

### **WS 3 - Predicting Redox Reactions**

For each of the following situations, determine the net redox reaction and state the spontaneity:

1. Aqueous solutions of tin (II) bromide and iron (III) nitrate are mixed.
2. A laboratory technician stores an aqueous solution of iron (III) chloride in a nickel plated container.
3. A chemistry teacher demonstrates the test for bromide ions by bubbling some chlorine gas cautiously through a sodium bromide solution.
4. Acidified potassium dichromate is added to a solution of tin(II) sulphate.
5. A solution of nickel(II) nitrate is stored in a copper container.
6. Hydrogen peroxide is slowly poured into a beaker of cobalt(II) bromide.
7. Solutions of sodium dichromate, sodium hypochlorite and sodium hydroxide are mixed in a beaker.

8. Sodium metal is added to some water in a typical demonstration of the reactivity of the alkali metals.
  
  
  
  
  
  
  
  
  
  
9. Iron is used in an environment (eg. ocean water) containing aqueous magnesium chloride.
  
  
  
  
  
  
  
  
  
  
10. A student uses hydrobromic acid to acidify a potassium dichromate solution for later use as an oxidizing solution.