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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **Acarbose** **Catalog No.: 2673** **Batch No.: 2**

CAS Number: 56180-94-0 EC Number: 260-030-7

IUPAC Name: *O*-4,6-Dideoxy-4-[[(1*S*,4*R*,5*S*,6*S*)-4,5,6-trihydroxy-3-(hydroxymethyl)-2-cyclohexen-1-yl]amino]-α-D-glucopyranosyl-(1-4)-*O*-α-D-glucopyranosyl-(1-4)-D-Glucose

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{25}H_{43}NO_{18}.1¼H_2O$

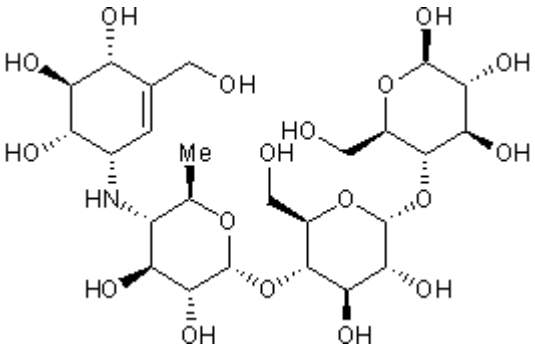
Batch Molecular Weight: 667.77

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +179 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	44.97	6.87	2.1
Found	44.78	6.78	2.15

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Description:

Inhibitor of intestinal α-glucosidase (IC_{50} = 11 nM). Antidiabetic; inhibits the hydrolysis of complex carbohydrates.

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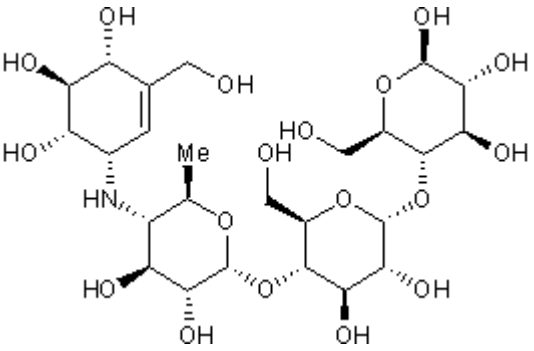

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
DMSO 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. 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:

Krause *et al* (1982) Inhibition of disaccharide digestion in rat intestine by the alpha-glucosidase inhibitor acarbose (BAY g 5421). Digestion ***23*** 232. PMID: 6754513.

Balfour and McTavish (1993) Acarbose: an update of its pharmacology and therapeutic use in diabetes mellitus. Drugs ***46*** 1025. PMID: 7510610.

Oki *et al* (2000) Evaluation of alpha-glucosidase inhibition by using an immobilized assay system. Biol.Pharm.Bull. ***23*** 1084. PMID: 10993209.