

# Fat Reduction

## Thermised, Fermented Dairy Drink



IDEA	SOLUTION
Formulate a cost-effective dairy product which appeals to consumers following low-fat diets.	A reduced-fat dairy drink with all the textural attributes of a full-fat equivalent.

**N-CREAMER® 221** starch is modified tapioca starch and widely used in dairy applications where excellent process resistance and shelf life stability is required. Due to its good compatibility with milk proteins, excellent flavour release and superior texture stability it is widely recommended for yoghurt products where protein needs to be reduced to save recipe costs.

**N-DULGE® CI** starch is a modified starch co-texturiser is an effective fat mimetic in low-fat applications. It can enable food manufacturers to create products with the same body, mouthcoating and meltaway as their full-fat equivalents. In dairy products, it can deliver the appealing textural attributes consumers seek, such as creaminess and smoothness.

**Ticalose® CMC 400** Granular Powder is a medium-viscosity coarse carboxymethylcellulose (CMC) derived from cellulose. Soluble in both cold or hot water, it remains stable over a pH range of four to ten and is compatible with other hydrocolloids, proteins and sugars. It can control ice crystal growth and texture in frozen dairy products and can protect proteins in acidified dairy products. With strong moisture-retention capabilities, it is also ideal for use in low-calorie products.

### Thermised, Fermented Dairy Drink Recipe

Ingredients	% as is
Fresh skimmed milk	65.43
Water	20.00
Sugar	8.00
Cream (40% fat)	5.00
<b>N-CREAMER® 221</b>	<b>0.75</b>
<b>N-DULGE® CI</b>	<b>0.50</b>
<b>Ticalose® CMC 400 Granular Powder (Carboxymethyl cellulose)</b>	<b>0.30</b>
Culture	0.02
<b>Total</b>	<b>100.00</b>

Preparation details on back

### Nutritional Information

Nutrients per 100g

<b>ENERGY</b> (kJ / kcal)	321 / 76
<b>FAT</b> (g)	2.0
of which <b>SATURATES</b> (g)	1.5
<b>CARBOHYDRATE</b> (g)	12.0
of which <b>SUGARS</b> (g)	10.9
<b>DIETARY FIBRE</b> (g)	0.3
<b>PROTEIN</b> (g)	2.3
<b>SALT</b> (g)	0.1 [59mg]

### Allergen Information

Contains milk and products thereof.

N-CREAMER® 221 and N-DULGE® CI contain Sulphur Dioxide (SO<sub>2</sub>), typically <10 ppm.

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## Preparation

1. Add the starches and sugar to 60% of the water, cream and milk.
2. Preheat to 65°C.
3. Homogenise at 130/30 bar.
4. Pasteurise at 92°C and hold for five minutes.
5. Fill at < 43°C.
6. Inoculate with culture.
7. Stop fermentation at pH 4.5 by stirring and cooling to 20°C.
8. Prepare a CMC/water solution using 40% of the total water. Mix with a high-speed mixer at 7000 rpm for five minutes.
9. Mix the yoghurt with the CMC/water solution.
10. Thermise at 75°C for 15 seconds and cool to 20°C.
11. Fill the drink into containers.