

# **Synthesis and Characterization of Some New Ion-polymer Complexes as Topical Agents**

## **Abstract:**

Complexes with some metal ions ( $Al^{3+}$ ,  $Cu^{2+}$ ,  $Ag^{+}$ ) with some polymers were prepared. The new complexes were studied by Ultraviolet Visible and (FTIR) spectrophotometer. The distinguish bands of synthetic complexes were characterized. The complexes use topically. They be divided into broad categories based on their usual action or use .The result shows they are protective, antimicrobial and a stringent compounds of silver complex is more than others. Some of the agents have uses extending beyond the limits of specific category. It also be noted that they are overlap between categories. The uses depend on the area of application, the concentration of the complex and the solubility.

**Keywords:** polymer-metal complexes, antimicrobial, topical agent.