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[NANOSTRUCTURED FERRIC CITRATE EFFECT ON *Chlorella vulgaris* DEVELOPMENT](#)

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[Abstract](#)

The aim of the research was to study the development of *Chlorella vulgaris* at culturing on the modified Gromov 6 medium with high concentrations of nanostructured ferric citrate and also its effect on photosynthesis pigments accumulation. It was demonstrated that the highest intracellular iron content (15 mg/g of dry mass) in the culture cells was typical with nanostructured ferric citrate content of 30 mg/dm³ of culture medium, the highest content of chlorophyll *a* — 23

mg/g of dry algae mass,

b
— 7.5 mg/g of dry mass, and carotenoids — 9.2 mg/g of dry mass was observed at nanostructured ferric citrate content of 20 mg/dm³

. The use of nanostructured ferric citrate led to an increase in the *Chlorella* biomass yield by 3 times compared to standard technology. Simultaneously, intracellular iron content in cells increased significantly with the use of nanostructured ferric citrate, which increases their value as a nutritional supplement. In order to increase the biomass yield and intracellular iron content in cells, application of nanostructured ferric citrate is recommended.

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