

# **DAOgest** Diamine oxidase enzyme

Use: digestive health Dose: 4.2mg/serving Application: dietary supplements

DAOgest is an effective digestive health supplement providing high-quality diamine oxidase (DAO) enzyme to support with the management of histamine intolerance. Extracted from porcine kidney, DAOgest is a 100% biologically-derived ingredient for use in food supplements.

## Globally:



40% people have a gastrointestinal disorder1



Digestive health supplements market CAGR 8.6% 2019-20253



Food intolerances affect 15-20% of the population<sup>2</sup>



Increasing number of digestive enzyme supplements

### **Histamine & DAO**

Histamine is a naturally occurring molecule that is produced in the body and present in a wide range of foods and drinks. This ingested histamine is broken down by DAO enzyme - a histaminase - in the digestive system. Histamine intolerance is associated with impaired dietary histamine metabolism. This is due to low DAO enzyme activity and/or low levels of the enzyme, which can lead to an imbalance between the intake of histamine and the body's ability to degrade it - creating an excess of histamine that can trigger allergy-like symptoms.

### Histamine intolerance

Who: women (80% cases)

Prevalence: 1-3% global population<sup>4</sup> Cause: low DAO enzyme activity Activated by: histamine-rich foods

# The solution: DAOgest

A low histamine diet, plus DAO enzyme supplementation 15 minutes before meals help to manage the condition.

DAO supplementation:

1 Breaks down histamine from foods and beverages in the digestive tract

- 2 Decreases histamine levels
- 3 Reduces symptoms of histamine intolerance



# 1. Individuals with histamine intolerance have lower DAO activity

Higher DAO serum activity is observed in healthy individuals compared to people with histamine intolerance symptoms.

Manzotti, G et al. Int J Immunopathol Pharmacol, 2016;29:105-111.

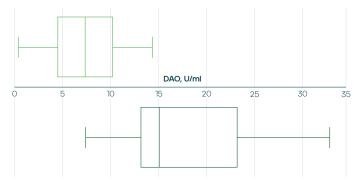


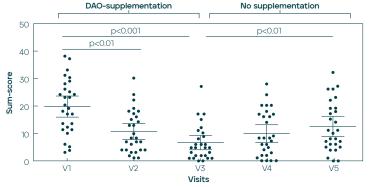
Fig 1. Mean DAO activity in individuals with histamine intolerance (HI) and those without (CTRL).

#### — HI — CTRL

# 2. Improves symptoms of histamine intolerance

Oral supplementation of DAO enzyme significantly improves symptoms of histamine intolerance in patients with low endogenous DAO enzyme activity.

Schnedl, W. J. et al. Food Sci Biotechnol, 2019; 28:1779-1784.

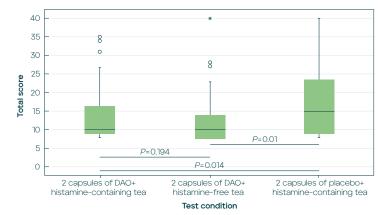


**Fig 2.** Scatter-plot of sum-score for all 22 histamine intolerance-related symptoms throughout the study period of eight weeks. DAO supplementation was provided between visit 1-3 only.

## 3. Reduces histamineassociated symptoms

The intake of DAO capsules significantly reduces total histamine-induced symptoms.

Komericki, P et al. Wien Klin Wochenschr, 2011;123:15-20.



**Fig 3.** Effect of DAO supplementation on total sum score in individuals taking histamine-containing tea.

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References 1) Sperber et al. Gastroenterology, 2021;160:99-114. 2) Zopf et al. Dtsch Arztebl Int, 2009;106:359-369. 3) Grand View Research. [report], accessed August 2021. 4) Comas-Baste et al. Biomolecules, 2020;10:1181. 5) Jarisch Current Dermatology, 2014;40: 275-282.

### **About Bioiberica**

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To innovate in the digestive health market using Bioiberica's DAOgest, contact us today.

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