

## Determination of quality parameters of fillets

### Development status

#### Phase 3

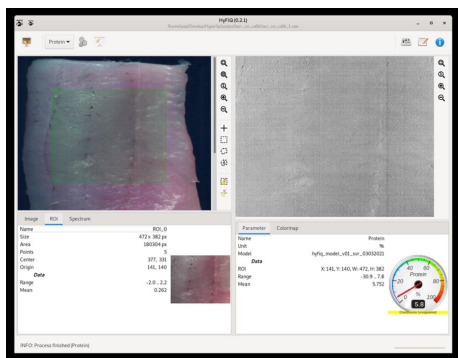
**Technology validation and implementing it in real environment.** Testing the technology outside of the laboratory and its adjustment to external conditions.

### IP protection status

Copyright protection

### Partnering strategy

investment, licensing



### Challenge

Food quality and production methods have become primary issues in the context of consumer behaviour and the increased industrialisation and globalisation of the food supply chain. Consumers demand high quality and safety of fish and fish products, which require high standards in process control and quality assurance. Hyperspectral imaging as a technology analyzes physical and chemical properties in samples in an order of magnitude shorter than standard methods.

### Description

SW for determining the quality parameters of the fillet allows the loading of scanned data, detection of the fillet area and subsequent prediction of parameters. Therefore, only input data are needed for evaluation, the subsequent analysis is carried out automatically. In addition, sw allows display of input data and their export to a format usable for MS Excel. SW is a self-executable application that can be operated by a regular user. Outputs are presented in the form of comprehensible visualization SW evaluates the following parameters: lipids, fats and pH.

### Commercial opportunity

The expected commercial use of the result is the implementation of automatic data processing from the hyperspectral camera imaging system along with machine learning algorithms to quantify selected qualitative features such as texture, proteins, pH and lipids in the form of specialized software. The resulting product can be used in fish processing, when it is necessary to determine the named parameters. It is also used during fish cultivation, when the effects of diets on the resulting quality of fish meat are determined. Thus, an expensive and lengthy chemical analysis can be replaced by a more efficient procedure. To deploy the result, there is an established market where the existing technology (chemical analysis) will be replaced by a new one (analysis using a hyperspectral camera).

### Institution

**jctt** Jihočeské Univerzitní  
a Akademické centrum  
transferu technologií

University of South Bohemia in  
České Budějovice