Electrolysis – Reading Guide

*section 17.7 in OpenStax*

What is an **electrolytic cell**? How is it different from a voltaic cell?

An electrolytic cell is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *(spontaneous or non-spontaneous)* and its standard cell potential, E°cell, is always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *(positive or negative).*

In all electrochemical cells (both galvanic and electrolytic), oxidation occurs at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and reduction occurs at the \_\_\_\_\_\_\_\_\_\_\_\_.

In an electrolytic cell, the anode is connected to the \_\_\_\_\_\_\_\_\_\_\_\_\_*(positive or negative)* terminal of the battery and the cathode is connected to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*(positive or negative)* terminal of the battery.

Work through Example 17.9. Then, calculate how many minutes it will take to plate out 10.0 g of zinc using a current of 5.0 A?

*Hint: first write an equation for the reduction of zinc ions to elemental zinc.*

*(ans. 98.4 minutes)*

**End of Chapter 17 Practice Problems**

#48a–b, 49a–b

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.”