

Fifteen+ Years of Reactions

1. A solution of ammonia is added to a solution of iron(III) chloride.
2. Solutions of sodium iodide and lead(II) nitrate are mixed.
3. A solution of hydrogen peroxide is heated.
4. Hydrogen sulfide gas is bubbled through a solution of potassium hydroxide.
5. Solid dinitrogen pentoxide is added to water.
6. Solutions of silver nitrate and sodium chromate are mixed.
7. A piece of solid bismuth is heated strongly in oxygen.
8. A strip of copper metal is added to concentrated solution of sulfuric acid.
9. Solutions of silver nitrate and lithium bromide are mixed.
10. A stream of chlorine gas is passed through a solution of potassium sulfate.
11. Excess hydrochloric acid solution is added to a solution of potassium sulfite.
12. A solution of tin(II) chloride is added to an acidified solution of potassium permanganate.
13. A solution of ammonium thiocyanate is added to a solution of iron(III) chloride.
14. Samples of boron trichloride gas and ammonia gas are mixed.
15. Carbon disulfide vapor is burned in excess oxygen.
16. A solution of potassium iodide is added to an acidified solution of potassium dichromate.
17. A solution of sodium hydroxide is added to a solution of ammonium chloride.
18. A strip of magnesium is added to a solution of silver nitrate.
19. Solid potassium chlorate is heated in the presence of manganese dioxide as a catalyst.
20. Dilute hydrochloric acid is added to a solution of potassium carbonate.
21. Sulfur trioxide gas is added to excess water.
22. Dilute sulfuric acid is added to a solution of barium chloride.

23. A concentrated solution of ammonia is added to a solution of copper(II) chloride.
24. Solid calcium is added to warm water.
25. Powdered magnesium oxide is added to a container of carbon dioxide gas.
26. Concentrated hydrochloric acid solution is added to solid manganese(IV) oxide and the reactants are heated.
27. Gaseous silane, SiH_4 , is burned in oxygen.
28. Equal volumes of 0.1 molar hydrochloric acid and 0.1 molar disodium monohydrogen phosphate are mixed.
29. Hydrogen sulfide gas is bubbled through a solution of lead(II) nitrate.
30. Solid zinc strips are added to a solution of copper(II) sulfate.
31. Solid lithium oxide is added to excess water.
32. Copper(II) sulfide is oxidized by dilute nitric acid.
33. Silver chloride is dissolved in excess ammonia solution.
34. Carbon dioxide gas is passed over hot solid, sodium oxide.
35. Dilute sulfuric acid is added to a solution of barium acetate.
36. Ammonium chloride crystals are added to a solution of sodium hydroxide.
37. Solid phosphorous pentachloride is added to excess water.
38. A solution of hydrogen peroxide is catalytically decomposed.
39. Powdered iron is added to a solution of iron(III) sulfate.
40. Chlorine gas is bubbled into a solution of sodium bromide.
41. A precipitate is formed when solutions of sodium phosphate and calcium chloride are mixed.
42. A 0.2 *M* barium nitrate solution is added to an alkaline 0.2 *M* potassium chromate solution.
43. Solid calcium oxide is exposed to a stream of carbon dioxide.
44. Dinitrogen trioxide gas is bubbled into water.

45. Sodium hydrogen carbonate is dissolved in water.
46. Pellets of lead are dropped into hot sulfuric acid.
47. Potassium permanganate solution is added to a solution of oxalic acid, $\text{H}_2\text{C}_2\text{O}_4$ acidified with a few drops of sulfuric acid.
48. Magnesium turnings are added to a solution of iron(III) chloride.
49. A small piece of calcium metal is added to hot distilled water.
50. A suspension of zinc hydroxide is treated with concentrated sodium hydroxide solution.
51. Gaseous hydrogen sulfide is bubbled through a solution of nickel(II) nitrate.
52. Excess concentrated sodium hydroxide solution is added to solid aluminum hydroxide.
53. Excess potassium hydroxide solution is added to a solution of potassium dihydrogen phosphate.
54. Hydrogen peroxide solution is added to a solution of iron(II) sulfate.
55. Propanol is burned completely in air.
56. A piece of lithium metal is dropped into a container of nitrogen gas.
57. Dilute hydrochloric acid is added to a solution of potassium sulfite.
58. Solid sodium oxide is added to water.
59. A solution of sodium sulfide is added to a solution of zinc nitrate.
60. A solution of ammonia is added to a dilute solution of acetic acid.
61. A piece of iron is added to a solution of iron(III) sulfate.
62. Butanol is burned in air.
63. Chlorine gas is bubbled into a solution of potassium iodide.
64. Sodium metal is added to water.
65. Dilute sulfuric acid is added to a solution of lithium hydrogen carbonate.
66. Excess concentrated ammonia solution is added to a solution of nickel(II) sulfate.

67. Excess concentrated potassium hydroxide solution is added to a precipitate of zinc hydroxide.
68. The gases boron trifluoride and ammonia are mixed.
69. A solution of tin(II) chloride is added to a solution of iron(III) sulfate.
70. Phosphorous(V) oxytrichloride is added to water.
71. An acidified solution of sodium permanganate is added to a solution of sodium sulfite.
72. Hydrogen gas is passed over hot iron(III) oxide.
73. Solutions of potassium iodide and potassium iodate are mixed in acid solution.
74. Dilute sulfuric acid is added to solid calcium fluoride.
75. Solid ammonium carbonate is heated.
76. A solution of copper(II) chloride is added to a solution of sodium sulfide.
77. A concentrated solution of ammonia is added to a suspension of zinc hydroxide.
78. Hydrogen peroxide is added to an acidified solution of sodium bromide.
79. Dilute hydrochloric acid is added to a dilute solution of mercury(I) nitrate.
80. A solution of tin(II) nitrate is added to a solution of silver nitrate.
81. Sulfur dioxide gas is passed over solid calcium oxide.
82. Lead foil is immersed in silver nitrate solution.
83. A solution of ammonium sulfate is added to a saturated solution of barium hydroxide.
84. Acetic acid solution is added to a solution of sodium hydrogen carbonate.
85. Solid sodium dichromate is added to an acidified solution of sodium iodide.
86. A drop of potassium thiocyanate is added to a solution of iron(III) chloride.
87. Ethanol is completely burned in air.
88. Solutions of sodium fluoride and dilute hydrochloric acid are mixed.
89. A saturated solution of barium hydroxide is mixed with a solution of iron(III) sulfate.

90. A solution of ammonium sulfate is added to a potassium hydroxide solution.
91. Excess hydrobromic acid solution is added to a solution of potassium hydrogen carbonate.
92. Solid copper is added to a dilute nitric acid solution.
93. Chlorine gas is bubbled into a cold solution of dilute sodium hydroxide.
94. A solution of potassium permanganate is mixed with an alkaline solution of sodium sulfite.
95. Powdered strontium oxide is added to distilled water.
96. Carbon monoxide gas is passed over hot iron(III) oxide.
97. Hydrogen sulfide gas is bubbled through excess potassium hydroxide solution.
98. Solutions of silver nitrate and sodium chromate are mixed.
99. Sodium hydroxide solution is added to a precipitate of aluminum hydroxide in water.
100. Solid sodium sulfite is added to water.
101. A solution of formic acid, HCOOH , is oxidized by an acidified solution of potassium dichromate.
102. Solutions of tin(II) chloride and iron(III) chloride are mixed.
103. Concentrated hydrochloric acid solution is added to solid manganese(IV) oxide and the reactants are heated.
104. Ethene gas is burned in air.
105. Equal volumes of equimolar solutions of phosphoric acid and potassium hydroxide are mixed.
106. Solid calcium sulfite is heated in a vacuum.
107. Excess hydrochloric acid is added to a solution of diammine silver(I) nitrate.
108. Solid sodium oxide is added to distilled water.
109. A strip of zinc is added to a solution of 6.0 molar hydrobromic acid.
110. A mixture of powdered iron(III) oxide and powdered aluminum metal is heated strongly.