Synthesis and characterization of VO (salen) complex in Zeolite X Pores

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Abstract: In this research, ZeoliteX (Na\textsubscript{86} [(AlO\textsubscript{2})\textsubscript{86}(SiO\textsubscript{2})\textsubscript{106}].264H\textsubscript{2}O), has been prepared from Zonouz Kaolin. Then VOX-Zeolite has been obtained by treatment of ZeoliteX with vanadyl sulfate solution. The Salen ligand has been synthesized by condensation reaction of salicylaldehyde and ethylenediamine. The encapsulated complex, VO (salen), in zeolite pores was prepared by reaction of salen with VOX-Zeolite in ethanol at reflux temperature. The product was characterized by FT-IR, XRD and SEM (EDX) techniques.

Key words: Zeolite X, Vanadyl schiff base complexes, Encapsulation, Ion exchange.