The invention relates to chemistry and medicine, namely to a biologically active coordinative nickel compound from the class of transition metal thiosemicarbazonates. This compound exhibits high antioxidant activity and can find application in medicine as a substance that inhibits the oxidation processes of organic molecules in the human body. Summary of the invention consists in obtaining a synthetic antioxidant based on [4-(2,4-dimethylphenyl)-2-(2-hydroxy-3-methoxyben-zylidene)hydrazinecarbothioamide-S][4-(2,4-dimethylphenyl)-2-(oxo-3-methoxybenzylidene)hydrazinecarbothioamido(2-)-O,N,S]-nickel(II) monoethanol solvate of the formula:

The claimed compound expands the arsenal of synthetic antioxidants with high biological activity.

Claims: 2 Fig.: 1