

A student carried out a titration to find the concentration of a solution of calcium hydroxide. In each titration, the student used 25.0 cm³ of the calcium hydroxide solution and titrated it against 0.0100 mol/dm³ hydrochloric acid solution.

$$Ca(OH)_2(aq) + 2HCl(aq) \rightarrow CaCl_2(aq) + 2H_2O(I)$$

The student's results are shown in the table.

titration	1	2	3
start reading / cm ³	0.00	23.15	0.10
end reading / cm ³	23.15	47.05	23.90
volume added / cm ³			

а	Find the mean titre to the appropriate number of significant figures and give the uncertainty in this measurement.
b	Find the concentration of the calcium hydroxide in mol/dm³ and g/dm³. Give your answers to 3 significant figures.
С	Outline the key steps in carrying out this titration.

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