

Specification of Competency Standards
for the Jewellery Industry
Unit of Competency

Functional Area - Production

Title	Master jewellery electroplating techniques
Code	108927L2
Range	This unit of competency is applicable to practitioners working in the jewellery polishing/electroplating department of jewellery manufacturing organizations. Practitioners should be capable of operating electroplating equipment and preparing electroplating solutions in accordance with the organization's code of practice and safety regulations under instruction, and electroplating a precious metal coating of different lustre and colour onto the surface of jewellery after polishing.
Level	2
Credit	6
Competency	<p>Performance Requirements</p> <p>1. Know about electroplating operation</p> <ul style="list-style-type: none"> • Know about various electroplating processes, including: <ul style="list-style-type: none"> ○ Electroplating to produce a yellow colour (karat gold (yellow/white)/rose gold) ○ Electroplating to produce a white colour (rhodium electroplating) ○ Pen-plating to fix defects • Know about the legislation related to electroplating <ul style="list-style-type: none"> ○ Drainage and environmental protection legislation ○ Disposal of chemical wastes legislation • Know about the safe operation of chemical drugs • Know about the refining method for the degreasers/precious metal electroplating solutions • Know about the solutions to electroplating defects <p>2. Jewellery electroplating</p> <ul style="list-style-type: none"> • The treatment of jewellery prior to electroplating <ul style="list-style-type: none"> ○ De-waxing ○ Bombing and polishing, and degreasing (tear degreasing) ○ Steam rinsing • Treatment before/after electroplating colours separately <ul style="list-style-type: none"> ○ Apply oil (nail polish) to the surface of the jewellery that needs to have different colours ○ Tie the jewellery and hang it to a rack for drying with a thin copper wire ○ Degrease by soaking in acetone after electroplating • Prepare electroplating solutions <ul style="list-style-type: none"> ○ Replenish gold potassium cyanide ○ Add chemical drugs ○ Control the temperature/concentration of the gold electroplating solutions • Install electroplating equipment <ul style="list-style-type: none"> ○ Magnetic tumbler (with heating function) ○ Ultrasonic cleaner ○ Steam rinser ○ Glass beaker ○ Rectifier ○ Electrode/Titanium mesh • Conduct electroplating <ul style="list-style-type: none"> ○ Master the time for electroplating ○ Master the thickness of the electroplated layer

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	<ul style="list-style-type: none"> ○ Master the techniques for electroplating yellow and white colours separately • Handle the precious metal electroplating solutions/chemical drugs in accordance with the legislation related to electroplating <p>3. Professionalism</p> <ul style="list-style-type: none"> • Carry out jewellery electroplating safely in accordance with the Dangerous Goods Ordinance and relevant environmental protection ordinances, as well as the safety guidelines and codes of practice specified in the legislation relevant to the electroplating industry
Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> • Able to operate electroplating equipment and prepare electroplating solutions in accordance with the organization's code of practice and safety regulations under instruction, and electroplate a precious metal coating of different lustre/colour with a specific thickness onto the surface of jewellery after polishing; understand the legislation relevant to the electroplating industry, and operate the electroplating equipment and handle the chemical drugs safely.
Remark	