

CREATING IN-DEMAND DAIRY PRODUCTS

**SOLVE YOUR DAIRY  
DEVELOPMENT  
CHALLENGES  
WITH INGREDION**

Clean labels. Healthier products. Rich, creamy textures. Discover how you can formulate dairy products that answer major consumer trends while optimising your production costs with help from Ingredion. Collaborate with us to leverage our science-based problem solving and innovative ingredient solutions to help you overcome your formulation challenges and get your products to market faster.

# FIT INTO MORE CONSUMERS' LIFESTYLES

Meet consumer demand for products they can feel good about with healthier food and beverages that align with consumers' dietary restrictions and preferences.



## CASE STUDY: DEVELOPING AN APPEALING LOW-FAT FLAVOURED MILK DRINK

### CHALLENGE

A beverage manufacturer needed to launch a low-fat milk drink within a short timeframe. Their R&D team had not reached an appealing formulation to deadline, so the company sought specialist advice.

### SOLUTION

Experts at Ingredion trialled a range of solutions before reaching the desired end result with **N-DULGE® C1** co-texturiser and **THERMFLO®** modified food starch.

### RESULT

The combination of Ingredion products gave the milk drink the body and mouthfeel consumers expect while supporting a low-fat claim. It also ensured that the drink would remain stable and visually appealing over its shelf life.

**N-DULGE® C1 co-texturiser** can enable food manufacturers to create low-fat products with the same body, mouthcoating and meltaway as their full-fat equivalents.

**THERMFLO® modified food starch** is designed to provide viscosity and mouthfeel. In combination with other co-texturisers, it builds body and creamy textures in fat-reduced applications.



## IMPROVE NUTRITION AND INCREASE APPEAL WITH INNOVATION FROM INGREDION



### YOGHURT AND FERMENTED DAIRY DRINKS

Reduce fat and sugar while maintaining creamy, rich textures



### PUDDING/DAIRY DESSERTS

Lower fat levels without changing the taste or texture of your consumers' favourite indulgences



### DAIRY ALTERNATIVES

Add protein with on-trend pulses while reducing sugar and fat



## ADD CLEAN AND SIMPLE APPEAL

Tap into Ingredion's broad portfolio of innovative ingredients to create dairy products with both the eating experience and the clean labels that consumers want.



### CASE STUDY: REFORMULATING A FRUIT PREPARATION FOR CLEAN LABELS

#### CHALLENGE

A manufacturer's goal was to replace modified starch in a yoghurt fruit preparation with a clean label ingredient while also extending texture stability over shelf life.

#### SOLUTION

Ingredion experts recommended reformulating with **NOVATION PRIMA® 303 functional native starch**, which offers the functionality of a modified starch with a clean label.

#### RESULT

Using **NOVATION PRIMA® 303 starch** helped the manufacturer achieve extended stability and shelf life, as well as a glossy, jam-like appearance for the fruit preparation.

**NOVATION PRIMA® 303 starch**, made from tapioca, provides the process tolerance of a modified starch with a more consumer-friendly label. It can also help you enhance creaminess and improve flavour in your dairy applications while increasing texture stability over shelf life.



### CREATE CLEANER, MORE CONSUMER-FRIENDLY LABELS WITH INNOVATION FROM INGREDION



#### YOGHURT AND FERMENTED DAIRY DRINKS

Enhance creaminess and improve mouthfeel without the use of modified starches



#### PROCESSED AND ANALOGUE CHEESE, CHEESE PRODUCTS

Formulate the cheesy textures that consumers expect with the labels they want



#### PUDDING/ DAIRY DESSERTS

Increase the indulgence in sweet treats' texture while keeping clean labels your consumers will feel good about



#### DAIRY ALTERNATIVES

Add protein and mimic dairy texture in a range of clean label alternative dairy applications

## DELIGHT WITH CONSUMER-WINNING TEXTURE

From thick and creamy yoghurt to smooth, spreadable cheese, developing the right texture is key to creating dairy products your consumers will love.



### CASE STUDY: BUILDING BACK TEXTURE IN A DAIRY DRINK

#### CHALLENGE

A manufacturer's non-fermented, high-protein dairy beverage lacked viscosity and mouthfeel, resulting in an unappealing drinking experience.

#### SOLUTION

Ingredion experts recommended adding **N-DULGE® starch** which provides mouthfeel, filmforming and creaminess in dairy applications.

#### RESULT

Adding the co-texturiser to the existing formulation allowed the product developers to fine-tune the mouthfeel to achieve the exact results the manufacturer wanted.

**N-DULGE® starches** can help you deliver creamy, smooth textures and enhance mouthfeel in high-moisture applications like dairy products. They improve mouthfeel, filmforming and creaminess, allowing you to replace costly dairy fats and oils while improving the nutritional profile of your consumers' favourite indulgences.



#### CREATE UNIQUELY APPEALING TEXTURES WITH INNOVATION FROM INGREDION



##### YOGHURT AND FERMENTED DAIRY DRINKS

Develop consumer-winning textures by boosting viscosity, increasing gelation and improving textural stability over shelf life



##### PROCESSED AND ANALOGUE CHEESE, CHEESE PRODUCTS

Improve elasticity, meltability and spreadability to create cheese products your consumers will love



##### PUDDING/ DAIRY DESSERTS

Get great mouthfeel and rich, creamy textures while improving texture stability over shelf life



##### DAIRY ALTERNATIVES

Deliver consumer-winning alternative dairy with the creaminess, viscosity and mouthfeel of traditional dairy products

# SAVE AND SATISFY

Some simple substitutions can help you reduce formulation costs without compromising the quality of your consumers' favourite products.



## CASE STUDY: WHIPPED CREAM CHEESE

### CHALLENGE

The manufacturer of a whipped cream cheese wanted to cut formulation costs without affecting the product's quality or consumers' eating experience.

### SOLUTION

Ingredion experts recommended partially replacing the dairy solids with **PURITY™ 87 tapioca-based starch**.

### RESULT

The starch helped the manufacturer meet its savings goals by reducing the amount of dairy solids needed without sacrificing the product's creaminess and light, whipped texture.

**PURITY™ 87 tapioca-based starch** can help you replace more dairy protein in creams and spreadable cheese products while maintaining freeze/thaw stability and consumer-winning taste and texture.



## CASE STUDY: STIRRED YOGHURT

### CHALLENGE

A stirred yoghurt manufacturer wanted to reduce its dependence on the cost and availability of traditional ingredients while maintaining the product's taste and texture.

### SOLUTION

Ingredion experts recommended partially replacing the dairy solids with **THERMTEX® starch** and **N-DULGE® C1 co-texturiser**.

### RESULT

The two ingredient solutions worked together to maintain the yoghurt's texture while reducing the fat by 25% and protein by 15% — saving the manufacturer €400,000 per year.

**THERMTEX® starch**, derived from waxy maize, is highly process-tolerant and can help you to reduce recipe costs by reducing dairy protein in your products.



## REDUCE YOUR RECIPE COSTS WITH INNOVATION FROM INGREDION



### YOGHURT AND FERMENTED DAIRY DRINKS

Replace more dairy protein, pectin and fat without compromising the creamy, smooth textures your consumers love



### PROCESSED AND ANALOGUE CHEESE, CHEESE PRODUCTS

Reduce your reliance on costly dairy proteins while maintaining the stretch, shred and melt that consumers expect



### PUDDING/ DAIRY DESSERTS

Cut costs but keep the indulgence by replacing dairy solids and fats with fat mimetics



### DAIRY ALTERNATIVES

Remove all dairy from your products while better imitating traditional dairy taste and texture



# GET A TASTE OF OUR CAPABILITIES

Utilise co-texturisers and starch for a thick and creamy Greek style yoghurt with consumer-friendly labels.



## CLEAN LABEL GREEK YOGHURT

INGREDIENTS	CONTROL	INGREDION SOLUTION
Fresh skimmed milk	70%	87.10%
Cream 40% fat	18%	8.65%
SMP	12%	1%
<b>N-DULGE® SA1</b>	-	2%
<b>NOVATION® Indulge 1720</b>	-	1.25%
<b>TOTAL</b>	100%	100%
<b>% protein</b>	<b>7.09%</b>	<b>3.58%</b>
<b>% fat</b>	<b>7.05%</b>	<b>3.51%</b>

**3.5% PROTEIN**  **3.5% FAT**

### PROCESS

- Blend dry components and incorporate into the milk
- Preheat to 65°C
- Homogenise (2nd/1st stage) at 30/100 bar
- Heat to 95°C and hold for 6 minutes
- Cool to 43°C and inoculate with standard culture (Chr. Hansen YC-X11)
- At pH 4.5 cool down to 20°C
- Static smoothing and fill

## INNOVATE WITH US

Entice more dairy consumers and grow your brand with solutions that can help you enhance texture, improve nutrition and clean up your labels, as well as reduce your costs. Rely on Ingredion's broad portfolio of ingredient solutions and science-based problem solving to develop the dairy products that your consumers really want.

Create dairy that delights with Ingredion

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