

## A new way of using poultry slaughter waste

### Development status

#### Phase 2

**Feasibility study.** There is a realistic design of the technology and the initial tests in the laboratory are leading to the specification of the technology requirements and its capabilities.

### IP protection status

Czech patent granted 307665, European patent application pending

### Partnering strategy

*Collaboration, licensing*

### Institution



**Tomas Bata University in Zlín**

### Challenge

The global production of poultry meat has been on the rise in the last 15 years, and a further increase in the consumption of this type of meat is expected, which is prospectively accepted by traditional consumers and the young generation of consumers. Up to 20-30% of the yield from the live weight of poultry is represented by by-products, which include, for example, runners, heads, skins, stomachs, but also subsequent products that remain after the processing of poultry meat into machine-separated meat, when a significant proportion of skeletal remains remains and cartilaginous matter. These unused tissues are rich in collagen. Gelatin manufacturers are looking for alternative sources of collagen, as the global consumption of gelatin is constantly growing (it has increased by approx. 20% in the last 6 years alone). There is also a growing demand for gelatins made from non-mammalian sources, especially among consumers in Islamic, Jewish and Hindu countries. With the size of the states

### Description

Poultry gelatin production technology is optimized from the point of view of more effective evaluation of the input raw material - the yield of gelatin corresponds to more of the potential of the raw material than is the case with existing technologies and represents a practically waste-free technology. The technology is suitable for the fractionation method of processing the initial protein substrate. At a lower extraction temperature, first high-quality gelatins are prepared at a relatively low degree of conversion ( $\approx 30\%$ ), and at increasing temperatures, gelatin with a lower gel strength is obtained with a better use of the starting raw material.

### Commercial opportunity

Gelatin manufacturers are looking for alternative sources of collagen, as the global consumption of gelatin is constantly growing (it has increased by approx. 20% in the last 6 years alone). There is also a growing demand for gelatins made from non-mammalian sources, particularly among consumers in Islamic, Jewish and Hindu countries.

With the size of the states and the population with this preference, the quantitative impact in the production volume of this gelatin is clear and possible. Economic and ecological reasons for the evaluation of the by-products of the meat processing industry force the producers of these wastes to look for ways of their further utilization. In the global market, poultry gelatins represent only a fraction of gelatins made from beef, pork and fish raw materials.