
Pre-Laboratory Assignment for Qualitative Analysis of Anions

Name _____

Date _____

Section _____

1. Write the net-ionic equation for the chemical reaction that occurs in each of the following spot tests.
 - (a) The production of carbon dioxide gas in the spot test for carbonate.

 - (b) The production of the aqueous $\text{Fe}(\text{SCN})^{2+}$ complex ion in the spot test for thiocyanate.

 - (c) The production of the white precipitate in the spot test for sulfate.

2. Suppose that a series of spot tests on an unknown solution yields the following results.
 - (a) A white precipitate upon the addition of BaCl_2 (aq)
 - (b) No yellow precipitate upon the addition of $(\text{NH}_4)_2\text{MoO}_4$.
 - (c) A dark red solution upon the addition of $\text{Fe}(\text{NO}_3)_3$.
 - (d) A white precipitate upon the addition of $\text{Ag}(\text{NO}_3)$.

Indicate whether each of the following is present, not present, or undetermined.

 CO_3^{2-} _____ SO_4^{2-} _____ PO_4^{3-} _____ SCN^- _____ Cl^- _____ NO_3^- _____