



**SUBSTITUTE SKIMMED MILK POWDER**  
and gain better texture for less

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## Substitute skimmed milk powder and gain better texture for less

Are raw material prices always on your mind? Arla Foods Ingredients can help you out of the high cost spiral.

Arla Foods Ingredients has used its extensive knowledge of milk components and long experience of working with the meat industry to develop a new opportunity for the meat industry. PSMD T45 is an innovative functional milk protein for cost optimisation of processed meat products.

Using PSMD T45, you can replace the milk powder in your meat formulations and achieve significant cost savings. At the same time, application trials have confirmed a series of quality improvements. That means meat products with PSMD T45 are tastier, juicier and more appealing.

PSMD T45 has been successfully tested in ham, pâtés, sausages, liver sausage, mortadella, frankfurters, salami and ready meals.

## Benefits

- Cuts ingredient costs by at least 10%
- Improves flavour release
- Promotes appealing mouthfeel and texture
- Ensures good water-binding with no syneresis
- Contains no E-numbers
- Freeze/thaw stable
- Heat stable

## Direct SMP replacement

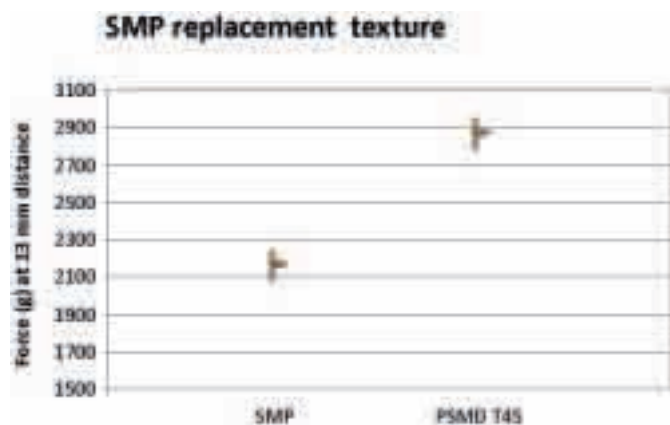
PSMD T45 can directly replace the 1-4% milk powder typically used in meat products. Though tests to determine the optimum dosage for individual applications are necessary.

## Application trial

We tested the performance of PSMD T45 versus SMP in a standard meat product formulation in our pilot plant. Texture, pressure loss and cooking loss were measured.

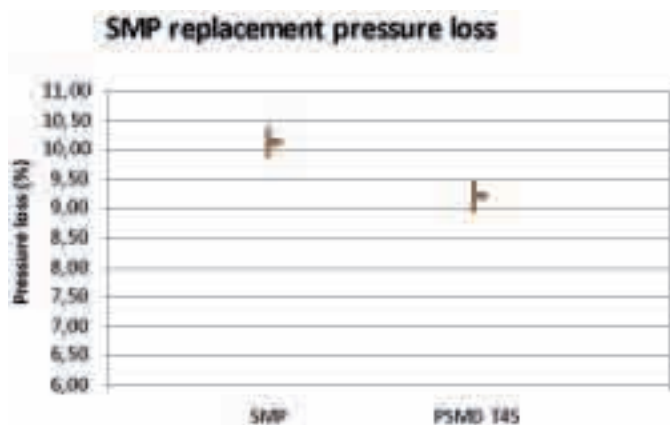
## Influence on texture

SMP substitution is possible when the vertical line for PSMD T45 is at the same level at that for SMP. The higher PSMD T45 line shows texture is improved compared to SMP.



## Influence on pressure loss

The higher the vertical line, the more water can be pressed out of the product. This diagram shows that PSMD T45 performs better than SMP with regard to maintaining the water content of the meat product.



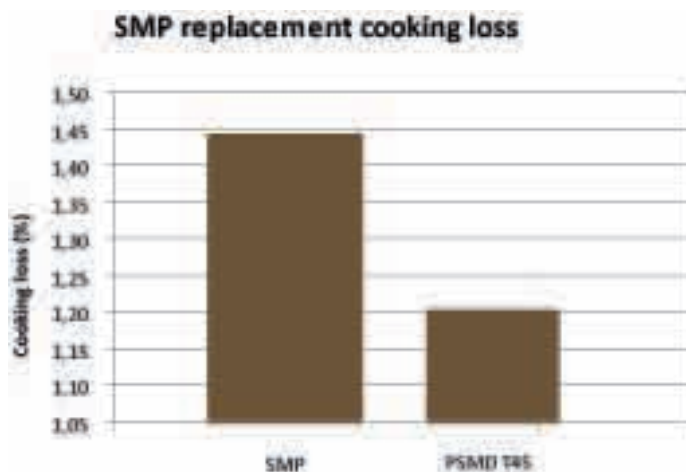
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## Influence on cooking loss

High cooking loss indicates high loss of water in the product. Again, our SMP substitute delivers a superior performance.



## Functionality

Milk powder is used in meat systems to obtain the following functionality:

- Skim milk powder – texture, colouring, taste
- Whole milk powder – texture, colouring, creaminess, fat
- Butter milk powder – texture, colouring, butter taste

PSMD T45 can provide similar, or even slightly improved, functionality in optimised formulations.

Sensory evaluations show quality is slightly improved when PSMD T45 replaces SMP.



## We can make your application trials

At Arla Foods Ingredients, we provide a series of options for testing dosage levels, including laboratory test systems, pilot-scale application trials and large-scale trials on customer production lines.

In laboratory tests of cold and hot emulsions, we can measure texture, pressure loss and cooking loss. This enables us to provide precise dosage advice. We can also advise on process simplification in order to cut costs on the production line.



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Every time you add SMP to your recipe, bear in mind that we have alternative solutions. We can match the gel strength and taste sensation provided by SMP, but also offer other proteins for improved water binding and, subsequently, improved meat product yield.

At Arla Foods Ingredients, we aim to help our customers stand out from their competitors. Tailor-made solutions are our focus.



# CONTACT

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