Titrations and Polyprotic Acids– Reading Guide

*section 14.5 and 14.7 in OpenStax*

**Polyprotic Acids (section 14.5)**

Polyprotic acids contain **more than one** ionizable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ per molecule.

For all polyprotic acids, a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ionization process occurs.

Give the chemical equation for the first and second ionization of hydrosulfuric acid, H2S.

First ionization: H2S (*aq*) + H2O (*l*) ⮀

Second ionization:

In the above example, \_\_\_\_\_\_\_\_\_ is the dominant producer of H3O+, and thus [H3O+] ≈ [ \_\_\_\_\_\_\_ ].

**Titration Curves (section 14.7)**

Refer to Figure 14.23 to sketch the following titration curves. Label the equivalence point.

1) **Strong acid** to which strong base is being added 2) **Weak acid** to which strong base is being added

Based on your sketches above, draw the titration curve for the following.

3) **Weak base** to which strong acid is being added 4) **Polyprotic acid** to which strong base is being added

**End of Chapter 14 Practice Problems**

#81, 83

For detailed solutions to these problems, go to the [OpenStax website](https://openstaxcollege.org/textbooks/chemistry/resources) and download the “Student Answer and Solution Guide.”