

# **Analytical Chemistry**

## Chapter 10

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## Activity 10

1. A 100.0 mL drinking water sample was treated with ammonia-ammonium chloride buffer solution to give a pH of about 10. Calgamite indicator was added and the solution was titrated with 0.0050 M EDTA. It required 23.50 mL of the titrant to achieve the end point. Calculate the water hardness in terms of ppm calcium carbonate.

## Activity 10

2. A 20.0 mL of a solution containing Hg<sup>2+</sup> in dilute nitric acid was treated with 10.00 mL of 0.0500 M EDTA and the solution was added with ammonia-ammonium chloride buffer solution to a give pH of 10. A few drops of freshly prepared EBT indicator was added and the excess EDTA was back titrated with 0.0100 M Mg<sup>2+</sup>. It required 25.50 mL of the titrant to reach the end point. Calculate the molarity of Hg<sup>2+</sup> in the sample.

#### Activity 10

3. A 0.524 g sample of a fungicide containing zinc undecylate was dissolved in concentrated nitric acid, adjusted to pH 6 and filtered. The filtrate required 12.31 mL of 0.01021 M EDTA to reach the endpoint. What is the % zinc undecylate in this sample?



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