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Product Information Sheet

C1933 Calcofluor White M2R

Synonyms: Calcofluor White ST; Fluorescent Brightner 28 Disodium Salt; Cellufluor
CAS: 4193-55-9
Formula: C₄₀H₄₂N₁₂O₁₀S₂Na₂
Mol. Weight: 960.95

Properties

Form: Powder
Appearance: Yellow to Tan
Application: Fluorescent Stain, Histology
Solubility: Water
Storage Temp: Room Temperature
Typical Working Concentration: Varies with application, should be determined by end user.

Application Notes

Calcofluor White is a fluorescent stain that has been used to indicate cell wall biosynthesis for plant and fungal cells (Nagata & Takebe, 1970). Calcofluor White fluoresces when it hydrogen bonds with beta-1,4 and beta-1,3 glucosidic linkages, which are primary components of cellulose and chitin in cell walls. These types of fluorescent dyes are known as optical brightening agents because they absorb near-UV light (broad region lambda max = 315-415 nm) and emit in the blue-green wavelength region (broad region lambda max = 430-550 nm). It can also be used for the staining of fungi and as a viability stain.

References:

Nagata T. and Takebe I. (1970) Cell wall regeneration and cell division in isolated tobacco mesophyll protoplasts.
Planta Vol. 92 pg. 301-308.