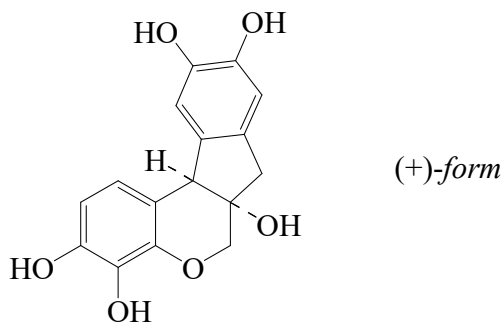




>>Entry Name: Haematoxylin

Synonym(s): 7,11*b*-Dihydrobenz[*b*]indeno[1,2-*d*]pyran-3,4,6*a*,9,10(6*H*)-pentol, 9Cl. Hematoxylin. C.I. Natural black 1. C.I. 75290



Molecular Formula: C₁₆H₁₄O₆

Molecular Weight: 302.283

Accurate Mass: 302.07904

Percentage Composition: C 63.57%; H 4.67%; O 31.76%

>>Variant: (+)-form

CAS Registry Number: 517-28-2

Molecular Formula: C₁₆H₁₄O₆

Molecular Weight: 302.283

Accurate Mass: 302.07904

Percentage Composition: C 63.57%; H 4.67%; O 31.76%

Biological Source: Constit. of *Haematoxylon campechianum* (Logwood). First isol. in 1810

Use/Importance: Histological stain. Used as 0.1% soln. in 95% EtOH for photometric detn. of B, Ti, Sn ($\lambda_{\max}$ 590 nm, ϵ 23000), F⁽⁻⁾ (indirectly)

Physical Description: Prisms + 3H₂O (EtOH)

Melting Point: Mp 100-120°

Optical Rotation: $[\alpha]_D^{18} +102.4$ (H₂O). $[\alpha]_D^{18} +90.3$ (c, 1.04 in MeOH)

Solubility: Sol. hot H₂O

Other Data: Reddens on exp. to light. Sweet taste

Aldrich: 86118-9

Fluka: 51260

Sigma: H3136

>>Derivative: Penta-Ac

Molecular Formula: C₂₆H₂₄O₁₁

Molecular Weight: 512.469

Accurate Mass: 512.131865

Percentage Composition: C 60.94%; H 4.72%; O 34.34%

Melting Point: Mp 165-166°

>>Variant: (±)-form

CAS Registry Number: 1621-46-1

Molecular Formula: C₁₆H₁₄O₆

Molecular Weight: 302.283

Accurate Mass: 302.07904

Percentage Composition: C 63.57%; H 4.67%; O 31.76%

Melting Point: Mp 210-212°

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 954D, (*ir*)

Perkin, W.H. *et al.*, *J.C.S.*, 1908, **93**, 489-517, (*struct*)

Hunter, G.J. *et al.*, *Anal. Chim. Acta*, 1953, **8**, 351-368; **9**, 425-440, (*detn*, F⁽⁻⁾)

Robinson, R. *et al.*, *Bull. Soc. Chim. Fr.*, 1958, 125-134, (*synth*, *rev*)

Dann, O. *et al.*, *Chem. Ber.*, 1965, **98**, 1498-1504, ((±)-*form*, *synth*)

Craig, J.C. *et al.*, *J.O.C.*, 1965, **30**, 1573-1576, (*stereochem*, *pmr*)

Asmus, E. *et al.*, *Fresenius' Z. Anal. Chem.*, 1966, **216**, 3-13, (*detn*, Sn)

Morsingh, F. *et al.*, *Tetrahedron*, 1970, **26**, 281-289, (*synth*, *biobl*)

Leong, C.L., *Analyst (London)*, 1977, **102**, 293-297; 837-841, (*detn*, Sn, Ti)

Masuda, H. *et al.*, *Chem. Pharm. Bull.*, 1991, **39**, 1382-1384, (*isol*)

Arnoldi, A. *et al.*, *J.C.S. Perkin 1*, 1995, 2447-2453, ((-)-*form*, *synth*)

Sigma-Aldrich Library of Stains, Dyes and Indicators, 394

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, HAP500