



**Wet Commixing Synthesis, Physical properties and Photocatalytic activity
of Nickel oxide chromite spinel**

Nada Yehya Fairouz, Alaa Rashid Imran*

Department of Chemistry, College of Science, Babylon of University

Email: alaarasheed863@yahoo.com

Received on 06th February and finalized on 19th February 2013.

ABSTRACT

Homogeneous crystalline nickel oxide chromite spinels ($NiCr_2O_4$) was prepared by wet commixing method by maxing chromium hexavelent oxide CrO_3 and nickel oxide followed by calcination at $700^\circ C$ for 6h. The crystalline structure of the synthesized chromate products were analyzed by X-ray diffraction (XRD) and FTIR. XRD powder diffraction data of specimens revealed the formation of a well-crystallized spinel structure of nickel oxide chromate after calcination at $700^\circ C$. The physical properties such as volume density of crystal was calculated. The photocatalytic activity of nickel oxide chromite ($NiCr_2O_4$) was tested by using herpicide paraquat dichloride.

Keywords: Wet Commixing method, chromite spinel, X-ray diffraction, FTIR, herpicide photocatalytic activity.
