

## Certificate of Analysis

Date of Testing: 2022-12-17 19:20:26  
 Date of Next Testing: 2026-12-16 19:20:26  
 Product Name: **Esculin hydrate**  
 CAS Number: 531-75-9  
 Specifications & Purity: 98%  
 Lot #: L2213356  
 SKU #: **E107333**  
**Analysis: 146346**

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D}(c=2.4 \text{ in } 50\% \text{ Dioxane})(\text{calcd. on anh})$	-88--84 (°)	-84.74°
Water by Karl Fischer	0-10.5 (%)	9.02%
UV/Vis Absorbance(EmM, 335-336nm in EtOH, anhydrous basis)	13-13.5	13.25
Purity(HPLC)	98-100 (%)	98.74000%
Purity(Neutralization titration)(calcd. on anh. substance)	97.5-102.5 (%)	97.50%
Appearance (E107333)	White to Off-White Powder	White to Off-White Powder
Solubility in hot H2O	almost transparency	almost transparency
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager