

The invention relates to chemistry and biotechnology, in particular to the synthesis of a new coordinative compound of iron(III) with antioxidant properties that can be used in the food industry and in medicine, and to a process for cultivation of microalga *Porphyridium cruentum* with its use.

According to the invention, a coordinative compound – bis[N'-(2-hydroxy-kO-benzylidene)pyridine-4-carbohydrazidate(-1)-k<sup>2</sup>N',O]iron(III) nitrate - water (2/3) is claimed.

A process for cultivation of microalga *Porphyridium cruentum* is also claimed, which consists in that microalga is cultivated on a nutrient medium containing, g/L: NaNO<sub>3</sub> - 5.0; NaCl - 7.0; KCl - 7.5; MgSO<sub>4</sub>·7H<sub>2</sub>O - 1.8; Ca(NO<sub>3</sub>)<sub>2</sub>·4H<sub>2</sub>O - 0.15; KBr - 0.05; KI - 0.05; K<sub>2</sub>HPO<sub>4</sub> - 0.2; ZnSO<sub>4</sub>·5H<sub>2</sub>O - 0.00002; CuSO<sub>4</sub>·5H<sub>2</sub>O - 0.00005; MnSO<sub>4</sub>·5H<sub>2</sub>O - 0.0003; H<sub>3</sub>BO<sub>3</sub> - 0.0006; MoO<sub>3</sub> - 0.00002; NaVO<sub>3</sub> - 0.00005, the compound bis[N'-(2-hydroxy-kO-benzylidene)pyridine-4-carbo-hydrazidate(-1)-k<sup>2</sup>N',O]iron(III) nitrate - water (2/3) - 0.01...0.012 g/L and distilled water up to 1 L, having the pH 6.8...7.2; at a temperature of 23...25°C, an illumination of 2000...3000 lx/cm<sup>2</sup>, with periodic stirring.

The result consists in increasing the content of phenols in the ethyl extract obtained from microalga biomass.

Claims: 2