

LACTOGLACE

Ice Cream Solutions



Enjoy our
movie about
LACTOGLACE

Products from the LACTOGLACE range offer you a wide range of **compounds for several ice cream applications**. We have focused on four areas, such as skim milk powder replacement, stabilizer / emulsifier systems, protein enrichment and ready-to-use blends for ice cream. Our products help to keep costs under control and deliver a high performance regarding ice cream taste and texture.



LACTOPROT
functionality from milk

www.lactoprot.de

LACTOGLACE 120, 150, 200

SKIM MILK POWDER REPLACEMENT

LACTOGLACE 120, **LACTOGLACE 150** and **LACTOGLACE 200** are highly functional milk products with naturally increased calcium mineral content. They can replace whey or milk powder at a ratio of 1 to 1 with **LACTOGLACE** in standard recipes, while bringing a significant improvement to the quality of the ice cream. **LACTOGLACE** is suitable for the traditional artisan ice cream as well as the industrial production and can also be used in soft ice cream.

Product	Description	Protein	Application
LACTOGLACE 120	whey product	12 %	SMP-replacement with 50%
LACTOGLACE 150	whey and/or milk solids	15 %	SMP-replacement with 100%
LACTOGLACE 200	whey and/or milk solids	20 %	SMP-replacement with 100%, best functionality

MELTING BEHAVIOUR OF ICE CREAM WITH/WITHOUT LACTOGLACE

The following pictures show the melting behaviour of ice cream with skim milk powder and with the substitute **LACTOGLACE 120** in comparison .



SMP

Lactoglance 120

LACTOGLACE SE

STABILIZER / EMULSIFIER SYSTEM

We would like to present our **LACTOGLACE SE CE** that can help you deliver the creamy, top quality ice cream your customers demand from you at optimized cost and with an increased overrun. If an even higher melt-down resistance is needed, try our **LACTOGLACE SE MV** for your premium ice cream quality!

EXAMPLE FORMULATION

This application suggestion demonstrates you the use of the stabilizer / emulsifier system **LACTOGLACE SE** and the skim milk replacer **LACTOGLACE 150** in a cost efficient ice cream.

Ingredient	Dosage (%)	Dosage (%)
Water	64.5	64.3
Glucose syrup DE 30-40	3.0	3.0
LACTOGLACE 150	10.0	10.0
Sugar	14	14
Palm fat	8.0	8.0
LACTOGLACE SE CE alternatively LACTOGLACE SE MV	0.3 – 0.5	0.5 – 0.7

Processing

1. Pre-melt the fat
2. Use warm water and add all dry ingredients under high shear
3. Add the fat while mixing
4. Heat mix to 60°C
5. Homogenize with 180/40 bar
6. Pasteurize mix at 85°C for 30 seconds
7. Cool to 5°C and ripe for min. 4 hours
8. Freeze with continuous or batch freezer and fill into final packaging
9. Freeze in hardening tunnel at -40°C and store at -22°C

KEY BENEFITS

Improved creaminess

Softer mouthfeel

Increased overrun

Slower melting

Cost-effective solutions

KEY BENEFITS

Overrun up to 120%

Cost optimization

High melt-down resistance

Creamy and smooth texture

Prevention of wheying off /
syneresis of the ice mix



LACTOGLACE 820 HP, LACTOGLACE SE PROTEIN ENRICHMENT OF ICE CREAM

High protein ice cream is a significant trend in food markets. Lactoprot faces this trend with blends, which are specially developed for these applications. Our high protein ice cream portfolio ranges from milk protein blends to individually adapted stabilizer / emulsifier systems.

EXAMPLE FORMULATION

This application suggestion demonstrates the use of **LACTOGLACE 820 HP** as a high protein blend and **LACTOGLACE SE LV** as a stabilizer / emulsifier system for high protein ice cream with a protein content of 12 %.

Ingredient	Dosage (%)
Water	67.5
Skim milk powder	4
Sucrose	13
Palm fat	2
LACTOGLACE SE LV	0.5
LACTOGLACE 820 HP	13

Processing

1. Pre-melt the fat
2. Use warm water and add all dry ingredients under high shear
3. Add the fat while mixing
4. Adjust pH to 6,8 with NaOH
5. Heat mix to 60°C
6. Homogenize with 250/50 bar (upstream homogenization)
7. Pasteurize mix at 80°C for 10 – 30 seconds
8. Cool to 5°C and ripe for min. 4 hours
9. Freeze with continuous or batch freezer and fill into final packaging
10. Freeze in hardening tunnel at -40°C and store at -22°C

KEY BENEFITS

Neutral dairy taste

Smooth ice cream texture

Low premix viscosity

Protein enrichment up to 12 %

LACTOGLACE IM ICE CREAM POWDER (ALL-IN-ONE SOLUTIONS)

Using our **LACTOGLACE IM** product range is the easiest way to produce high quality ice cream with low costs. It is about all-in-one ice cream solutions to which only water or milk has to be added for the ready ice cream premix. Optionally, customers can add flavouring products. Heat treatment and homogenization are both not necessary but possible. These instant products are recommended not only for smaller soft serve ice cream producers but also for medium-sized ice cream factories, which want to benefit from the excellent handling properties of **LACTOGLACE IM** products.

We offer our all-in-one solutions for ice cream:

LACTOGLACE IM NEUTRAL

EXAMPLE FORMULATION

This application suggestion demonstrates the use of **LACTOGLACE IM** products for soft serve ice cream.

Ingredient	Parts
Water	2
LACTOGLACE IM	1
Flavouring ingredients (optional)	as favoured

Processing

for soft serve ice cream

1. Mix cold water and LACTOGLACE IM with high shear
2. Allow to age for minimum 60 minutes
3. Freeze in soft serve freezer



KEY BENEFITS

Cost optimization

Easy handling

No heat treatment and homogenization necessary

Nice mouthfeel and high melt-down resistance

Creamy and smooth texture

Delicious taste



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LACTOPROT

functionality from milk

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