



Synthesis, Antibacterial Studies of derivatives 4-Chloro-5,7-dihydroxy-chromen-2-one [Complex with Ni(II), Ir(III)]

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Abstract: This work reports the syntheses of some new derivatives from Benzene-1,3,5-triol, 3-Oxo-butiroic acid ethyl ester and their antibacterial activity. Compounds 4-Chloro-5,7-dihydroxy-chromen-2-one **1a**, Amino-(4-chloro-5,7-dihydroxy-2-oxo-2H-chromen-3-yl)-acetic acid **2a**, 4-[2-(2-Amino-ethylamino)-ethylamino]-7-chloro-5-hydroxy-chromen-2-one **3a**, 4-[2-(2-Amino-ethylamino)-ethylamino]-7-chloro-5-hydroxy-chromen-2-one complex with Ni and Oxalate jone. **4a**, Complex of [4-Chloro-5,7-dihydroxy-chromen-2-one] with Heksa Clor Difosfine **5a**, Complex of 4-[2-(2-Amino-ethylamino)-ethylamino]-7-chloro-5-hydroxy-chromen-2-one] with glycine and Ir III **6a**. All Structures have been synthesized and characterized using melting points, IR spectra, ¹H-NMR and ¹³C-NMR spectra. The purified synthesized compounds 1a,2a,3a,4a at concentrations 2,3,5 mg/ml was subjected to test the antibacterial activity against the bacterial cultures; *Staphylococcus aureus*, *Escherchia coli* and *Bacillus cereus*. The antibacterial activity of synthesized compounds were compared with antibacterial activity of standard antibiotics cephalaxine and streptomycine. The compounds show different bacteriostatic and bacteriocidal activity.

Keywords: Benzene-1,3,5-triol derivatives, antibacterial activity

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