



A2 PRACTICAL 1

Finding activation energy (Technician)

You need to carry out a risk assessment before doing this practical

Apparatus & chemicals	<i>Whole class:</i> <ul style="list-style-type: none">• Burettes containing $0.020 \text{ mol dm}^{-3} \text{ KMnO}_4$ (each student collects 10 cm^3 for each experiment)• Burettes containing $0.060 \text{ mol dm}^{-3} \text{ H}_2\text{C}_2\text{O}_4$ in $0.5 \text{ mol dm}^{-3} \text{ H}_2\text{SO}_4$ (each student collects 10 cm^3 for each experiment)• Funnels for burettes	<i>Each student needs:</i> <ul style="list-style-type: none">• 2 boiling tubes• boiling tube rack• 250 cm^3 beaker• Bunsen, mat, tripod, gauze• Thermometer (110°C, $\pm 1^\circ\text{C}$)• stopwatch
Notes	<ul style="list-style-type: none">• Each student will use 50 cm^3 of the $0.020 \text{ mol dm}^{-3} \text{ KMnO}_4$• Each student will use 50 cm^3 of the $0.060 \text{ mol dm}^{-3} \text{ H}_2\text{C}_2\text{O}_4$ in $0.5 \text{ mol dm}^{-3} \text{ H}_2\text{SO}_4$ (make by dissolving solid ethanedioic acid in the $0.5 \text{ mol dm}^{-3} \text{ H}_2\text{SO}_4$)	