

Acid–Base Titration with Conductivity Worksheet

Data Table

Titration Data	
Volume of Barium Hydroxide (mL)	
Final Volume of the Buret (mL)	
Initial Volume of the Buret (mL)	
Volume of Sulfuric Acid added at endpoint (mL)	
Total Sulfuric Acid added to have the Conductivity Tester Glow Again (mL)	

Observations

Discussion Questions and Calculations

- 1. Given the sulfuric acid was 0.1 M, what was the initial concentration of the barium hydroxide solution?
- 2. When sulfuric acid is added to the initial barium hydroxide solution, what are the two balanced net-ionic equations that occur?
- 3. Why does the conductivity of the solution decrease when sulfuric acid is added?
- 4. Given a Ksp of 1.0×10^{-10} for BaSO₄, what is the concentration of Ba²⁺ at the equivalence point?
- 5. When another 0.5 mL of 0.1M sulfuric acid is added past the equivalence point, the concentration of Ba²⁺(aq) in the solution decreases. Why?

© 2019, Flinn Scientific, Inc. All Rights Reserved. Reproduction permission is granted from Flinn Scientific, Inc. Batavia, Illinois, U.S.A. No part of this material may be reproduced or transmitted in any form or by any means, electronic or mechanical, including, but not limited to photocopy, recording, or any information storage and retrieval system, without permission in writing from Flinn Scientific, Inc.