## Laboratory of hygiene of manufacture and microbiology



Already in the first year of work of institute the laboratory of chemistry and the meat microbiology over which microbiological branch supervised has been created. A.M.Kazakov's medical sciences, the known expert, the author of the monography first in the USSR «meat Microbiology». In 1933 A.M.Kazakov has headed microbiological laboratory.

The independent laboratory of veterinarian examination and meat microbiology has been organized in 1953, and its first manager was doctor of veterinary Sciences, the prof., the major general of veterinary service I.V.Shur. Later laboratory headed L.L.Kuharkova, V.G.Dedash, V.V.Avilov, J.V.Krejmer.

Research of ways of protection of meat from «destroying action of microorganisms and protection of people from infection through meat» was the basic scientific direction of work of laboratory in 1940-1950th years. Methods of prelethal and post-mortem examinations were with that end in view improved. Bases of a sanitary estimation of meat were developed at cattle infectious diseases, and also ways of disinfecting of such meat.

During laboratory functioning the special attention was given on safety and qualities of the meat products which technologies were developed at institute.

In the late forties the big scientific and technical value had H/IP about influence of "prelethal exhaustion» animals on sanitary-microbiological indicators of meat and other products of slaughter (A.M.Kazakov, E.V.Kisilyov, M.A.Kochergin). Later this work was deepened by G.B.Trudoljubova.

The great value to preventive maintenance of moldy meat with research of means of disinfection (A.M was attached. Cossacks, V.K.Dyklop).

Together with laboratory of canning manufacture modes of sterilization of canned meat (A.N.Kroha, A.E.Shirochenko) have been proved.

Essential value for the meat industry researches on research of effective ways of use of meat of animals-producers (L.L.Kuharkova, G.B.Trudoljubova), and also the workings out connected with a sanitary estimation of meat at a brucellosis of sheep (И.В.ШУР had, L.L.Kuharkova, E.M.Frejdlin, N.A.Zhizhokina, N.I.Pozdnjakova).

In laboratory it was generated and the new direction in the domestic meat industry on use of so-called starting cultures of microorganisms for improvement of quality of meat products and an intensification of technological processes bloated sausages (M.M.Mihajlova, N.D.Lihosonova, I.G.Anisimova, G.I.Solodovnikova, V.I.Osipova, O.V.Tereshina) developed. Domestic bacterial preparations ATSID-SK, PB-SK and others, technologies of their use in branch have been created at development of meat products.

Since 1990 laboratory of veterinarian examination headed d.v.s, prof. J.G.Kostenko, and in 1992 It has been renamed in «Laboratory of hygiene of manufacture and microbiology».

The next years in laboratory the collective of highly skilled experts was generated: the honored worker of a science of the Russian Federation, d.v.s, prof, the winner of the award of the Government of the Russian Federation J.G.Kostenko.

In 1995 there was a second edition «Managements on veterinary-sanitary examination and hygiene of manufactures of meat and meat products» with participation of prof. J.G.Kostenko.

In 1998 at competition of branch of processing and storage of food production of Russian Academy of Agrarian Sciences work on creation of a bacterial preparation for an intensification and quality improvement bloasted sausages has won first place.

In 1999 work of laboratory as a part of collective of authors (VNIIMP, Institute of a food of the Russian Academy of Medical Science, baby food scientific research institute, the Tihoretsky meat-packing plant, etc.) has been noted by the Award of the government of the Russian Federation for creation of scientifically-practical bases of a complex of manufacture of products of baby food.

A number of standard documents control of meat and meat products which are widely used at the enterprises of meat branch is during the last years created.

Researches were actively conducted in laboratory on the food listeriosis which activator is extremely hazardous to health of consumers. Influence of the technology factors applied at development of meat products has been thus studied, GOST on microbiological control of food production has been developed, modern nutrient mediums for revealing listeries are approved, together with Institute of a food of the Russian Academy of Medical Science offers on obligatory control of raw materials and products of an animal origin on presence listeries have been brought and accepted. The given indicator is entered in CaнПин.

The laboratory in 2003 has been completely reconstructed and moved on 4 floor of institute.

Since 2004 works were spent to laboratories on a substantiation of working lives of the cooled beef and pork in packing under vacuum and in the modified atmosphere. The structure and dynamics of growth of microflora of meat throughout all period of storage are studied at use of various kinds of packing. Periods of storage of the cooled meat in vacuum and the modified packing are defined.

In 2005 the molecular-biological division included PTSR-LABORATORY has joined laboratory. Which basic direction at that time was control of food production on presence GMO.

In 2005 the laboratory has been accredited in 2 systems: Rostehregulirovanie and Rospotrebnadzor. The given laboratory is a part of Test Center VNIIMP.

Since February, 2007 the laboratory is headed by M.J.Minaev.

## Lines of activity:

- Working out of sanitary-microbiological criteria of safety of meat products with a view of creation of measures of preventive maintenance of illnesses, the general for animals and the person;

- Working out and test of express methods of the microbiological analysis;
- A substantiation of working lives of meat;
- Working out and test of bacterial preparations for the meat industry;
- Identification of specific structure of raw materials and finished goods method ΠЦΡ;
- Revealing of molecular-genetic markers of efficiency cattle of a meat direction;
- Specific identification of microorganisms;

Besides, the laboratory closely cooperates with faculties of veterinarian examination and food biotechnology of the Moscow State University of Applied Biotechnology, veterinary faculty of RUDN of Patris Lumumba. Since 2000 more than 50 students have passed industrial and externship on the basis of laboratory. Under the direction of experts of laboratory it has been executed not less than 20 diploma-qualifying works.

From 2000 on 2010 on the basis of laboratory dissertational works have been performed and have received a candidate's degree G.A.Kuznetsova, K.S.Jankovsky, D.S.Bataeva, J.K.Jushina, Minaev, M.A.Shikina Now on the basis of laboratory perform dissertational works 4 post-graduate students.

Experts of laboratory take active part in seminars of the educational center created on the basis of all-union scientific research institute of the meat industry, in such as a seminar-study on improvement of professional skill of microbiologists of laboratories meat-processing plants, and also laboratories of the state and industrial veterinary and certified services; a seminar on «Safety of manufacture of meat and meat production»; a seminar on «to the Fast quality monitoring of meat and meat production».

Training is spent under specially developed programs as for beginners, and the prepared experts, providing studying and practical development to laboratories of institute of modern methods and techniques of sanitary-microbiological control, safety of food and technical production.

## **Contacts:**

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- Activities

- Regulatory documents
- Proposals for Industry
- Publications