

## AFILACT® FLUID

### Product Information

Version: 5 PI GLOB EN 02-23-2017

### Description

AFILACT® FLUID is a natural preservative used in the biopreservation of food. The active component is lysozyme, an enzyme widely present in biological liquids (tears, saliva, blood, etc) where its function is to attack foreign bacteria. Lysozyme inhibits the growth of certain Gram-positive bacteria including Clostridia species but is not effective against yeast, mold or Gram-negative bacteria. The product does not influence the development of mesophilic or most thermophilic dairy cultures when used in the recommended dosage. Currently, the use of lysozyme in food is allowed in over 30 countries, including the EU where lysozyme is approved as a preservative (E1105) with restricted use in some cheeses. The product contains a standardized preparation of lysozyme extracted from fresh egg white.

Material No: 200722

Size 6 X 1 L

Type Bottle in box

Storage temp: 0 - 8 °C / 32 - 46 °F

Conditions: Protect from light . Keep closed in the original container.

### Shelf life

12 months from date of production when stored according to the recommended storage conditions.

### Transport condition

The product should be transported between -5 and 20 °C / 23 and 68 °F with a maximum transit time of 7 days outside this interval. Prolonged exposure to heat above this temperature may influence the shelf life and activity of the product.

### Application

AFILACT® FLUID is used to protect against late blowing of cheese, a cheese defect caused by spore-forming bacteria. Spores are very thermostable and are not destroyed by pasteurization.

### Dosage

2.5-3g /100l milk

It is important to secure the optimal quantity of lysozyme per gram of curd. If the milk has been standardized (high protein content) and cheese yield significantly increased, the dosage of lysozyme per unit of milk must be increased.

Normal cheese yield	High cheese yield
Yield ≤ 120 kg of cheese/1000 l milk	Yield > 120 kg of cheese/1000 l milk
<b>AFILACT™ Fluid dosage</b>	
Standard dosage	Higher dosage required
125 ml/1000 l of milk	150 ml/1000 l of milk
Please check local regulations for possible definitions of max. dosage	

### Directions for use

As the active component of the product is partially inactivated by pasteurization, it should be added to milk following pasteurization. However, the product can withstand heat treatment up to 80°C for a couple of minutes without loss of activity at a pH 5.0- 5.5. The product can be added directly to the vat according to the dosage recommendations.

### Composition

Water, Lysozyme (E1105), Potassium sorbate E202 (<1%)

### Specification

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**Properties**

Average activity: 45000 FIP units/mg protein    Activity /mg protein: > 45.000 FIP/mg  
 Guaranteed activity is the minimum activity at best-before date.

**Content**

Lysozyme (anhydrous): >= 96 %    Enzyme type: Lysozyme  
 Solids: >= 20 %

**Physical Properties**

Color: Slightly yellow    Form: Liquid  
 Solubility: Water soluble    Odor: Slightly sweetish  
 pH: 3,00 - 5,00    Density: 1,00 - 1,10

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

**Formulation**

Potassium sorbate (w/w): 0,14 - 0,18 %

**Microbiological quality**

Total count:	< 100 cfu/ml	Yeast:	< 10 cfu/ml
Mold:	< 10 cfu/ml	Enterobacteriaceae:	Absent in 1ml
Escherichia coli:	Absent in 1ml	Salmonella spp.:	Absent in 25ml
Staphylococcus aureus:	Absent in 1ml		

**Comments**

Methods are available on request.

This product complies with the recommended purity specifications for the E1105 Lysozyme outlined in Commission Regulation (EU) No 231/2012 of 9 March 2012 laying down specification for food additives for Arsenic ( $\leq 1$  mg/kg), Lead ( $\leq 5$  mg/kg) and Mercury ( $\leq 1$  mg/kg).

**Certificate of Analysis**

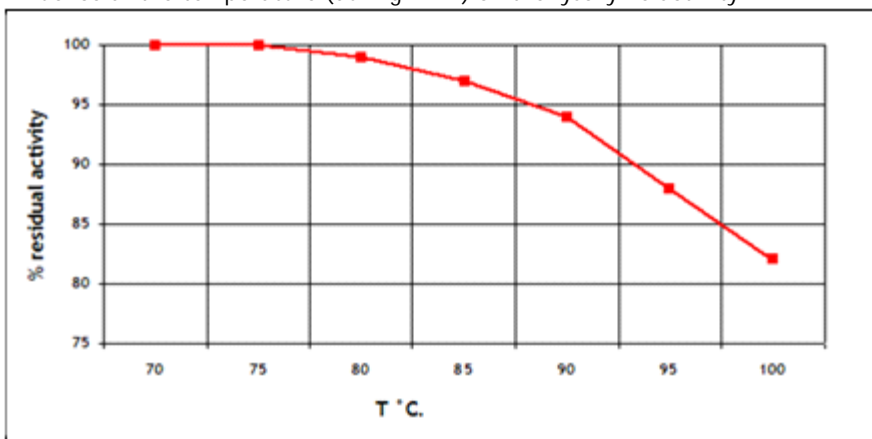
A Certificate of Analysis (CoA) will normally accompany the goods.

**Technical Data**

**Temperature**

Between pH 5.0 and 5.5, this product can withstand heat treatments up to 80°C / 176 °F for up to a couple of minutes without loss of activity.

Influence of the temperature (during 2min) on the lysozyme activity



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### Technical support

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

## Dietary Information

Kosher: K kosher Pareve Excl. Passover  
Vegetarian: No

## Handling precautions

For detailed handling information, please refer to the appropriate Safety Data Sheet. Enzymes may cause irritation upon inhalation or skin contact among sensitive individuals. The use of personal protection equipments such as gloves, goggles and respiratory equipment can prevent sensitisation. 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

This product is a permitted additive according to EU legislation. Please refer to current EU regulations for details on the conditions of use. Outside the EU, please check for local/national rules or regulations. Lysozyme has the E-number E1105. In the Codex Alimentarius system, it is known as INS1105. This product complies with EU, JECFA and FCC specifications.

The product is intended for use in food.

## Labeling

Labeling on final food products: "E1105 (egg)" or "Lysozyme from egg".

## 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 used under license. Trademarks appearing in this document may not be registered in your country, even if they are marked with an ®.

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**GMO Information**

In accordance with the legislation in the European Union\* AFILACT® FLUID does not contain GMOs and does not contain GM labeled raw materials\*\*. In accordance with European legislation on labeling of final food products\*\* we can inform that the use of AFILACT® FLUID does not trigger a GM labeling of the final food product. Chr. Hansen's position on GMO can be found on: [www.chr-hansen.com/About us/Policies and positions/Quality and product safety](http://www.chr-hansen.com/About us/Policies and positions/Quality and product safety).

\* Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms with later amendments, and repealing Council Directive 90/220/EEC.

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

Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labeling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms amending Directive 2001/18/EC, and with later amendments.

**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	Yes
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 <sub>2</sub>	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](http://www.eur-lex.europa.eu)