Low sodium processed cheese spreads
40-60% sodium reduction with Nutrilac®

www.arlafoodsingredients.com
Ready for your challenges
We know that controlling the functionality, sensory properties and consistent quality of processed cheese is easier said than done when working with blends of young, medium ripened and ripened cheeses. No wonder that many processors turn to stabilisers to smooth over quality variations.

Our natural solutions
What we offer is a natural solution to your challenges. Nutrilac® is an opportunity to manufacture low sodium processed cheeses of high, uniform quality and with a consumer-friendly label.

Here’s a summary of the processed cheese challenges we solve:

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<tr>
<th>Your challenges</th>
<th>Your gains with Nutrilac®</th>
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<tr>
<td>Controlling taste, texture and mouthfeel</td>
<td>High textural control and mild dairy flavour</td>
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<tr>
<td>Reducing production costs</td>
<td>Natural cheese substitution</td>
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<td>Improved water binding properties</td>
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<td>Maintaining quality in low fat/low sodium formulations</td>
<td>Effective fat simulation, securing creaminess, soft texture and white appearance 50% sodium reduction with improved emulsification</td>
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<td>Optimising production processes</td>
<td>Faster, simpler processing</td>
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Processed cheese spreads with less sodium

Reducing sodium intake is very much a growing consumer trend, but producing high quality, low sodium processed cheese can be a difficult process for even the best producers.

At Arla Foods Ingredients, we have developed Nutrilac® functional milk proteins for high quality formulations with at least 50% less sodium. This is done by partly or fully substitution of the emulsifying salts which are normally present in processed cheeses.

On top of the appealing texture, firmness and colour of your reduced sodium cheese spreads, you gain from an optimised manufacturing process – improving efficiency and cutting your overall costs.

Why choose Nutrilac®?
› Spreadable processed cheeses with up to 40-60% less sodium
› Improved emulsification
› Improved texture and creaminess
› Mild dairy flavour
› Fast, effective processing without creaming

Ask about our high level technical advice
We work with you to define your needs, develop a solution and deploy the result on your production line. To find out more, send us a mail: ingredients@arlafoods.com.

Production of low sodium processed cheese spread

1. MIX CHEESE, WATER & FAT AT 40°C IN BATCH COOKER
2. ADD NUTRILAC® & REST OF INGREDIENTS & MIX FOR 5 MINUTES
3. ADJUST pH TO 5.5 WITH CITRIC ACID
4. HEAT TO 85°C WITH DIRECT STEAM
5. PASTEURISATION AT 85°C FOR 5 MINUTES
6. HOMOGENISATION AT 200 BAR (OPTIONAL)
7. FILLING & COOLING
Recommended Nutrilac® solution for low sodium processed cheese spreads

<table>
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<th>Nutrilac® solution</th>
<th>Emulsifies</th>
<th>Improves creaminess</th>
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<td>Nutrilac® CH-6540</td>
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**Frequently asked questions**

**Will functional milk proteins be able to cope with a UHT treatment, which is often used for processed cheese production?**

Yes, the solutions that we recommend for retort stable productions are “retort stable”.

**Will the cheese flavour be affected, if e.g. 30-40% of natural cheese is replaced in the formulation?**

No, this is almost never a problem. Often you will be surprised how much flavour 20-40% natural cheeses will bring to a processed cheese. If further flavour enhancement is required, we have the expertise to guide in the use of cheese powders and EMC’s.

**What are the optimal Nutrilac® storage conditions?**

AFI’s Nutrilac® solutions are stable when stored at ambient temperature. The product has a minimum one year storage life if kept under the prescribed storage conditions. A cooler storage temperature will give an even longer shelf life.