RESEARCH PRODUCTS INTERNATIONAL

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TECHNICAL DATA SHEET

bis-MSB Scintillation Grade

1, 4-Di-(2-methylstyrl)-benzene

No. 111077,111076,111078

Chemical Formula: $C_{24}H_{22}$ **Molecular Weight:** 310.44 **Melting Point:** 180-181°C

Hyamine OH^- Test: Compatible, no chemical reaction or discoloration. No increase in background. No sporatic counts.

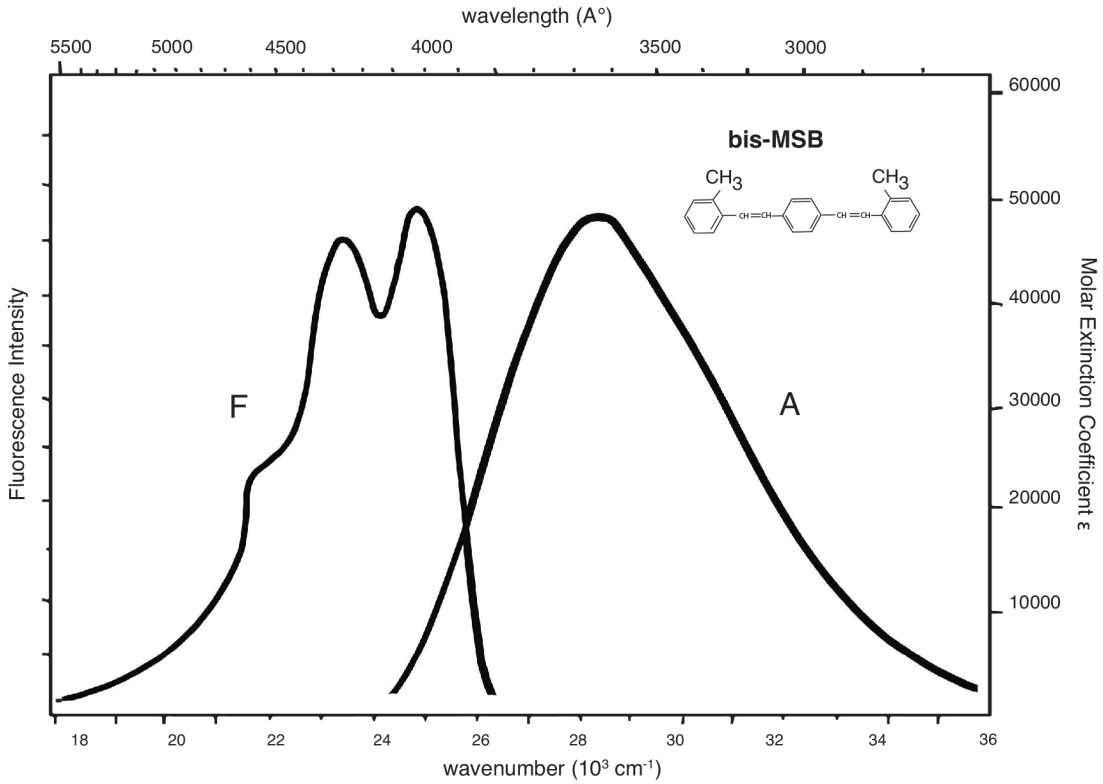
Insoluble Impurities: (in xylene) < 0.001%

Physical Form: Bright yellow fluorescent crystals.

TLC: (toluene solvent at 20°C) > 99%
Fluorescence quantum efficiency in toluene solution at 20°C: 0.70
Fluorescence lifetime in toluene solution at 20°C: 1.3 n seconds
Fluorescence emission maximum: 4000, 4240°A

SPECTRAL MATCHING FACTORS: BA: 0.89 (Bialkali Cathode), S-11-13: 0.95 (Antimony-Cesium Cathode)
S-20: 0.96 (Trialkali Cathode)

Recommended Concentrations: 0.20g/l to 1 g/l. The higher concentrations for maximizing counting efficiency in chemical and/or color quenched samples.



Absorption Spectrum (A) in toluene solution at 20°C: molar extinction coefficient ε against wavenumber (V) and wavelength.

Fluorescence Spectrum (F) in toluene solution at 20°C: relative fluorescence quantum intensity against wavenumber (V) and wavelength.