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The invention refers to the field of the coordinative compounds on base of cobalt and dimethylglyoxime which may be used as biostimulators and catalysts of different biotechnological and chemical processes.

Summary of the invention consists in the synthesis of the bioactive complex of *trans*-[Co(DH)₂(Thio)₂]₂F[PF₆], where DH⁻– dimethylglyoxime anion, and Thio – the thiourea, possessing properties of the microorganisms growth stimulator.

The X-ray analysis of said compound demonstrates an unusual combination of different types of the chemical bonds and non-valent interactions, as well as location of ligands that allows introduction into one individual chemical compound of three microelements – Co, P and F, necessary for the development of certain microorganisms, in particular strains of micromycetes of the *Rhizopus*, *Aspergillus*, *Penicillium* genus.

Claims: 1

Fig.: 4