

USE sonochemistry in pigs
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Sonochemistry is high-energy chemistry. Experiments were started by the Moscow State University of Technology and Management (MSUTM) after the the laboratory of food sonochemistry was founded in 2009. Sanitary-epidemiological examination was carried out as well as certification of the developed cavitation reactors and TU 5130-002-26784341-08 for them for the implementation of food sonochemistry technology. Federal Service for Supervision of Consumer Rights Protection and Welfare of people and the State Standard of Russia certified reactors to be used for production for use in technological machines of food industry that allow to replenish moisture in food raw material that was lost during its transportation and especially storage in a dried and frozen condition, as soon as is considered that pure protein can theoretically bind in the hydration reaction by up to 40% of its weight in water.

The primary researches were conducted to verify the hypothesis for increase of digestibility of animals feed at fattening of young pigs on the basis of improvement of electronic potential of drinking water when using the new cavitation device for water sonochemical treatment.

Food safety of sonochemical water treatment was studied experimentally. It was assessed by biotesting method of toxicological evaluation of food products. Comparison of the number of species of ciliates *Tetrahymena pyriformis* in samples of spray dried serum recovered by sonochemically treated water at regular time intervals was carried out. The serum restored in the cavitation treated water throughout the experiment showed more ciliates than serum restored in untreated water.

The authors determined advantage of using this device when watering young pigs at fattening for sonochemical treatment of drinking water.

The distinctive features of the obtained treated water and its positive characteristics at a sufficiently high reduction of adverse characteristics (contamination with erosion products) are stated.

It is proposed to use such equipment for watering young pigs at fattening as an innovative solution for improvement of digestibility of animal feeds.

Keywords: cavitation, sonochemistry, young pigs at fattening, drinking water.