Name
1. Why precipitation can increase the hardness of the aluminum alloys?
2. The first step for the experiment is solution treatment of Al2024 alloy (96wt%Al4wt%Cu) at $550^{\circ}$ C. Can this solution treatment be at $600^{\circ}$ C? Can this solution treatment be at $450^{\circ}$ C? Explain why.
3. The second step is quenching. Do you expect an obvious increase in hardness after quenching? Why?
4. We will compare the Natural Aging and the Artificial Aging. Which aging process increases hardness faster? Why?
5. Will the ductility of the aluminum alloy increase or decrease after it is strengthened? Will the impact toughness increase or decrease? Explain why?