# QUALITATIVE AND QUANTITATIVE RESEARCH COMPOSITION BIOLOGICAL PRODUCT "BAIKAL EM"

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EM – technology – is one of the most promising directions of development agricultural production in the XXI century – application of effective microorganisms. Biological product "Baikal EM" – is a concentrate, created by a special technology in liquid form, which contains a large number of effective (useful) microorganisms living in the soil. The product includes microorganisms such as Saccharomyces, Lactobacillus, and Nitrogen-fixing photosynthetic bacteria; together they form a stable symbiosis. Interaction in the soil, microorganisms produce enzymes and physiologically active substances, amino acids, nucleic acids and other biologically active components that provide both direct and indirect positive effects on plant growth and development, accelerate the onset of flowering, increasing the number of ovaries and fruiting period, stimulating development of the root system, which restores soil fertility.

This biological product is also used as a supplement in food for animals and birds. Increasing the amount of essential amino acids by microorganisms which contains in this product improves the quality of forage. This forage is better digested and not only improves weight gain and other quality indicators animals, but also the prevention of gastro-intestinal diseases allergies, vitamin deficiency, intoxication and poisoning of animals, strengthen the immune system, the normalization of metabolism and others.

The objective of this study was to analyze the biological product "Baikal EM" on the presence of microorganisms specified by the manufacturer as part of the preparation, and their viability.

When conducting research on the qualitative composition, the product sample was plated on a special liquid and solid nutrient media. After isolation of pure cultures of microorganisms, was carried out to study the morphology of the colonies and microorganisms. As a result of microscopy it was established that in the biological product "Baikal EM" really includes microorganisms specified by the manufacturer, namely: Lactococcus, Lactobacillus, Saccharomyces.

Using the method of serial dilutions followed inoculation of each dilution on solid growth medium was set quantitative composition. The experimental results showed that the number of viable microorganisms' biological product "Baikal EM" is fully consistent with the established norms.