**Service ID** S00358

**Location** France

# Calibration and Optimisation of Technological Quality Measurement Meth

## Provider service

ARVALIS

## Link to content

https://agrifoodtef.eu/catalogue-of-services/calibration-and-optimisation-technological-quality-measurement-methods-cereal

## Type of Sector

Arable farming

## Accepted type of products

Physical system, Other

## Type of service

Collection of test data, Desk assessment, Performance evaluation, Provision of datasets, Test design, Test execution, Test se

## Description

Our service provides access to grain samples and comprehensive technological quality analysis conducted at Arvalis facilities, enabling the development of AI-powered grain analysis solutions. Clients can work with well-documented samples from one or multiple species, enriched with detailed metadata such as variety, harvest year, and collection location crucial for training and validating AI models. Beyond sample selection and preparation, our experts assist in choosing, testing, and validating analytical methods, covering rheological properties (Alvéolab), breadmaking tests, and protein content measurement (Infratec, Dumas). These high-quality datasets, combined with access to Arvalis facilities and controlled testing environments, provide an ideal foundation for developing machine learning algorithms that enhance grain quality prediction, automate classification, and optimise processing parameters. With our service, clients can accelerate the development, validation, and deployment of AI-driven grain analysis tools, ensuring they meet industry standards and deliver precise, reproducible results. Our expertise in analytical methods allows customers to refine their models, improve prediction accuracy, and scale AI solutions for real-world agricultural applications.

## How can the service help you

Our service supports instrument manufacturers in the development and verification of optical, non-destructive measurement devices for grain quality assessment, for example. By providing high-quality reference samples, expert testing environments, and method evaluation, we help ensure that new instruments deliver accurate, reliable, and reproducible results. Manufacturers can test and refine their technologies using standardised and validated analytical methods, optimising performance before market deployment while reducing the need for extensive field trials.

## How the service will be delivered

This service is only available on cereal crops. Clients gain access to a diverse selection of grain samples, with the flexibility to choose from a wide range of varieties and harvest years, all accompanied by detailed metadata, including collection location and agronomic conditions.

## Service customisation

Our service is delivered on-site at ARVALIS facilities, where customers benefit from a dedicated team of experts who guide them throughout the entire process. Clients have access to a diverse collection of grain samples from different harvest years, available year-round. The duration of an analysis depends on various factors, including the type of test performed, the number of samples, and the complexity of the required evaluations. At the end of the process, customers receive a detailed analytical report summarising key parameters such as protein content, moisture content, Hagberg falling number, gluten quality and quantity. Additionally, for customers developing AI-powered grain analysis tools, we provide structured datasets that can be used to train and validate machine learning models.