



Innovative solutions for gums and jellies

In the global confectionery industry, product developers increasingly face the need for new and innovative gums and jellies. Consumers do not only look for indulgence, but also for products that fit their choice of lifestyle or products based on ethics. Potato-based starch solutions from KMC can help create different textures or replace ingredients in formulas to match these consumer requirements.

Free-from trends

There is a growing trend towards ways of living that are either focused on lifestyle choices or based on ethical or religious considerations. People adopt a vegan lifestyle because they care for animals, are concerned about the impact of livestock farming or because they perceive it as a healthier way of living or the opposite of an over-indulgent lifestyle. This provides new possibilities for the confectionery industry, as consumers demand new and innovative products that are similar to the original food items with regard to taste and functionality.

Many consumers also look for products that are free from allergens. KMC offers specialised solutions based on potato starch that is non-allergenic, gluten-free and GMO-free.

Different textures

Gum and jelly-type sweets can come in different textures – from soft

and chewy to firm and elastic. Consumers constantly look for new products and to change and optimise different textures is one way of meeting this challenge. Using potato starch with different types and degrees of modification will result in different textures.

When working with gum and jelly formulas, it is important to keep in mind that the choice of starch solution depends on a number of factors, e.g. storage, production equipment, process parameters as well as other ingredients in the recipe, e.g. ratio of sucrose/glucose syrup, other gelling agents and moisture level. In the Gelamyl product range, KMC's application specialist uses the

knowledge of the different modifications and their degrees to develop products specific for the gum and jelly confectionery that enable the product developers to target different textures.

Customised solutions

At the KMC Food Innovation Centre, new solutions are constantly tested in the pilot confectionery plant. The confectionery specialist does not only work on new starch solutions and new concepts, but also works closely together with customers to optimise their formulas and processes. Although potato starch is an important ingredient that gives a certain texture, other ingredients such as the used sweetener can also influence the texture. Furthermore, the type of equipment and the process parameters are important for the quality of the gum. At the Food Innovation Centre at KMC's Head Quarters in Denmark, the specialists have access to pilot plant equipment that will simulate industrial processes.

Replacing gelatine

Gelatine is traditionally used in gums and jellies to obtain an elastic gel. Modified potato starch can easily replace part of the gelatine and provide the product developers with a cost-effective ingredient in their formulas. Maria Elena Hansen, Application specialist at KMC, explains, "When replacing up to 30% of the gelatine with our Gelamyl solutions, we do not detect any differences in the organoleptic



Figure 1 Trial production in the pilot factory at KMC Food Innovation Centre



Figure 2 Determination of total soluble solids content during the manufacturing of jellies by using a pocket sugar refractometer.



Figure 3 The ready jellies after polishing:

evaluations.”

If a larger amount of the gelatine is replaced, or if the gum is completely free of gelatine, it becomes more difficult to obtain a gelatine-like texture. “With our new Gelamyl 800 series we challenge the traditional textures of starch-based gums and jellies,” Maria Elena Hansen says and continues, “and we achieve a much better elasticity and “bite” without the stickiness known from traditional starches.”

Easy to use

Compared to starches of other origin, potato starch has a neutral flavour. This enables the

product developer to add any interesting flavour and be able to obtain the full flavour release without the need to mask off-flavours. The Gelamyl starches also result in very clear and transparent gels, so it is easy to add all different kinds of colours.

Using starches as a gelling agent will give certain advantages in the production. Even at a high inclusion rate, the viscosity of the product during manufacture will still be low. It is easy to pump and fill in moulds during processing and all Gelamyl products are optimised to prevent tailing during the filling process. During stoving, the candy will firm up to form the gums or jellies with the

texture defined by the chosen Gelamyl starch.

Follow new trends

With halal certified and non-GMO specialty starches from KMC, vegan and health-oriented consumers do not have to give up their favourite candies anymore and product developers have a number of different building blocks to create new and innovative solutions to match their challenges. Ask KMC for help with tailor-made solutions.

Find more information and contact details on www.kmc.dk



The vegetable solution

Gelatine-free | Suitable for vegans | Reduced costs

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Potato-based ingredients and specialist know-how from KMC help you gain an edge in the competitive market for food products

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