



CERTIFICATE OF ANALYSIS

20 Martin Ross Avenue, North York, ON, M3J 2K8, CANADA
Tel: (416) 665-9696, Fax: (416) 665-4439
Email: orders.trc@lgcgroup.com Website: www.trc-canada.com

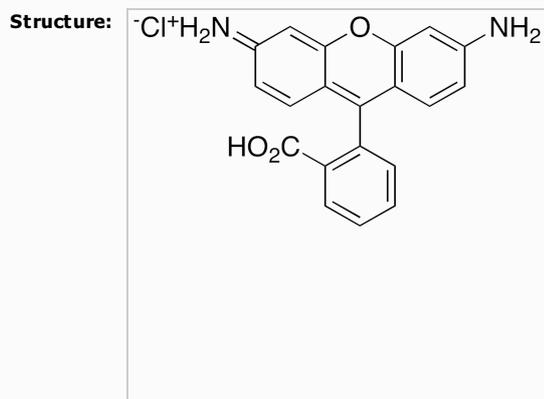
1. Identification

Catalogue Number: R318580

CAS Number: 13558-31-1

Product: Rhodamine 110

Synonym: 3,6-Diamino-9-(2-carboxyphenyl)xanthylium Chloride; 2-(6-Amino-3-imino-3H-xanthen-9-yl)benzoic Acid Monohydrochloride; 3,6-Diamino-9-(2-carboxyphenyl)xanthylium Chloride; R 110; RH 110; Rhodamine 560; Rhodamine N;



Molecular Formula:

C₂₀H₁₅ClN₂O₃

Molecular weight:

366.8

Source of Product:

N/A

Solubility:

Aqueous Acid (Slightly),
DMSO (Slightly), Methanol
(Slightly)

Lot Number: 23-XJZ-175-3

Purity: 97%

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: -20°C

2. Warning

Warning 1:

Warning 2:

Warning 3:

3. Analytical Information

Tests:	Specifications:	Results:
NMR	Conforms to Structure	Conforms
MS	Conforms to Structure	Conforms
Water Content	Report Result	Refer: Additional Information
Anion Content	Report Result	Refer: Additional Information
Elemental Analysis	Conforms	Refer: Additional Information
Appearance	Dark Red to Very Dark Red Solid	Very Dark Red Solid

Additional Information:

TLC Conditions: SiO₂; Dichloromethane : Methanol : Acetic Acid = 8 : 2 : 0.2; Visualized with UV, AMCS, and Naked Eye; R_f = 0.60. 1H NMR and MS conform to structure. Elemental Analysis: (Found) %C: 59.75, %H: 4.65, %N: 6.95; (Calculated) %C: 65.49, %H: 4.12, %N: 7.64. Chloride Content: 8.44% by Ion Chromatography. Water Content: 8.1% based on Elemental Analysis

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 2%. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed By

Philip Chan



Reviewed By

**C of A Approved
By**

Test Date

7/14/2018

Retest Date

7/12/2025