The scenario

Subject	**Analytical chemistry/Determination of the exact concentration of HCl**
Length	3:12
Main objectives	To show how titrations works
Detailed objectives	
Structure and description of experiments:	
1. Introduction	Description: The objective of this experiment is to understand the titration process
2. Main subject	Description: What is the titration process?
Part 1	
(0:40), **Experiment 1 (0:42)**	**Tools:** HCl , NaOH, phenolphthalein, pipettes, burettes **Description:** Add 10 mL of HCl 0,1 M in a beaker and add water to a volume of 50 mL, then add some drops of phenolphthalein. Titrate with a normalized NaOH solution to determine the exact HCl concentration. The solution just begins to turn pink as the pH reaches 7, indicating that the base neutralized the acid. **Questions:** At what point has the acid titration been achieved? – When the solution beings to turn pink. **Conclusions:** Titration is a technique where a solution of known concentration is used to determine the concentration of an unknown solution.
3. Summary, evaluation and notes	**Application:** Food processing, chemical manufacturing, and pharmaceutical manufacturing are the three businesses in the manufacturing sector that heavily rely on titration methods. These are used in several important areas, including product research and development, quality control, and large-scale production. **Level:** secondary school

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