

A business unit of AB Biotek

## **DAO**head®

## What is DAO deficiency?

It refers to a deficiency in Diamine Oxidase (DAO) metabolization activity or when there is an imbalance between the ingested histamine and the enzyme's capacity to metabolize it. As the histamine has not been properly metabolized and degraded, it passes into the bloodstream triggering various symptoms. The most common reactions stemming from DAO deficiency are:

## Migraine and headaches. The 87% of the patients with migraine diagnosis have a reduced or a very reduced DAO enzyme activity.

Although other symptoms may occur such as:

- Digestive disorders including feelings of bloating, flatulence, constipation and diarrhea.
- Muscle pain and cramps, and osteopathic pain.
- Skin disorders, such as dry skin or atopic dermatitis.
- Non-allergic rhinitis.
- Tinnitus.

## How does DAOhead® work?

The Diamine Oxidase (DAO) contained in DAOhead® serves as a supplement to the same enzyme found naturally in the body, which is responsible for metabolizing histamine. Taking one tablet of DAOhead® before each meal increases the amount of DAO in the small bowel and therefore also boosts histamine degradation. This accelerates the processing in the digestive tract of the histamine found in different foods which is the root cause of the symptoms. Caffeine and vitamins B6. B9 and B12 are active ingredients that act as adjuvants on the dietary management of DAO deficiency.



## For the dietary management of migraine caused by DAO deficiency • Contains DAO ENZYME (Diamine Oxidase). Also con-

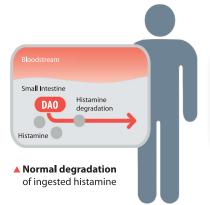
- tainsvitamins B6, B9 and B12 and caffeine that act as adjuvants on the dietary management of migraine.
- The active ingredient is a Novel Food according to the EU Regulation 2015/2283.
- Acts metabolizing ingested histamine in the diet, preventing its accumulation in the blood and avoiding the appearance ofmigraine and headaches.
- Restores the optimal levels of DAO activity thanks to its structural and functional equivalence with the human DAO, avoiding histamine absorption.
- The DAO enzyme contained in DAOhead® presents an enzymatic activity of around **0.61 mU per dose (30,000 HDU)**.

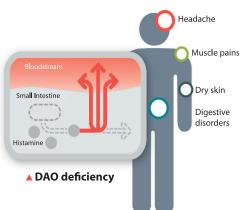
## What is DAO?

DAO is the main enzyme for the metabolism of ingested histamine. It is mainly located in the intestinal epithelium, where it absorbs and degrades ingested histamine preventing it from passing into the bloodstream.

## What is histamine?

Histamine is an essential molecule, a transmitter that belongs to a group of amines known as biogenic amines and that is naturally present in many foods as well as inside our cells. Normally, the intake of histamine contained in food does not cause any problems, since it is quickly processed and metabolized by the enzyme Diamine Oxidase (DAO).







Food for Special Medical Purposes



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# DAOhead®

## **DAO** enzyme

## For the dietary management of migraine caused by DAO deficiency

The DAO enzyme contained in DAOhead® acts only in the intestine; it is not absorbed and has no systemic activity, and hence it is considered a harmless product with no adverse effects.

## What does DAOhead® contain?

Ingredients: Bulking agents: microcrystalline cellulose and hydroxypropyl cellulose; caffeine anhydrous; potato starch; glazing agent: ethyl cellulose and hydroxypropyl methylcellulose; pig kidney protein extract with 7% diamine oxidase (DAO); stabilizers: magnesium salts of fatty acids and sodium alginate; medium chain triglycerides; pyridoxine hydrochloride (vitamin B6); rice starch; colour: beetroot red; stabilizer: oleic acid; folic acid (vitamin B9); humectant: glycerin; stabilizer: stearic acid; colour: riboflavin; maltodextrin; stabilizer: trisodium citrate; cyanocobalamin (vitamin B12); acid: citric acid; vegetable capsule: hydroxypropyl methylcellulose.

DAOhead® Eficaps® capsules contain gastro-resistant tablets for controlled release of DAO in the intestine, avoiding the acidic pH of the stomach, and tablets that guarantee the immediate release of adjuvant active ingredients.

Each capsule contains four tablets:

- 2 white/beige gastro-resistant DAO tablets for intestinal release
- 1 orange immediate-release tablet containing group B vitamins.
- 1 red immediate-release tablet containing caffeine\*.
- (\*) If you cannot take caffeine, you can open the capsule and remove the red tablet.

#### How should DAOhead® be used?

Take 1 capsule with some water 20 minutes before main meals (3 times a day). The capsule should be swallowed whole. If the whole capsule cannot be swallowed, it can be opened up and the tablets within can be consumed separately. The tablets must be swallowed whole, without chewing, splitting or breaking them.

Per capsule	Per 100g
8.21 kJ	1,348 kJ
1.94 kcal	318 kcal
0.007 g	1.1 g
0.0014 g	0.233 g
0.4 g	65 g
0.003 g	<0.5 g
0.072 g	11.9 g
0.003 g	0.464 g
1 mg	186 mg
4.2 mg	0.689 g
0.3 mg	0.049 g
30 mg	4.926 g
1.4 mg	230.26 mg
1 µg	164.47 µg
400 µg	65,789.47µg
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DAOhead® does not contain any of the allergens referred to in Annex II of the Regulation (EU) No. 1169/2011.

## **Recommended storage**

Controlled temperature (< 25°C) or refrigerated (2-8°C) / 60% RH. Avoiding temperatures over 40°C while handling and transport.

## **Recommended conservation to the consumer**

DAOhead® contains Diamine Oxidase (DAO), a thermolabile enzyme (sensitive to temperature), and as such it is advisable to keep it away from heat sources. If it is consumed according to the recommended daily intake dose, it does not require special conservation, but if it is exceptionally consumed sporadically and stored for a long time, it is advisable to keep it in a refrigerator.

### **Shelf life**

24 months from manufacturing date.

### LOGISTICAL INFORMATION

Reference code	DAO60HEAD	Cases per layer	9
Net weight	36.5 g	Layers per pallet	5
Item dimensions (cm) L x W x H	11.4 x 6.2 x 7.7	Cases per pallet	45
EAN13	8437009483121	Units per pallet	1,260
Units per case	28	Pallet dimensions (cm) L x W x H	120 x 80 x 138
Case dimensions (cm) L x W x H	45 x 17 x 24	Gross pallet weight (kg)	135

DR Healthcare is a leading biomedical company in research, development, innovation and manufacturing of nutraceutical products aimed at the dietary management of DAO deficiency and its associated pathologies.

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