

OPTIMIZATION THE COPPER ELECTROLESS PLATING

AHMAD IZZAT EMIR BIN ATAN

**BACHELOR OF SCIENCE (Hons.) CHEMISTRY
FACULTY OF APPLIED SCIENCE
UNIVERSITI TEKNOLOGI MARA**

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This Final Year Project entitled “**Optimization The Parameter of Copper Electroless Plating Bath**” was submitted by Ahmad Izzat Emir Bin Atan, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by

Nurul ‘Ain binti Jamion
Supervisor
B. Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Siti Nafisah binti Md Rashid
Co Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Dr. Syeikh Ahmad Izaddin bin Syeikh
Mohd Ghazali
Project Coordinator
B. Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah Negeri Sembilan

Pn. Mazni binti Musa
Head of Programme
B. Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Date: _____

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ABSTRACT

OPTIMIZATION THE COPPER ELECTROLESS PLATING

Copper electroless plating have been used widely in decoration and corrosion prevention for desired metal. The effect of using difference parameter and condition in copper solution lead to difference result of copper electroless plating. The purpose of this study was to optimize the parameter of copper solution which are pH of solution, plating time, temperature, concentration and the effect in the present of additives which are ethyleneditetraacetic acid and monosodium glutamate. From the results obtained, the optimum pH of copper solution suitable for immersion plating was between pH 3 to 4 and the time used was between 80 second to 90 second. Next, the suitable temperature for immersion plating was between 25 °C to 30 °C to get better adhesion on the metal surface and also the optimum concentration of copper solution was 100 gL⁻¹. The suitable additives for immersion copper electroless plating in this study was monosodium glutamate (MSG). In conclusion, based on the optimization parameter obtained, the immersion copper electroless plating were at pH 4 for 80 s at temperature of 25 °C in 100gL⁻¹ concentration.