The scenario

Subject	**Analytical chemistry/Determination of the exact concentration of H_2SO_4 solution**
Length	2:33
Main objectives	To show how titrations work
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),**	**Description:** Add 20 mL of H_2SO_4 in a beaker and then, add some drops of phenolphthalein. Titrate with a normalized NaOH solution to determine the exact H_2SO_4 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. The use of an indicator such as phenolphthalein helps to identify when the base has neutralized the acid.
3. Summary, evaluation and notes	**Application:** Titration can analyze purity and content. It supports the preparation of pharmaceutical products and the manufacturing of biodiesel fuel from vegetable oil. It is used extensively in product development and quality control. In food processing, acid or base titration determines the acidity of fruit juice. **Level:** secondary school

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