

## **Abstract**

The article deals with importance of proteins and amino acids in vital processes of all organisms and finding new ways for obtaining its in sufficient quantity to meet the growing demands. Because strains of genus *Streptomyces* are source of proteins and amino acids, the aim of research was to study changes of amino acid composition of the biomass of the strain *Streptomyces fradiae* CNMN-Ac-11, which was obtained during cultivation on medium R supplemented with bio products of cyanobacterial nature. Medium for cultivation R was improved by adding of cyanobacterial bio products BioR and Psh\*ZnS. For analysis of amino acid composition were selected biomasses of experimental variants obtained after cultivation on medium R + 0.1 % BioR and medium R + 30.0 % Psh\*ZnS, because of their benefic influence on lipogenesis. The addition of the BioR preparation in a concentration of 0.1 % had a significant effect on the productivity of the biomass of the strain and the synthesis of amino acids, increasing their yield by 24.2 %. The quantity of individual amino acids, such as asparagine, serine, valine, threonine and phenylalanine, has more than doubled. The addition of Psh\*ZnS particularly affected the biosynthesis of methionine, increasing its yield by 83.8 %. The significant increase in the amount was mainly seen for essential amino acids.