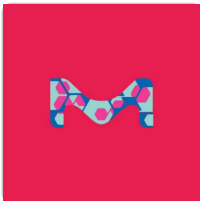




Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



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[Specification Sheet](#)

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D0443 ▶ **Sigma-Aldrich.**

# Dextranase from *Chaetomium erraticum*

★★★★★ (0)

Synonym(s):

Dextranase Plus L, 1,6- $\alpha$ -D-Glucan 6-glucanohydrolase

CAS Number: **9025-70-1**

Enzyme Commission number: **3.2.1.11 (BRENDA, IUBMB)**

EC Number: **232-803-9**

MDL number: **MFCD00130940**

NACRES: NA.54

SKU	Pack Size	Availability	Price	Quantity
D0443-50ML	50 ML	Only 1 left in stock (more on the way) <a href="#">Details...</a>	€120.00	<div><div>–</div><div>+</div><div></div></div>
D0443-250ML	250 ML	Only 1 left in stock (more on the way) <a href="#">Details...</a>	€296.00	<div><div>–</div><div>+</div><div></div></div>

[Request a Bulk Order](#)

Add to Cart

## RECOMMENDED PRODUCTS

**Sigma-Aldrich**

**Sigma-Aldrich**



**D4668**

Dextranase from *Penicillium* sp.  
lyophilized powder, 100-250 units/mg protein

[View Price and Availability](#)



**D5884**

Dextranase from *Penicillium* sp.  
lyophilized powder, 10-25 units/mg solid

[View Price and Availability](#)



## PROPERTIES

form	solution
Quality Level	300
storage temp.	2-8°C

## DESCRIPTION

### General description

A product of Novozymes Corp.

Dextranase is generated by many microorganisms, including bacteria, filamentous fungi, and yeast.

### Application

Dextranase from *Chaetomium erraticum* has been used:

- in microcarrier dissolution to produce multicellular 3D spheroids for drug discovery

- in *in vitro* digestion of extracellular polysaccharide (EPS) from the bacterial isolates
- in a study to investigate the immobilization of dextranase
- to investigate the optimization of process conditions for enzymatic modification of alternan

## Biochem/physiol Actions

Dextranase is an endodextranase that hydrolyzes  $\alpha$ -(1,6)-glycosidic linkages in dextran. It has many industrial and clinical applications such as food processing, sugar modification, and medicine preparation. Dextranase is widely used to produce alternated sugar beet and isomaltooligosaccharides (IMOs), a prebiotic functional food. The low molecular weight dextran obtained from dextranase serves as a synthetic blood volume expander. Dextranase can be coupled to antibodies for the detection of tumor cells. It prevents the occurrence of dental plaques by depolymerizing microbial dextran deposits in teeth. Hence, it is used in dental care products.

## Preparation Note

A fungal dextranase produced by submerged fermentation of *Chaetomium erraticum*.

## Analysis Note

Stable in the pH range of 3-7 and at temperatures up to approx. 70 °C. For most applications, the preferred conditions are pH 5-6 and a temperature of 50-60 °C.

## Other Notes

View more information on [enzymes for complex carbohydrate analysis](https://www.sigmaaldrich.com/FR/en/product/sigma/d0443) at [www.sigmaaldrich.com/enzymeexplorer](https://www.sigmaaldrich.com/enzymeexplorer)

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## SAFETY INFORMATION

**Storage Class Code**

13 - Non 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

e.g. 023J5431

**How to enter Lot Number (COA)**

Search

**Certificate of Origin**

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Lot Number

e.g. 023J5431

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## More Documents

[Enzyme Explorer](#)[SDS](#)

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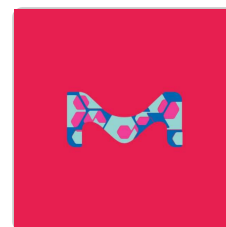
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**A7595**

**$\alpha$ -Amylase from *Bacillus amyloliquefaciens***  
liquid,  $\geq 250$  units/g

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Sigma-Aldrich

**31398**

**Dextran from *Leuconostoc mesenteroides***  
 $M_r \sim 200,000$

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## PEER REVIEWED PAPERS

### Co-immobilization of dextranucrase and dextranase in epoxy-agarose-tailoring oligosaccharides synthesis

da Silva R, et al.

*Process Biochemistry (Oxford, United Kingdom), 78, 71-81 (2019)*

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### Immobilization of dextranase from *Chaetomium erraticum*.

Frank Alwin Erhardt et al.

*Journal of biotechnology, 131(4), 440-447 (2007-09-19)*

In order to facilitate the Co-Immobilization of dextransucrase and dextranase, various techniques for the immobilization of industrial endo-dextranase from *Chaetomium erraticum* (Novozymes A/S) were researched. Adsorption isotherms at various pH-values have been determined for bentonite (Montmorillonite), hydroxyapatite and Streamline DEAE.

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### Continuous microcarrier-based cell culture in a benchtop microfluidic bioreactor.

**F Abeille et al.**

*Lab on a chip, 14(18), 3510-3518 (2014-07-12)*

Microfluidic bioreactors are expected to impact cell therapy and biopharmaceutical production due to their ability to control cellular microenvironments. This work presents a novel approach for continuous cell culture in a microfluidic system. Microcarriers (i.e., microbeads) are used as growth

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### Kinetics and thermodynamic of the purified dextranase from *Chaetomium erraticum*

**Virgen-Ortiz JJ, et al.**

*Journal of Molecular Catalysis. B, Enzymatic, 122, 80-86 (2015)*

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### Characterization of a marine-derived dextranase and its application to the prevention of dental caries.

**Yu-Liang Jiao et al.**

*Journal of industrial microbiology & biotechnology, 41(1), 17-26 (2013-11-08)*

The dextranase added in current commercial dextranase-containing mouthwashes is largely from fungi. However, fungal dextranase has shown much higher optimum temperature than bacterial dextranase and relatively low activity when used in human oral cavities. Bacterial dextranase has been considered to

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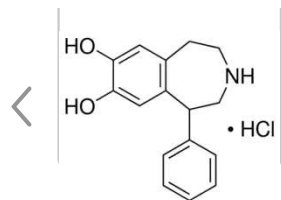
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Sigma-Aldrich

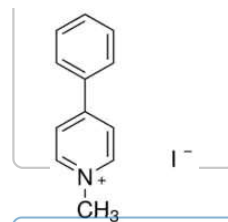


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**D048**  
**MPP<sup>+</sup> iodide**  
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