PROCESS FOR INCREASING THE CONTENT OF ESSENTIAL AMINO ACIDS IN BIOMASS OF YEASTS *RHODOTORULA GRACILIS*

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FIELD OF STUDY: Chemistry

AIM: The invention relates to microbial biotechnologies, in particular to the process of increasing the content of essential amino acids in the biomass of yeasts *Rhodotorula gracilis*.

ESSENCE: The process according to the invention includes obtaining the yeast suspension of the *Rhodotorula gracilis* strain CNMN-Y-30 grown for 24 hours on YPD medium, inoculating the suspension in 5 % volume concentration and cultivating on YPD medium with the addition of ZnO nanoparticles 50 nm in concentration 20.0-70.0 mg/L under sterile conditions, at 28...30 ºC with continuous stirring at 180...200 rot./min. within 72 hours.

ADVANTAGE: The technical result of the invention consists in significantly increasing the content of essential amino acids by 32-89 % in the levurian biomass compared to the control and reducing the cultivation time up to 72 hours.

The process can be used to obtain the essential amino acids with high potential for application in the microbiological, pharmaceutical, zootechnical and cosmetic industries.