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Valid from: February 5, 2013

PRODUCT DESCRIPTION - PD 247755-1.0EN

Biolac LYO 20 g

Description

Concentrated, freeze-dried culture for bakery.

Application:

BIOLAC enables to control fermentation process in bakery industry.

Characteristics:

BIOLAC starter culture allows to control the fermentation process when acidifying rye dough and mixed dough. Lactic acid produced by lactic acid bacteria has favourable influence on product organoleptic properties.

Bread produced with BIOLAC starter cultures is characterized by excellent texture, very good taste and flavour and is less susceptible to unfavourable microbiological changes when being stored.

Usage levels

One sachet yields/generates up to 30 kg of leaven i.e. approximately $10 \div 14$ t of finished bread.

We do not accept any liability in case of undue application.

Directions for use

Instructions for starter cultures usage.

1st step. Preliminary fermentation in small tank - setting the leaven.

Leaven temperature should be 32-35°C. Leaven composition:

- wholemeal rye flour type 2000 10 kg (thick milling best)
- table salt (dissolved in the part 0,5 kg of water from the recipte)
- BIOLAC
- water (temp. about 35°C) 20 I.

Pour water and salt solution to the tank, add 10 kg of wholemeal flour type 2000 and one sachet of BIOLAC. Mix all carefully together and leave it for 24-28 hours.

- 1 sachet

- 30 kg

2nd step. Right leaven.

Leaven composition:

- leaven
- wholemeal rye flour type 2000 75 kg
- rye flour type 720 75 kg
- water with temp. 32-35°C 260 I
- stale bread 40÷150 kg

Pour leaven from the small tank (1st step) to the main tank. Add 260 I of water (temp. 32-35°C) flour and stale bread.

Mix all together and leave it for 24-28 hours. pH after 24 hours should be 12-15°SH. Use 12 l of acid for 100 kg of ready bakery products. It has to be considered that the whole content of the pouch has to be applied per propagation in order to assure constant product quality.

Composition

Lactococcus lactis Lactobacillus plantarum carrier: dextrose, waterfree

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Properties

Effects:

- · excellent quality of leaven and dough acidification
- · perfect leaven organoleptic properties
- high and even bread quality
- extended freshness
- · controlability of fermentation process
- higher hygiene of bread production

Remarks:

- bread added (without mould and paper labels) should not be milled or dried
- 1-2 day bread is best to be used
- minimum quantity of bread is 40 kg
- maximum quantity of added bread is 150 kg
- bread should not be replaced by flour
- flour and water ratio is stable
- do not change temperature; it may cause some problem during fermentation process

Microbiological specifications

| Non-lactic acid bacteria | < 500 cfu/g |
|---|----------------|
| Enterobacteriaceae | < 10 cfu/g |
| Yeasts and Moulds | < 10 cfu/g |
| Enterococci | < 100 cfu/g |
| Clostridia spores | < 10 cfu/g |
| Coagulase-positive | < 10 cfu/g |
| staphylococci | |
| Salmonella spp. | absent in 25 g |
| Listeria monocytogenes | absent in 25 g |
| Analytical matheda available upon request | |

Analytical methods available upon request

Storage

12 months from date of production at <= -18 °C

Purity and legal status

Biolac LYO 20 g meets the specification laid down by the EU legislation.

Label food regulations should always be consulted concerning the status of this product, as legislation regarding its use in food may vary from country to country.

Safety and handling

MSDS is available on request.

Allergens

Below table indicates the presence of the following allergens and products thereof:

| Yes | No | Allergens | Description of components |
|-----|----|---|---------------------------|
| | Х | wheat | |
| | x | other cereals containing gluten | |
| | Х | crustacean shellfish | |
| | Х | eggs | |
| | Х | fish | |
| | Х | peanuts | |
| | Х | soybeans | |
| х | | milk (including lactose) | |
| | Х | nuts | |
| | Х | celery | |
| | Х | mustard | |
| | Х | sesame seeds | |
| | х | sulphur dioxide and sulphites (> 10 mg/kg) | |
| | Х | lupin | |
| | Х | molluscs | |

Local regulation has always to be consulted as allergen labelling requirements may vary from country to country.

Packaging

PE, PET, AI laminated foil

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Additional information

The values indicated in this document correspond to results from standardized laboratory tests. They should be considered as guidelines. In practice, other values are expected depending on the type of product and technology. Due to advances in technology and continuous product improvement it may be necessary to change standard values in the future.

GMO status

Biolac LYO 20 g does not consist of, nor contains, nor is produced from genetically modified organisms according to the definitions of Regulation (EC) 1829/2003 and Regulation (EC) 1830/2003 of the European Parliament and of the Council of 22 September 2003.



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