The invention refers to biotechnology, in particular to a process for *Spirulina platensis* biomass obtaining that may be used in the pharmaceutical industry, as well as in the clinical and experimental medicine.

The process for *Spirulina platensis* biomass obtaining includes preparation of the nutrient medium, containing, g/L of water: NaHCO₃ – 16,8; K₂HPO₄ – 1,0; KNO₃ – 3,75; NaCl – 1,0; K₂SO₄ – 3,75; CaCl₂·6H₂O – 0,04; MgSO₄·7H₂O – 0,70; H₃BO₃ – 0,00286; MnCl₂·4H₂O – 0,00181; ZnSO₄·7H₂O – 0,00022; CuSO₄·5H₂O – 0,00008; MoO₃ – 0,000015, FeSO₄·7H₂O – 0,024; Fe-EDTA – 0,025, inoculation of the *Spirulina platensis* suspension in the amount of 0,40...0,45 g/L and cultivation thereof during 6 days in the accumulation regime under the light of 3400...4800 lx, at a temperature of 31...36°C and pH of 9,5...10,0.

Novelty of the invention consists in that on the first day of cultivation into the medium is added the coordinative compound $[Fe_2Mg(CCl_3COO)_6 (CH_3OH)_3]$ in the quantity of 0,005...0,025 g/L.

Claims: 1