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A9857 ▶ **Sigma-Aldrich®**

α-Amylase from *Aspergillus oryzae*

★★★★★ (0)

≥150 units/mg protein (biuret)

Synonym(s):

1,4-α-D-Glucan-glucanohydrolase

Enzyme Commission number: **3.2.1.1 (BRENDA, IUBMB)**

EC Number: **232-588-1**

MDL number: **MFCD00081319**

eCl@ss: 32160410

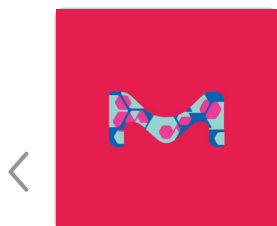
NACRES: NA.54

SKU	Pack Size	Availability	Price	Quantity	
A9857-250KU	250000 UNITS	✓ Estimated to ship on October 27, 2022	€72.90	<input type="text" value="1"/>	i
A9857-1MU	1000000 UNITS	✓ Only 2 left in stock (more on the way) Details...	€139.00	<input type="text" value="1"/>	i
A9857-5MU	5000000 UNITS	✓ Estimated to ship on December 13, 2022	€371.00	<input type="text" value="1"/>	i

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RECOMMENDED PRODUCTS



Sigma-Aldrich

10065 **α -Amylase from *Aspergillus oryzae***

powder, ~30 U/mg

[View Price and Availability](#)

Sigma-Aldrich

A8220 **α -Amylase from *Aspergillus oryzae***aqueous solution, ≥ 800 FAU/g[View Price and Availability](#)

PROPERTIES

form powder

Quality Level **200**

specific activity ≥ 150 units/mg protein (biuret)

greener alternative product characteristics Waste Prevention
Design for Energy Efficiency
Learn more about the [Principles of Green Chemistry](#).

greener alternative category **Enabling**

storage temp.

-20°C

Looking for similar products? Visit [Product Comparison Guide](#)

Related Categories

[Greener Alternative Products](#)

DESCRIPTION

General description

We are committed to bringing you Greener Alternative Products, which adhere to one or more of The 12 Principles of Greener Chemistry. This product has been enhanced for energy efficiency and waste prevention when used in starch ethanol research. For more information see the [article in biofiles](#).

Application

α -Amylase is used to hydrolyze α bonds of α -linked polysaccharides, such as starch and glycogen. α -Amylase has been used in various plant studies, such as metabolism studies in *Arabidopsis*. Amylases from *Aspergillus oryzae* are commonly used as baking additives to prevent staling in the baking industry, clarify haze from fruit juices and alcoholic beverages, and to produce glucose and maltose syrup products.

Packaging

250000, 1000000, 5000000 units in glass bottle

Biochem/physiol Actions

α -Amylase hydrolyzes the α -(1,4) glucan linkages in polysaccharides of three or more α -(1,4) linked D-glucose units. Natural substrates such as starch and glycogen are broken down into glucose and maltose. The International Union of Immunological Societies (IUIS) has classified α -amylase from *Aspergillus oryzae* (Asp o II) as an occupational allergen that can cause respiratory symptoms .

Quality

Crude

Unit Definition

One unit will liberate 1.0mg of maltose from starch in 3 min at pH 6.9 at 20 °C.

Physical form

powder

Other Notes

View more information on [enzymes for complex carbohydrate analysis](https://www.sigma-aldrich.com/enzymeexplorer) at www.sigma-aldrich.com/enzymeexplorer

RELATED PRODUCTS

Substrate

N1519

4-Nitrophenyl α -D-maltopentaoside, $\geq 98\%$

[View Pricing](#)

S7776

Starch Azure, Insoluble corn starch covalently linked with Remazol Brilliant Blue R

[View Pricing](#)

SAFETY INFORMATION

Pictograms**GHS07,GHS08****Signal Word**

Danger

Hazard Statements**H302 - H334****Precautionary Statements****P261 - P264 - P270 - P284 - P301 +
P312 - P304 + P340 + P312****Hazard Classifications**

Acute Tox. 4 Oral - Resp. Sens. 1

Storage Class Code

11 - Combustible Solids

WGK

WGK 3

Flash Point(F)

Not applicable

Flash Point(C)

Not applicable

**Personal Protective
Equipment**dust mask type N95 (US),
Eyeshields, Gloves

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

How to enter Lot Number (COA)

Certificate of Origin

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

How to enter Lot Number (COO)

More Documents

[Enzyme Explorer](#)

[SDS](#)

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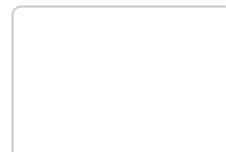


Sigma-Aldrich

10069

α -Amylase from *Bacillus* sp.

powder, yellow-brown, ~380 U/mg



Supelco

A4582

α -Amylase from *Bacillus licheniformis*

suitable for determination of starch (Kit STA-20)

[View Price and Availability](#)[View Price and Availability](#)

PEER REVIEWED PAPERS

Isolation and denomination of an important allergen in baking additives: alpha-amylase from *Aspergillus oryzae* (Asp o II).

X Baur et al.

Clinical and experimental allergy : journal of the British Society for Allergy and Clinical Immunology, 24(5), 465-470 (1994-05-01)

The commercially available alpha-amylase from *Aspergillus oryzae* which is widely used as a baking additive was compared with a highly purified enzyme preparation. We used enzyme allergosorbent test (EAST), EAST inhibition, sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), isoelectric focussing, immunoblotting

null

Isolation and Characterization of Polysaccharides from the Ascidian *Styela clava*.

Jesus Valcarcel et al.

Polymers, 14(1) (2022-01-12)

Styela clava is an edible sea squirt farmed in Korea that has gradually invaded other seas, negatively impacting the ecology and economy of coastal areas. Extracts from *S. clava* have shown wide bioactivities, and ascidians have the unique capability among

Bioaccessibility of folate in faba bean, oat, rye and wheat matrices.

Fengyuan Liu et al.

Food chemistry, 350, 129259-129259 (2021-02-24)

Cereals and legumes are rich in folate. However, due to the instability of folate, processing and digestion can induce significant folate loss. In this paper, folate bioaccessibility of faba bean, oat, rye and wheat flours and pastes was studied using

The bioaccessibility of folate in breads and the stability of folate vitamers during in vitro digestion.

Fengyuan Liu et al.

Food & function, 13(6), 3220-3233 (2022-02-26)

Both the liberation and stability of endogenous folate are relevant to the bioaccessibility of folate. Since folates are unstable, in addition to studying the natural folate content in foods, bioaccessibility should be considered. To understand folate changes during digestion, a

[View All Related Papers](#)

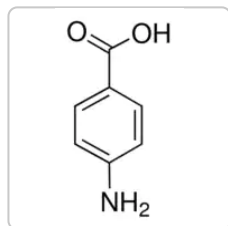
PROTOCOLS AND ARTICLES

Protocols

Enzymatic Assay of α -Amylase (EC 3.2.1.1)

Follow our procedure for the determination of alpha-Amylase activity. This enzymatic assay of a-Amylase guides you through the entire process and necessary calculations.

RECENTLY VIEWED PRODUCTS

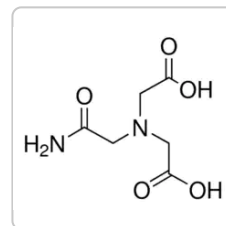


Sigma-Aldrich

A9878

4-Aminobenzoic acid

ReagentPlus[®], ≥99%



Sigma-Aldrich

A9883

ADA

≥98% (titration)

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