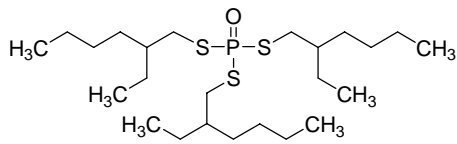


Serotonin



S,S,S-Tris(2-ethylhexyl) phosphorotrithioate

C₂₄H₅₁OPS₃ M_r = 482.83

[181629-03-8]

[11686](#)

Selectophore®

250 mg

Electrochemical Transduction

- Ion-Selective Electrodes

Electrochemical Transduction

Ion-Selective Electrodes

Application 1 and Sensor Type¹

Ionophore-incorporated PVC-membrane sensors are well-established analytical tools routinely used for the selective and direct measurement of a wide variety of different analytes in complex biological and environmental samples. S,S,S-Tris(2-ethylhexyl) phosphorotrithioate proved an effective solvent mediator for constructing a serotonin-selective membrane electrode. This ionophore shows an excellent selectivity for alkali metal cations, and a lower selectivity for quaternary ammonium ions.

Recommended Membrane Composition

66.3	wt%	S,S,S-Tris(2-ethylhexyl) phosphorotrithioate (11686)
0.6	wt%	Sodium tetrakis[3,5-bis(1,1,1,3,3,3-hexafluoro-2-methoxy-2-propyl)phenyl]borate trihydrate (NaHFPB) (72015)
33.1	wt%	Poly(vinyl chloride) high molecular weight (81392)

Electrode Characteristics and Function

Slope (sensitivity): 53.8 mV/dec

Detection limit: 40 μ M in physiological saline containing 150mM NaCl and 10mM HEPES-NaOH (pH 7.4)

¹ T. Katsu, H. Hirodo, Solvent Mediator for a Serotonin-selective Membrane Electrode, **Sensor Letters** 1, 99 (2003).