Chem-Impex International, Inc.

Tel: (630) 766-2112 Fax: (630) 766-2218

E-mail: sales@chemimpex.com Web site: www.chemimpex.com

Shipping and Correspondence: Manufacturing site:

935 Dillon Drive 825 Dillon Drive

Wood Dale, IL 60191 Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number 06038

Product L-Glutamine α-4-nitrobenzyl ester

hydrobromide

Lot Number 000127-1047372

L-Gln-ONb•HBr

CAS Number 14349-18-9

Molecular Formula C₁₂H₁₅N₃O₅·HBr

Molecular Weight 362.19

Appearance White powder

Solubility Clear, colorless solution (25mg/mL in 50% Methanol)

Melting Point 167 °C

Elemental Analysis

(Theory)

Elemental Analysis C = 40.2%, H = 4.4%, N = 11.7%

(Found)

TLC System n-Butanol/Acetic acid/H₂O (4:2:2)

Chloroform/Methanol/Acetic acid 32% (5:3:1)

Ethyl acetate/Pyridine/Acetic acid/H₂O (60:30:9:16.5)

C = 39.8%, H = 4.5%, N = 11.6% (Calc. as 1 Hbr (22.3%)

Plate: silicagel 60 F₂₅₄

Detected by: UV, ninhydrin, chlorine-tolidine

Optical Rotation [a]_D²⁴ = +10.8° (C=2 in DMF)

Titration Bromide Content: 22.2% (AgNO3)

Purity by TLC > 98%

Storage Store at 0-8 °C

Certificate of Analysis

Catalog Number: 06038 Lot Number: 000127-1047372

Remarks

See material safety data sheet for additional information

For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Bala Kumar

Quality Control Manager