

SpiceIT® AM

Product Information

Version: 9 PI GLOB EN 08-30-2019

Description

SpiceIT® AM is an enzyme that catalyzes the breakdown of fat, which results in the formation of free fatty acids. Free fatty acids contribute to improved flavor of various cheese types. Lipases result in the formation of shorter chain fatty acids which contribute to a piquant flavor characteristic. The enzyme originates from the epiglottis of freshly slaughtered calves, lambs and kid-goats.

Material No: 712152

Size 1 kg

Type Bucket

Storage temp: < 10 °C / < 50 °F

Conditions: Cool Dry . Keep closed in the original container.

Shelf life

12 months from quality release when stored according to the recommended storage conditions. The shelf life is limited to 3 months after opening, provided the product is maintained according to the recommended storage conditions.

Transport condition

Ambient temperature.

Application

SpiceIT® AM can be used for improving the flavor profile of various cheese types including Italian, Italian-style and Feta cheese. Desired flavor profiles are highly subjective and vary according to individual. As a result, selection and dosage of lipases should be adjusted for each market. It is advised to adjust dosage levels according to desired flavor profiles.

Dosage

1-3 LFU /l

The correct dosage of lipases depends on the following factors: cheese type, cheese dry-matter, temperature and pH. Factors may vary according to country, dairy and day. Therefore, exact dosage should be optimized to local conditions.

The following dosage rates are guidelines provided for trial purposes.

| Cheese Type | Animal Lipases |
|--------------------|-----------------------|
| Feta | 0.8 - 1.7 LFU /L |
| Pecorino/Pepato | 1.7 - 2.9 LFU /L |
| Parmesan | 1.7 - 2.9 LFU /L |
| Romano | 1.7 - 2.9 LFU /L |

Directions for use

It is recommended to reconstitute 1 part of lipase in 10-50 parts of clean cold water, free of chlorine, prior to use. The dilution should preferably take place in a stainless steel container as some plastic materials have a negative effect on the enzyme activity. Heat the milk to the desired temperature. The diluted lipase should be added immediately to the milk, prior to the coagulant and possibly together with the cultures, while stirring for 2-3 minutes to distribute the lipase properly.

Composition

Sodium chloride, Maltodextrin, Animal lipase

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Specification**Properties**

Average activity: 57 LFU/g Guaranteed activity: $\geq 52,00$ LFU/g
 Guaranteed activity is the minimum activity at best-before date.

Content

Enzyme type: Mixed Lipase

Physical Properties

Color: Creamy to light brown Form: Powder
 Solubility: Water soluble Odor: Characteristic

The product may exhibit batch-to-batch color variations. This has no influence on the activity.

Microbiological quality

| | | | |
|-------------------------|---------------|-----------------------------------|----------------|
| Total count: | < 5.000 cfu/g | Yeast: | < 100 cfu/g |
| Mold: | < 100 cfu/g | Coliform bacteria: | < 10 cfu/g |
| Escherichia coli: | Absent in 25g | Salmonella spp.: | Absent in 25g |
| Listeria monocytogenes: | Absent in 25g | Coagulase-positive staphylococci: | Absent in 2,5g |

Comments

Methods are available on request.

This product complies with the recommended purity specifications for food-grade enzymes given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemical Codex (FCC) with heavy metal specifications for Lead (≤ 5 ppm), Cadmium ($\leq 0,5$ ppm), Mercury ($\leq 0,5$ ppm) and Arsenic (≤ 3 ppm).

Technical Data**Temperature**

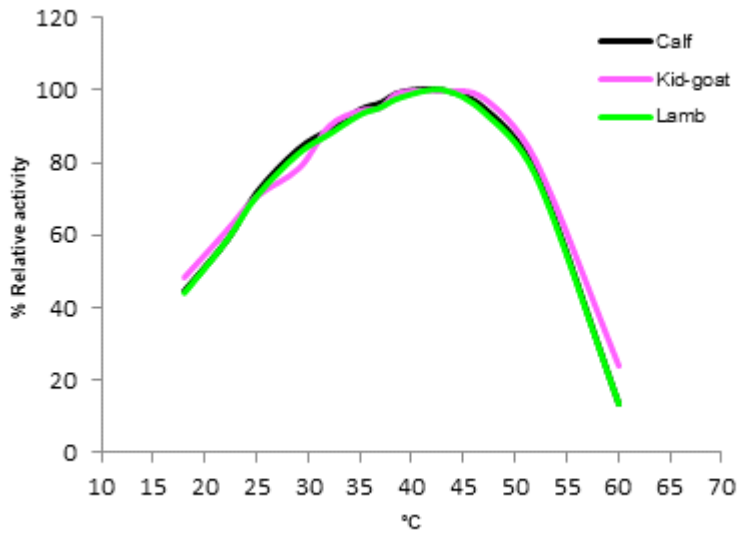
The relative activity of different lipases depends on the temperature. For this product, the temperature optimum is between 35-45°C / 95-113°F.

Influence of temperature on animal lipase activity.

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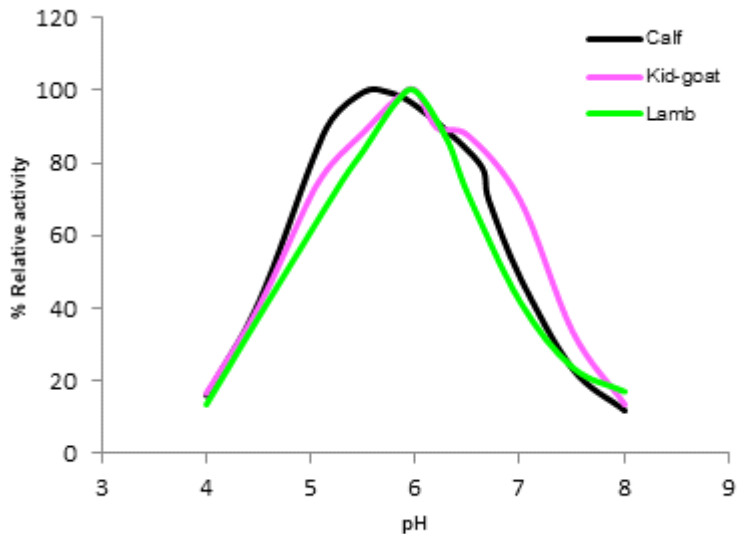
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pH

The activity of lipases is pH dependent with pH optimum between 5.5-6.2.

Influence of pH on animal lipase activity.



Technical support

Chr. Hansen's Application and Product Development Laboratories and personnel are available if you need further information.

Dietary Information

| | |
|-------------|------------|
| Kosher: | Non kosher |
| Halal: | Certified |
| Vegetarian: | No |

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Handling precautions

For detailed handling information, please refer to the appropriate Safety Data Sheet. Enzymes may cause sensitization upon inhalation and irritation upon skin contact. The use of personal protection equipment such as gloves, goggles and respiratory protection can prevent sensitization. For additional guidelines refer to 'Guide to the safe handling of microbial enzymes preparations' published by the Association of Manufacturers and Formulators of Enzyme Products (AMFEP) and 'Working Safely With Enzymes' by the Enzyme Technical Association (ETA).

According to EU legislation, disposal of packaging material of this product should be treated as hazardous waste. Alternatively, or for non EU countries, packaging may be disposed of as normal waste by rinsing with plenty of water to ensure no enzyme residues are present.

Legislation

The product complies with Jecfa (FAO/WHO) and FCC recommended specifications for food grade enzymes.

The legal use of enzymes in food processing is governed by the general food law and by Reg. (EC) No 1332/2008. However the first positive list is only expected to be published in a few years from now. In the meantime, the regulatory situation is unchanged. The safety of the enzyme has been established and documented and as such the enzyme can be used as a processing aid in all countries that do not have specific requirements for approval. In the EU, this currently means all countries except Denmark and France, which have their own national approval systems.

The product is intended for use in food.

Labeling

Enzymes, as processing aids, generally do not need to be labeled on the final product. However local legislation and standards of identity for the final product should always be consulted.

Trademarks

Product names, names of concepts, logos, brands and other trademarks referred to in this document, whether or not appearing in large print, bold or with the ® or TM symbol are the property of Chr. Hansen A/S or an affiliate thereof or used under license. Trademarks appearing in this document may not be registered in your country, even if they are marked with an ®.

GMO Information

In accordance with the below mentioned legislation of the European Union we can inform that:

SpiceIT® AM is not a GM (genetically modified) food *.

As such GM labelling is not required for SpiceIT® AM or the food it is used to produce**. Moreover, the product does not contain any GM labelled raw materials.

* Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed.

** Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC.

Please note the information presented here does not imply that the product can either be used in, or is externally certified to be used in, food or feed labelled as 'organic' or 'GMO free'. Requirements to make these claims vary per country, please contact us for more information.

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Allergen Information

| List of common allergens in accordance with the US Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA) and EU Regulation 1169/2011/EC with later amendments | Present as an ingredient in the product |
|---|---|
| Cereals containing gluten* and products thereof | No |
| Crustaceans and products thereof | No |
| Eggs and products thereof | No |
| Fish and products thereof | No |
| Peanuts and products thereof | No |
| Soybeans and products thereof | No |
| Milk and products thereof (including lactose) | No |
| Nuts* and products thereof | No |
| List of allergens in accordance with EU Regulation 1169/2011/EC only | |
| Celery and products thereof | No |
| Mustard and products thereof | No |
| Sesame seeds and products thereof | No |
| Lupine and products thereof | No |
| Mollusks and products thereof | No |
| Sulphur dioxide and sulphites (added) at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO ₂ | No |

* Please consult the EU Regulation 1169/2011 Annex II for a legal definition of common allergens, see European Union law at: www.eur-lex.europa.eu