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### **A total experimental study of electrolysis based on precise observation and analysis of products (color, solubility)**

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#### **ABSTRACT**

*Electrolysis of salts is mainly used for electroplating and electro refining. For this acidic solutions are used (chiefly dilute H<sub>2</sub>SO<sub>4</sub>). Alkaline solutions are hardly used because metal hydroxides are formed which are mostly insoluble. But precise experiment shows that alkaline solutions can significantly help in metal deposition at cathode as seen case of SnCl<sub>2</sub>.2H<sub>2</sub>O and (CH<sub>3</sub>COO)<sub>2</sub>Pb.3H<sub>2</sub>O and help in the formation of salts like (CH<sub>3</sub>COO)<sub>2</sub>Cu which can not be synthesized generally. Organic compounds like alcohols can form salts by this process salts containing RO- (R being an alkyl group primary or secondary). If acidic alcohols are electrolyzed, aldehydes and carboxylic acids are formed. So the difference can be easily noticed. Highly covalent aromatic compounds like benzene, toluene e.t.c. can accelerate some reactions, retard some and some times change the products. In this Paper it has been discussed about the electrolysis of Ca(NO<sub>3</sub>)<sub>2</sub>.4H<sub>2</sub>O, SnCl<sub>2</sub>.2H<sub>2</sub>O, (CH<sub>3</sub>COO)<sub>2</sub>Pb.3H<sub>2</sub>O in alkaline medium and how organic compounds like benzene can affect the products.*

**Keywords:** Ca(NO<sub>3</sub>)<sub>2</sub>.4H<sub>2</sub>O; SnCl<sub>2</sub>.2H<sub>2</sub>O; (CH<sub>3</sub>COO)<sub>2</sub>Pb.3H<sub>2</sub>O; C<sub>6</sub>H<sub>6</sub>; 2 Butanol; NaOH.

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