Cream Cheese Light

recommended recipe

Product characterization

This recipes show various possibilities for the stabilisation of a full bodied, creamy and smooth Cream Cheese Light with a natural appearance.

Recipe (Ref.: KB14_99e.DOC)

Skim quark (fresh cheese)	45.50 %
Cream Cheese with 30% fat	54.00 %
Salt	0.20 %
Stabiliser	approx 0.30 %
Fat Replacer	evtl. 1.00 %

Preparation (in Stephankutter)

1. Mix the cheese in the Stephankutter and heat up to 40°C while stirring at 1500 t/min.
2. Add the premixed dry components.
3. Heat up to a maximum of 92°C and keep at this temperature for 10 min
4. Homogenise at 200 bar
5. Package directly (hot filling)

Remarks

- The laboratory tests were made under practical conditions (thermic treatment, homogenisation, time for cooling to the storage temperature) at the Swiss Federal Dairy Research Station.
- The test incluced various combinations of hydrocolloids together with galactomannans.
- A fat replacer based on milk protein and cellulose were tested for improving the texture and appearance of the cream cheese light.
- Nutritional values (theoretic)

Fat	16.00 %
Protein	7.50 %
Total Solids	approx. 29.50 %

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Experiments and Results

Recipe 1		Results	
VIDOGUM L 190/C500.	0.20 %	creamy and smooth texture	
k-Carrageenan	0.10 %	surface is lightly pale	
		Viscosity at 75°C (+/- 2°C)	7500 mPa.s
		pH	4.88
		NaCl	0.69 %
		Fat	15.80 %
		Protein	7.80 %
		Total Solids	28.80 %
		Fat in TS	54.60 %
		Water in Fatfree TS	84.50 %

Recipe 2		Results	
VIDOGUM LS 35E.	0.20 %	even creamier and smoother texture than recipe 1	
k-Carrageenan	0.10 %	gleamy shine on surface	
		Viscosity at 75°C (+/- 2°C)	6000 mPa.s
		pH	4.87
		NaCl	0.66 %
		Fat	15.00 %
		Protein	7.48 %
		Total Solids	27.10 %
		Fat in TS	55.40 %
		Water in Fatfree TS	85.80 %

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Further two tests were made with milk protein and a cellulose products in addition to the stabiliser system of the recipe 1. The effect was a dryer aspect and a creamier and fattier structure.

Recipe 3		Results	
VIDOGUM L 190/C500.	0.20 %	texture is crumbly and full bodied. The mouthfeeling shows a resistent structure at the beginning but it melts fast.	
k-Carrageenan	0.10 %		
Microcristalline Cellulose	1.00 %	Surface and texture have a natural, dry appearance	
		Viscosity at 75°C (+/- 2°C)	9000 mPa.s
		pH	4.84
		NaCl	0.63 %
		Fat	14.50 %
		Protein	7.97 %
		Total Solids	28.00 %
		Fat in TS	51.70 %
		Water in Fatfree TS	84.20 %

Recipe 4		Results	
VIDOGUM L 190/C500.	0.20 %	structure is crumbly and the texture is full bodied. The melting behaviour is fat-like.	
k-Carrageenan	0.10 %		
Simplesse	1.50 %	Surface and texture have a natural, dry appearance	
		Viscosity at 75°C (+/- 2°C)	8500 mPa.s
		pH	4.93
		NaCl	0.66 %
		Fat	14.30 %
		Protein	8.55 %
		Total Solids	28.20 %
		Fat in TS	50.60 %
		Water in Fatfree TS	83.70 %

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Instead of the k-Carrageenan, two test were made with Na-Alginate and Agar Agar.

Recipe 5		Results	
VIDOGUM L 190/C500.	0.20 %	texture is shligtly flat. Probably the concentration in Na-Alginate is too low.	
Na-Alginat	0.10 %	Surface has a natural shine.	
		Viscosity at 75°C (+/- 2°C)	7000 mPa.s
		pH	4.86
		NaCl	0.68 %
		Fat	16.10 %
		Protein	7.67 %
		Total Solids	28.70 %
		Fat in TS	55.80 %
		Water in Fatfree TS	84.90 %

Recipe 6		Results	
VIDOGUM L 190/C500.	0.20 %	texture is creamy and firm.	
Agar Agar	0.10 %	Surface has a glassy shine	
		Viscosity at 75°C (+/- 2°C)	6000 mPa.s
		pH	4.85
		NaCl	0.61 %
		Fat	16.00 %
		Protein	8.00 %
		Total Solids	28.40 %
		Fat in TS	56.30 %
		Water in Fatfree TS	85.20 %

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