

LABORATORY OF LIVESTOCK MEATY CHARACTERISTICS AND MEAT QUALITY EVALUATION

Laboratory was established in 1976 in Veterinary Academy on prof. habil. dr. Česlovas Jukna initiative. During the years of laboratory's activity, the laboratory has an experience of many years in improving pig's and cattle bred in Lithuania meaty characteristics and developing the branch of beef cattle breeding in Lithuania. Since the establishment of the laboratory, there were constantly pursued scientific experimental and intended researches, laboratory was in pursuit of ways of animal production and its quality improvement.

Scientific interest –Meat and its' products chemical composition and technological indexes evaluation, milk and its' products chemical composition and technological indexes evaluation, evaluation of feeding and breeding technology's and particular feeds and its' additives influence on meat production and its' quality.

Laboratory has a big experience in meat evaluation, evaluating meat technological and chemical indexes while applying modern and advanced equipment according to standards accredited in EU. Laboratory's scientists have a big experience in determining and evaluating breeding conditions, genetic and feeding factors influence on cattle, swine, sheep and other rural animals productivity, physiological condition and quality of production.

While pursuing various researches, laboratory has a collaboration with foreign and Lithuanian research and education institutions and business companies (Institute for Reproduction and Food Research of Polish Academy of Science, Institute of Animal Nutrition of Hohenheim University and Department of Livestock Population Genomics of Institute of Animal Science of Hohenheim University, Institute of Animal Nutrition and Functional Plant Compounds, Vienna University of Veterinary Medicine (Austria), Department of Biology of VMU, KTU Food institute, „Innovad“ (Belgium), JSC „AUGA Gruduva“). International conferences concerning feed materials and feed additives, animal nutrition and product quality issues are organized at the laboratory every two years, scientific seminars are held. Laboratory researchers are active in research, making scientific reports in Lithuania and in other countries of the world, such as Austria, Germany, Poland and others.

Moreover, the laboratory is pursuing scientific orders of Lithuanian Agriculture Ministry and various companies, moreover, it is giving consultations for animal breeders about animal feeding, breeding, and improving animal origin production quality.

Services pursued in the laboratory:

- Determination of fatty acids, volatile compounds with gas chromatograph (Shimadzu) (GC) with mass (MS) and ion exchange detectors (FID), which has a static headspace for samples that contain high molecular weight, in meat, meat products, milk and milk products, and in fodder raw materials.
- Colour determination with Minolta (CIE) Chroma-meter, while applying international colour system, which evaluates brightness (L*), redness (a*) and yellowness (b*) intensity in meat, milk and its' products, and in fodder raw materials.
- Fat, protein, dry matter, and ash content determination in meat, milk, its' products and fodder raw materials.
- Drip loss, water coherence determination in meat and its' products.
- Full-rate protein determination in beef meat (tryptophan/oxypoline) .
- Meat and its' products tenderness determination with texture analyzer „TA.XT plus“.
- Cholesterol amount determination in meat and milk products with HPLC system (high pressure liquid chromatograph) with UV detector (Knauer).
- Meat storage in ultra-low temperature freezer „Sanyo MDF-U2086S“(in -86 °C temperature).

The head of the laboratory: prof.. dr. Asta Racevičiūtė-Stupelienė, Tilžės str. 18, Kaunas, 4 block, tel. Tel. Nr.: 8 37 363505, e-mail: asta.raceviciutestupeliene@ismuni.lt

Staff:

Junior scientist Jolita Klementavičiūtė, e-mail: Jolita.Klementaviciute@ismuni.lt

Junior scientist Gintarė Rakickaitė, e-mail: Gintare.Rakickaite@ismuni.lt

Junior scientist Vilma Valaitienė, e-mail: Vilma.Valaitiene@ismuni.lt

Laboratory assistant Jovita Lionikienė, e-mail: Jovita.Lionikienė@lsmini.lt

Laboratory assistant Ernesta Tolpežnikaite, e-mail: Ernesta.Tolpeznikaite@lsmini.lt

Main laboratory's equipment



Gas chromatograph (Shimadzu) (GC) with mass (MS) and ion exchange detectors (FID), which has a static headspace for samples that contain high molecular weight



Texture analyzer „TA.XT plus“.



HPLC system (high pressure liquid chromatograph) with UV detector (Knauer).



Colour analyzer Minolta Chroma meter



Ultra-low temperature freezer „Sanyo MDF-U2086S“