



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: | G253470 | CAS Number: | NA |
| Product: | Galamustine Hydrochloride (>85%) | | |
| Structure: | | | |
| Lot Number: | 23-UPA-129-2 | Purity: | >85% |
| Shipping Condition: | This Product Is Stable To Be Shipped At Room Temperature | Storage Condition: | 4°C |

2. Warning

Warning 1: **Warning 2:** **Warning 3:**

3. Analytical Information

| Tests: | Specifications: | Results: |
|--------------------|---------------------------------------|-------------------------------|
| Appearance | Pale Yellow to Brown Oil to Thick Oil | Clear Pale Yellow Thick Oil |
| NMR | Conforms to Structure | Conforms |
| Elemental Analysis | Conforms | %C: 25.23, %H: 7.00, %N: 3.38 |
| MS | Conforms to Structure | Conforms |
| Water Content | Report Result | 22.5% by Karl Fischer |
| Specific Rotation | Report Result | +42.8° (c = 0.5, Water) |
| Chloride Content | Report Result | 15.3% |
| C NMR | Conforms to Structure | Conforms |

Additional Information: N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of $\pm 2\%$. 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 | Reviewed By | C of A Approved By | Test Date | Retest Date |
|-------------|---------------|--------------------|-----------|-------------|
| Henry Tieu | Toni Rantanen | Chanell Chu | 6/3/2022 | 6/1/2026 |