Certificate of Analysis

Product Name: **Miglustat hydrochloride** **Catalog No.: 3117** **Batch No.: 4**

CAS Number: 210110-90-0

IUPAC Name: (2*R*,3*R*,4*R*,5*S*)-1-Butyl-2-(hydroxymethyl)-3,4,5-piperidinetriol hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{10}H_{21}NO_4.HCl$

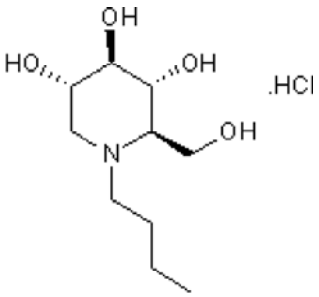
Batch Molecular Weight: 255.74

Physical Appearance: White solid

Solubility: water to 75 mM
DMSO to 75 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.28 (Dichloromethane:Methanol:Ammonia soln. [80:18.2])

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	46.96	8.67	5.48
Found	46.59	8.76	5.5

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Description:

Miglustat hydrochloride is an orally active α-glucosidase I and II and ceramide-specific glycosyltransferase inhibitor. Rescues trafficking-deficient F508del-CFTR in human airway epithelial cells via inhibition of ER α-glucosidases I and II. Also has broad spectrum antiviral activity.

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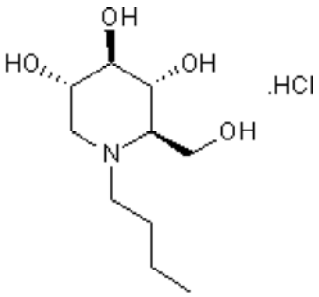

Storage: Desiccate at -20°C

Solubility & Usage Info:

water to 75 mM
DMSO to 75 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. Our standard recommendations are:

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:

Noel *et al* (2008) Parallel improvements of sodium and chloride transport defects by migl. (*n*-butyldeoxynojyrimicin) in cystic fibrosis epithelial cells. J.Pharmacol.Exp.Ther. ***325*** 1016. PMID: 18309088.

Dwek *et al* (2002) Targeting glycosylation as a therapeutic approach. Nat.Rev.Drug Disc. ***1*** 65. PMID: 12119611.

Platt *et al* (1994) *N*-Butyldeoxynojirimycin is a novel inhibitor of glycolipid biosynthesis. J.Biol.Chem. ***269*** 8362. PMID: 8132559.