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The invention relates to chemistry and biotechnology, in particular to the synthesis of a new coordinative compound of cobalt(III) and a process for cultivation of *Porphyridium cruentum* microalga with the use thereof.

According to the invention, a coordinative compound – bis(dimethylglyoximato)chloro(isonicotinoylhydrazone-2-hydroxy-1-naphthaldehyde)cobalt(III) is claimed.

It is also claimed a process for cultivation of *Porphyridium cruentum* microalga, consisting in that microalga is cultivated on a nutrient medium, comprising in g/L: $NaNO_3$ - 5,0; NaCl - 7,0; KCl - 7,5; $MgSO_4 \cdot 7H_2O$ - 1,8; $Ca(NO_3)_2 \cdot 4H_2O$ - 0,15; KBr - 0,05; KI - 0,05; $K_2HPO_4$ - 0,2; $FeCl_3 \cdot 6H_2O$ - 0,00027; $ZnSO_4 \cdot 5H_2O$ - 0,00002; $CuSO_4 \cdot 5H_2O$ - 0,00005; $MnSO_4 \cdot 5H_2O$ - 0,0003; $H_3BO_3$ - 0,0006; $MoO_3$ - 0,00002; $NaVO_3$ - 0,00005; bis(dimethylglyoximato)chloro(isonicotinoyl-hydrazone-2-hydroxy-1-naphthaldehyde)cobalt(III) compound - 0,010…0,014 g/L and distilled water up to 1 L, having a pH of 6.8…7.2; at the temperature of 23…25°C and the lighting of 2000…3000 lx/$cm^2$.

The result is to increase the amount of lipids and eicosapentaenoic acid in the absolutely dry biomass of microalga.

Claims: 2