

Title (en)  
CYTOSOLIC FLUORESCENT ION INDICATORS

Title (de)  
INDIKATOREN FÜR FLUORESZIERENDE CYTOSOLISCHE IONEN

Title (fr)  
INDICATEURS D'ION FLUORESCENTS CYTOSOLIQUES

Publication  
**EP 2619199 A2 20130731 (EN)**

Application  
**EP 11827351 A 20110920**

Priority  
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• US 2011052353 W 20110920

Abstract (en)  
[origin: WO2012040204A2] Novel fluorophores for fluorescent ion indicators incorporate water-solubilizing functional groups. These fluorophores enable visible-wavelength analysis of ion concentrations with chelators that are insoluble or poorly soluble in water. A green version of the fluorophore comprises a putative fluorescein with carboxylate appendages. An orange version of the fluorophore comprises a putative rhodamine, also with carboxylate appendages. Attaching the fluorophore to a 12-crown-4, a 15-crown-5, a 18-crown-6, a 21-crown-7, or a 24-crown-8 produces lithium, sodium, potassium, rubidium, and cesium indicator families, respectively. Attaching the fluorophore to diaza [1,1,1], [1,1,2], [1,2,2], [2,2,2], [2,2,3], [2,3,3], or [3,3,3] cryptands produces more selective lithium, sodium, potassium, rubidium, and cesium indicator families, respectively. Attaching the fluorophore to BAPTA, APTRA, or half- BAPTA or their analogs produces new calcium, magnesium, and other metal ions indicator families that strongly resist leakage from the cell.

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