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Reduced-fat fresh cheese with inulin



Fat replacers are used to avoid some of the problems found when producing low-fat cheeses such as lack of flavour, bitterness, off-flavour, poor meltability, undesirable colour and rubbery texture. One of these is inulin, which possesses the properties of dietary fibers and stimulates the growth of beneficial microorganisms. A study from CERPTA (UAB) shows that adding 5% of inulin improves the sensory and nutritional characteristics of low-fat fresh cheeses.

As nutrition is moving towards the use of foods to promote better health and well-being, low-fat, probiotic and prebiotic foods are increasing in importance among consumers. The consumer of today is health conscious and demands foods which are both tasty and low in fat and calories, as well as offering additional health benefits. The production of reduced- or low-fat cheeses has significantly increased; however, fat has an important role in the development of flavour, texture and appearance of cheese.

Removal of fat from cheese therefore causes textural, functional and sensory defects such as rubbery texture, lack of flavour, bitterness, off-flavour, poor meltability and undesirable colour. A strategy proposed for improving the flavour and texture of low-fat cheese is the use of fat replacers. Inulin has been available as an ingredient for application in the food industry, where it is used in a large variety of food products, for both its technological and nutritional benefits.

Inulin possesses characteristics of dietary fibers, with beneficial effects for human health. It has been shown that fibers decrease or prevent certain pathologies such as coronary disease, hypertension, diabetes, hypercholesterolemia and gastrointestinal disorders. Inulin also promotes healthy bacteria growth in the colon and enhances calcium absorption and immune functions. In addition to its beneficial effects on health, inulin also has interesting technological properties: low calorie sweetener, bulking agent, fat substitute and texture modifier.

Researcher of the Centre Especial de Recerca Planta de Tecnologia dels Aliments (CERPTA) developed a reduced-fat fresh cheese with 5% of inulin added and with sensory characteristics similar to the conventional product, and with health benefits arising from the presence of the prebiotic. This study shows that inulin can be successfully used as a fat replacer in reduced-fat fresh cheese.

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References

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