

CHEMICAL AND PHYSICAL CHANGES

Date: _____ Name: _____ Section: _____

Object

The objective of this experiment is to recognize when a chemical reaction has occurred and to make deductions based upon careful observations.

Procedure

As in the Chemistry 1094 Lab Manual, pages _____.

Observations and Data

Test	Solutions	Observations	Deductions (choose one from each column below)	
1	Calcium chloride and Sodium carbonate		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
2	Silver nitrate and Copper		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
3	6 M Sodium hydroxide and 6 M Hydrochloric acid		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
4	Hydrogen peroxide and Potassium iodide		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction

Test	Solutions	Observations	Deductions (choose one from each column below)	
5	Ferric chloride and Ammonium thiocyanate		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
6	Step 5 and Silver nitrate		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
7	Potassium permanganate and water		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
8	Potassium permanganate and oxalic acid		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
9	Potassium permanganate and oxalic acid and heat		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
10	Sucrose and Heat		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
11	Sodium Chloride and Heat		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
12	Tin and Heat		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction
13	Ice and Heat		<input type="checkbox"/> Chemical change <input type="checkbox"/> Physical change <input type="checkbox"/> Neither	<input type="checkbox"/> Reaction <input type="checkbox"/> No reaction

Conclusion

Question

What evidence can be used to determine whether or not a chemical reaction has occurred? Give examples from the reactions performed today.