



Certificate of Analysis

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Product Name: Salbutamol hemisulfate Catalog No.: 0634 Batch No.: 7

51022-70-9 CAS Number: EC Number: 256-916-8

IUPAC Name: α^{1} -[[(1,1-Dimethylethyl)amino]methyl]-4-hydroxy-1,3-benzenedimethanol hemisulfate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{13}H_{21}NO_3.1/_2H_2SO_4.$

Batch Molecular Weight: 288.35 **Physical Appearance:** White solid

Solubility: water to 100 mM

Storage: Store at RT

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

¹H NMR: Consistent with structure **Mass Spectrum:** Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

> Theoretical 54.15 7.69 4.86 Found 53.52 7.61 4.79

Product Information

Print Date: Apr 11th 2024

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IUPAC Name: α^{1} -[[(1,1-Dimethylethyl)amino]methyl]-4-hydroxy-1,3-benzenedimethanol hemisulfate

Description:

Salbutamol hemisulfate is a selective β_2 -adrenergic agonist with 29-fold higher selectivity for β_2 over β_1 receptors. Salbutamol elevates fibroblast growth factor 20 (FGF20) in nigrostriatal neurons, and is neuroprotective in a mouse model of Parkinson's disease.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₃H₂₁NO₃.1/₂H₂SO₄.

Batch Molecular Weight: 288.35 Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:

Storage: Store at RT

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Fletcher *et al* (2019) Targeted repositioning identifies drugs that increase fibroblast growth factor 20 production and protect against 6-hydroxydopamine-induced nigral cell loss in rats. Sci.Rep. **9**. PMID: 31171821.

Baker (2005) The selectivity of beta-adrenoceptor antagonists at the human β 1, β 2 and β 3 adrenoceptors. Br.J.Pharmacol. **144** 317. PMID: 15655528.

January *et al* (1998) Salmeterol-induced desensitisation, internalization and phosphorylation of the human β_2 -adrenoceptor. Br.J.Pharmacol. **123** 701. PMID: 9517390.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use