

# Case Study: Yogurt

## Application

Blending high protein ingredients into yogurt

## Specifications

Zero fat yogurt with 10% protein from casein and whey protein. 4,000 kg batches 2-3 times weekly.

## Challenge

Disolve ingredients completely for smooth feel and appealing look.

## Issue

Undissolved high protein ingredients gave product gritty feel and cloudy look.

## Products with Similar Challenges

- Cottage cheese dressing
- Cream cheese
- Greek yogurt
- Non-Dairy Cheese



## FS Capabilities

Models: 12

Max. Tip Speed: 44m/s

Max. Flow Rate: 375 gpm (85 m3/hr)



## FS Solves Texture Issues

A Brazilian dairy processor created a new high protein yogurt product, but could not mass market it due to processing difficulties. They could not reproduce the smooth mouth-feel the yogurt had in their test lab when they moved to full-scale production, using another brand of mixer. Instead it felt gritty and looked cloudy, due to undissolved ingredients.

## Solution

They turned to Fristam who recommended they place a Fristam FS shear blender with pyramid teeth, for medium shearing, after their existing mixing tank to supplement the texturizing system and smooth out the yogurt.

## Why It Worked

The FS uses an intermeshed rotor/stator system to disperse particles into liquid. Its rotating teeth pass within 0.5 mm of the stationary teeth at high speeds, causing tremendous turbulence. As centrifugal force pushes the product towards the outlet, this turbulence ensures that all product is thoroughly blended.

With the FS in place, all the wet and dry ingredients passed through the blender's mixing zone and were completely dispersed in a single pass, allowing the yogurt to have the desired texture and appearance.

To read the complete story, visit: [www.fristam.com/fs-apps](http://www.fristam.com/fs-apps)  
Call Fristam to discuss your application today: 800-841-5001.

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