GENESIS MC SERIES

STARTER CULTURES

Description

►Citrate Fermenting Cultures
►Mesophilic and Blended Multiple-species Starter Cultures
►Optimized combinations of compatible selected bacteriophage resistant strains
►Activity – the number of viable active cells is 1 x 10^{10} CFU per gram
►Strains are not genetically modified

Packing and storage conditions

► GENESIS cultures are packed in three layer folio sachets in doses for a fixed amount of milk
►Cultures for bulk starter preparation – 100, 200 l. They assure the obtaining of an active liquid bulk starter culture.
► Direct starter cultures for 500, 1000, 1500, 2000, 5000 l
►Freeze-dried GENESIS cultures preserve their production qualities for a year when stored at 0 ÷ 10 ^{o}C in dry premises. GENESIS cultures allow transportation without special cooling for no more than 72 hours.

Purity

Coliforms (ISO 4831,ISO 4832)	**CfU/g; MPN**	**Absent**
Escherihia coli (ISO 7251)	**CfU/g; MPN**	**Absent**
Salmonella species (ISO 6579)	**in 25,0 g**	**Absent**
Staphylococcus aureus (6888-1-3)	**CfU/g; MPN**	**Absent**
Listeria monocytogenes (ISO 11290-1)	**in 25,0 g**	**Absent**
Yeast and moulds (ISO 7954)	**CfU/g**	**< 5**

Chemical standards

Pb	**< 0,10 mg/kg**	**Cd**	**<0,10 mg/kg**	**As**	**<1,00 mg/kg**
Hg	**< 0,03 mg/kg**	**Cu**	**< 1,00 mg/kg**	**Zn**	**< 1,00 mg**

Dosage

Activity units (U) in relation to liters	Amount of milk (mixture) for fermentation (l)
1	**100**
5	**500**
10	**1000-1500**
20	**2000-2500**
50	**5000**

Alternative cultures

►MC-1 ►MC-2 ►MC-3 ►MC-4 ►MC-5

Compossition

Lactococcus lactis sp. lactis
Lactococcus lactis sp. cremoris
Lactococcus lactis sp. lactis biovar. diacetylactis
Leuconostoc mesenteroides sp. cremoris

Application

►Heterofermentative mesophilic cultures
►Medium/fast acidification
►Medium gas production
►The cultures are suitable for the production of cottage cheese and hard cheese at low temperature of the second heating.

Technological modes

Name of the product	Temperature, °C	Fermentation time, hour	pH
Sour cream	**36 ±1**	**8÷9**	**4,8±1**
Curd cheese	**36 ±1**	**8÷9**	**4,8±1**

Fermentation activity

	0:00	1:00	2:00	3:00	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00
36°C	6,60	6,58	6,55	5,45	5,89	5,73	5,37	5,23	5,13	5,00	4,95	4,85	4,80

36°C	24:00
pH	4,59

Alternative cultures

►**MC-10** ►**MC-11** ►**MC-12**

Compossition

Lactococcus lactis sp. lactis
Lactococcus lactis sp. cremoris
Lactococcus lactis sp. lactis biovar. diacetylactis
Leuconostoc mesenteroides sp. cremoris
Streptococcus salivarius sp. thermophilus

Application

►Low gas production
►Strong flavor
►Medium viscosity
►Creamy texture
►The final product is with cream like consistency, moderate aroma production, which increases during ripening.
►The cultures have a low level of gas production and low post acidification.
►Suitable for production of fermented milk beverages，sour cream, sour cream butter, curd cheese, soft cheese types.

Technological modes

Name of the product	Temperature, °C	Fermentation time, hour	pH
Sour cream	36 ±1	6÷8	4,7±1
Curd cheese	36 ±1	6÷8	4,7±1

Fermentation activity

	0:00	1:00	2:00	3:00	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00
36°C	6,60	6,53	6,46	5,96	5,85	5,70	5,32	5,20	5,10	5,00	4,95	4,84	4,80

36°C	24:00
pH	4,60

Alternative cultures

►**MC-34** ►**MC-35** ►**MC-35** ►**MC-40**

Compossition

Lactococcus lactis sp. lactis
Lactococcus lactis sp. cremoris
Lactococcus lactis sp. lactis biovar. diacetylactis
Leuconostoc mesenteroides sp. cremoris
Streptococcus salivarius sp. thermophilus

Application

►Medium acidification
►Low gas production
►Medium/Strong flavor
►Medium viscosity
►Creamy texture
►The final product is with cream like consistency, moderate aroma production, which increases during ripening.
►The cultures have a low level of gas production and low post acidification.
►Suitable for production of sour cream and fermented milk beverages

Technological modes

Name of the product	Temperature, °C	Fermentation time, hour	pH
Sour cream	36 ±1	6÷8	4,7±1

Fermentation activity

	0:00	1:00	2:00	3:00	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00
36°C	6,60	6,58	6,56	6,46	5,90	5,74	5,38	5,24	5,14	5,02	4,97	4,86	4,80

36°C	24:00
pH	4,59

►The information is based on laboratory experiments and is approximate for manufacturing conditions.

►Nutritional medium used: non-fat reconstituted milk (10% solids), heated for 45 minutes at 99 ° C and standardized to pH 6.6 ± 0.5.

►Each consumer should carry out his own tests based on our recommendations and determine the suitability of the starter culture depending on the quality of raw materials, technology, equipment in each case.