

Low energy value, neutral taste, good digestibility by the organism, reversibility and attractiveness make gelatin easy to use and a modern product, which scope of use is constantly expanding.

Food gelatin is the most compatible food product and due to its technological qualities opens an extremely wide range of use. Gelatin finds its use both in home cooking and in various fields of food industry. It is able to produce transparent elastic gel (jelly, broth jell) in the water, melting in Your mouth, and if gelatin broth jell melts when heated, it needs to be cooled and broth jell is formed again.

When using gelatin in food industry, it is important to take into account that the product texture is influenced not only by the gelling power industry, which is typical for this type of gelatin, but also by other important parameters, such as:

- gelatin concentration;
- hydrogen index (ph) of a food product;
- dynamic viscosity;
- compatibility with other ingredients;
- product storage temperature.

● **MEAT PROCESSING INDUSTRY.** Gelatin is widely used in production of broth jell, meat pastes, head cheese, where it fulfills a function of meat juice absorbent and serves to create shape and structure of products. Highly viscous gelatin is produced as edible casings, which is the binding element for spices, which cover sausages, as well as non-edible casings to protect sausage products from weathering. In the course of canned meats production (ham, corned meat) during heat treatment, meat extracts a large quantity of meat juice, which is easily linked by gelatin, and the final consumer receives a product with a saved meat flavor. Gelatin plays an aesthetic role by giving an appetizing appearance to many sausage and meat products. Correct choice of gelatin quality parameters ensures dense and smooth in meat products even at room temperature.

● **FISH PROCESSING INDUSTRY.** In fish processing industry gelatin is used to produce aspics and delicacies (fish in jelly, etc.). Canned food with jelly is one of the most popular products among consumers, thanks to the excellent taste and appetizing glaze of gelatin covering.

● **DAIRY INDUSTRY.** Due to expansion of the range of dairy products, the use of food gelatin in the dairy industry is becoming more important to stabilize the protein and improve the consistency of dairy products, extend of storage periods, prevent dairy protein early coagulation, froth stabilization. Gelatin is widely used in production of yogurt, cottage cheese products and cream cheese, in which it acts as a binding and stabilizing element for milk whey. During production of whisked dairy desserts, mousses and puddings gelatin forms and stabilizes froth, so that a final product has fluffy consistency. During ice-cream production gelatin plays the function of a stabilizer, improves the taste and provides a good creamy structure. Gelatin is widely used in production of low-caloric cream cheese spread, as a stabilizer of low-fat and non-fat dairy products, for retention of water or whey, and for fat replacement without a significant impact on taste of a final product.

● **CONFECTIONERY PRODUCTION.** In confectionery industry gel-forming and stabilizing properties of gelatin are widely used. It is responsible for jelling and creation of forms of chewing candies, pastes, fruit marmalade, zephyrs, caramels, marshmallows, creams for cakes, dessert dishes, cakes, mousses, puddings and jellies. Organoleptic properties of gelatin open almost unlimited opportunities for confectioners and allow to use it in various products.

● **PRODUCTION OF BEVERAGES.** Various tasks are solved with a help of gelatin during production of beverages. Grape and fruit wines, as well as beer, in some cases undergo treatment with gelatin to give them bottling resistance and special tastes. By doing so, gelatin reacts with tannin and bitter principles, as well as other substances, and absorbs turbid components, which further sink and are easily withdrawn from the beverage. It is also used to lighten fruit juices and beverages.

● **OTHER APPLICATIONS.** In pharmaceuticals industry gelatin is used to produce soft capsules, pills and jelly beans, and as a plasma volume expander. Gelatin is also used as a component of blood-stopping drugs, which encourage angiogenesis.

Gelatin has found its place in cosmetic, printing and light industry. It is used for making securities, photo graphic paper, canvass priming, adhesive compositions and cloth treatment. Gelatin is widely used for production of capsules for paintball balls, as well as during electrolysis of non-ferrous metals.