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The invention refers to biotechnology, particularly to a process for obtaining an antioxidant preparation from *Spirulina platensis* cyanobacterium biomass, used in the pharmaceutical industry and cosmetology.

The process, according to the invention, includes cultivation of *Spirulina platensis* cyanobacterium biomass in open-type reactors on a Gromov culture medium with addition of the coordinative compound with the tartaric acid and imidazole $[\text{Mn}(\text{COO}(\text{CHOH})_2\text{COO}(\text{C}_3\text{N}_2\text{H}_4)_2(\text{H}_2\text{O})_2)] \cdot n\text{H}_2\text{O}$ in the concentration of 20 mg/L at a temperature of 30...35°C, separation of biomass from the culture medium, destruction of cells by repeated congelation-decongelation, extraction of proteic fraction with 0,1 M Na-phosphatic buffer at a pH of 7,8...8,0 with addition of 10 mM EDTA, fractionation of proteic fraction by isoelectric precipitation at a pH of 3,8...4,0, centrifugation with subsequent separation of the precipitate, concentration of the supernatant liquid containing superoxidedismutase and phycocyanine using the Mr 40000 Da polyethylene glycol reagent and congelation.

The result consists in obtaining a thermostable preparation with high antioxidant activity.

Claims: 1