



## Processed Cheese

### Introduction

Cheese is an ancient food discovered empirically as a means to preserve and concentrate the food value of perishable milk<sup>1</sup>. Cheese is a dairy food, made from pressed milk curds. It is a delicious and nutritious food, high in protein and calcium.



There are thousands of varieties made from milk cheeses from several different species<sup>2</sup> available in various flavours and forms (chunks, slices, cubes, shredded, grated, crumbled, sticks, spreads)<sup>3</sup>.

Countries that have the highest consumption rates in Europe are France, Germany and Iceland while the rate in the US has tripled over the past 40 years<sup>4</sup>. One of the leading cheese varieties worldwide is processed cheese.

### What is Processed Cheese?

Processed cheese is made from cheese (and sometimes other dairy ingredients), emulsifiers salt and additional ingredients including herbs, flavours, colours and spices. The use of emulsifiers (typically sodium phosphate, citrate or potassium phosphate) in processed cheese results in a product that melts without separating when cooked. Its invention is credited to Walter Gerber, who mixed hot shredded Emmentaler with sodium citrate in 1911 and discovered a cooled product that has a longer shelf life<sup>5</sup>, much like milk powder or condensed milk discovery helped easier access of a broad population to the nutritional benefits of dairy products<sup>6</sup>.

The high quality of European processed cheese is guaranteed through its highly-specialized production chains and the use of only the best raw ingredients. Besides its great taste and many varieties, some of the technical and convenient advantages of processed cheese are: its longevity, unique melting qualities and its multiple convenient uses, either as spreads, toppings or even cooking ingredients.

For the above reasons, European processed cheese has become immensely popular. It is a versatile food consumed all over the world.

<sup>1</sup> Kenneth J. Valentas, J. Peter Clark, Leon Levin, *Food Processing Operations and Scale-up*, RC Press, 19 Nov 1990 - Technology & Engineering

<sup>2</sup> Megan Ware, *Cheese: Nutritional Information, Risks, Benefits*, 30 Nov 2015, Medical News Today, <http://www.medicalnewstoday.com/articles/299147.php>.

<sup>3</sup> *Nutrients in Cheese*, 2017, Dairy Council of California, <http://www.healthyeating.org/Milk-Dairy/Nutrients-in-Milk-Cheese-Yogurt/Nutrients-in-Cheese.aspx>

<sup>4</sup> *The Most Popular Cheeses In The World*, 2017, The Wisconsin Cheeseman, <http://www.wisconsincheeseman.com/blog/cheese-nation/popular-cheeses-world/>

<sup>5</sup> *Processed cheese*, last modified 19 March 2017, Wikipedia [https://en.wikipedia.org/wiki/Processed\\_cheese](https://en.wikipedia.org/wiki/Processed_cheese)

<sup>6</sup> Nutrition Factsheet on health benefits and nutrition, 2013, EDA [http://eda.euromilk.org/fileadmin/user\\_upload/Public\\_Documents/Nutrition\\_Factsheets/EDA\\_Nutrition\\_Fact\\_Sheet\\_-\\_HEALTH\\_BENEFITS\\_AND\\_NUTRITION.pdf](http://eda.euromilk.org/fileadmin/user_upload/Public_Documents/Nutrition_Factsheets/EDA_Nutrition_Fact_Sheet_-_HEALTH_BENEFITS_AND_NUTRITION.pdf)



## How Processed Cheese is made?

Processed cheese is produced with different natural cheese types, selected for its flavour, fat and moisture content which is then salted, grated and sometimes mixed with milk fats, milk proteins and milk solids. The melted mixture is then packaged into blocks, or as slices, or into tubs or jars, depending on the desired end use<sup>7</sup>.

The components of this processed cheese can be adjusted in the process enabling producers to create various types of processed cheese<sup>8</sup>.

The production of processed cheese represents more than 10% of the cheese production.

Depending on its required specificities, processed cheese contains between 10% and 70% of natural cheese, keeping the taste and nutrients of this raw product while combining the qualities of a handy product.

## What are the advantages?

Processed cheese has several advantages<sup>9</sup>:

- **Longer shelf-life**

Processed cheese lasts much longer than natural cheese. Special recipes can be kept out of the refrigerator and offers unlimited variety of products ideal for cooking.

- **Resistance to separating when cooked**

When heated it does not alter its taste or texture and keeps a uniform look and physical behavior.

- **Convenient and easy to enjoy**

It can be kept at room temperature, which makes it easy and safe to transport and use when you are on the go. It can be eaten in sandwiches, at the end of a meal, in soups, salads, sauces.



<sup>7</sup> Zey Ustunol, *Processed Cheese: What is that Stuff Anyway?*, Apr 2009, Dept. of Food Science and Human Nutrition <https://msu.edu/~mdr/vol14no2/ustunol.html>

<sup>8</sup> Arla Food initiative on lowering total sodium content : *Versatile quality processed Cheese*, Arla Foods Ingredient Bulletin p.8 [http://www.arlafoodsingredients.com/globalassets/global/downloads/applications/cheese/processed-cheese/bt\\_processed\\_cheese.pdf](http://www.arlafoodsingredients.com/globalassets/global/downloads/applications/cheese/processed-cheese/bt_processed_cheese.pdf)

<sup>9</sup> *Processed cheese*, last modified 19 March 2017, Wikipedia [https://en.wikipedia.org/wiki/Processed\\_cheese](https://en.wikipedia.org/wiki/Processed_cheese)



- **Can be used as an ingredient in a variety of dishes**

As it does not separate when melted, it can be used for a variety of recipes. It suits both children and parents at any time of the day and it is the choice of food professionals because of its taste and cooking qualities. It is also a practical solution for a snack/lunch or a quick recipe for the whole family.



- **Helps reduce food loss and waste**

Production of processed cheese also uses cut-off bits and hence helps to reduce food waste and food loss which, at certain production phases, no longer meets the commercial requirements. Using this natural cheese, whose safety is guaranteed for manufacturing processed cheese, is a win-win deal for sustainability and for making processed cheese an affordable and healthy food for consumers as well as creating a product with a low environmental footprint.

- **High quality made affordable**

It enables scaled production volumes, thus incurring lower distribution costs and a steadier supply, making it more accessible to consumers.

- **High value dairy nutrients**

Processed cheese is made from cheese which is rich in protein and calcium<sup>10-11</sup> and contributes to a balanced and healthy diet especially for young people who are fond of these products.

## Processed cheese - a versatile product



Processed cheese can be produced and used in many different ways. Processed cheese production is based on brands, well-known by consumers across the European Union and beyond. Manufacturers create a wide range of products exploring consumer tastes and different kinds of uses. Its long shelf life, taste, and cooking qualities have made processed cheese essential in families and in professional kitchens. In addition, it is a safe asset for the sustainability of the dairy sector.

### **About ASSIFONTE**

*ASSIFONTE represents the European processed cheese sector at large. It gives the entire sector a voice at European level and provides a platform for industry experts to exchange new innovations and best practices with EU policy-makers.*

<sup>10</sup> EDA Nutrition Factsheet on nutritional value of dairy products, 2013, EDA  
[http://eda.euromilk.org/fileadmin/user\\_upload/Public\\_Documents/Nutrition\\_Factsheets/EDA\\_Nutrition\\_Fact\\_Sheet\\_-\\_HEALTH\\_BENEFITS\\_AND\\_NUTRITION.pdf](http://eda.euromilk.org/fileadmin/user_upload/Public_Documents/Nutrition_Factsheets/EDA_Nutrition_Fact_Sheet_-_HEALTH_BENEFITS_AND_NUTRITION.pdf)

<sup>11</sup> French food composition table, 2016, ANSES, <https://pro.anses.fr/tableciqual/index.html>