effects. Calbryte™ 520 is a new generation of fluorescent indicator for calcium measurements, its greatly improved signal-to-noise ratio and better intracellular retention properties make Calbryte™ 520 the most robust calcium indicator. It has the identical excitation and emission wavelength as Fluo-4, thus the same Fluo-4 assay settings can be readily applied to Calbryte™ 520-based calcium assays.