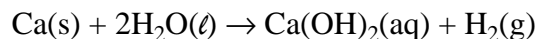


Table L Common Bases

- | | |
|---|--|
| <p>1 Which compound is an Arrhenius base?</p> <p>(1) CO_2 (3) $\text{Ca}(\text{OH})_2$
 (2) CaSO_4 (4) $\text{C}_2\text{H}_5\text{OH}$</p> <p>2 Which pair of compounds represents one Arrhenius acid and one Arrhenius base?</p> <p>(1) CH_3OH and NaOH (3) HNO_3 and NaOH
 (2) CH_3OH and HCl (4) HNO_3 and HCl</p> <p>3 The concentration of which ion is increased when LiOH is dissolved in water?</p> <p>(1) hydroxide ion (3) hydronium ion
 (2) hydrogen ion (4) halide ion</p> | <p>4 Which statement describes characteristics of a 0.01 M $\text{KOH}(\text{aq})$ solution?</p> <p>(1) The solution is acidic with a pH less than 7.
 (2) The solution is acidic with a pH greater than 7.
 (3) The solution is basic with a pH less than 7.
 (4) The solution is basic with a pH greater than 7.</p> <p>5 Which substance is an Arrhenius base?</p> <p>(1) HNO_3 (3) LiOH
 (2) KNO_3 (4) CH_3COOH</p> <p>6 Which compound is an Arrhenius base?</p> <p>(1) HCl (3) $\text{Ca}(\text{OH})_2$
 (2) H_3PO_4 (4) CH_3COOH</p> |
|---|--|
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Base your answers to questions 7 on the information below.

Calcium reacts with water. This reaction is represented by the balanced equation below. The aqueous product of this reaction can be heated to evaporate the water, leaving a white solid, $\text{Ca}(\text{OH})_2(\text{s})$.



7 Write the chemical name of the base produced in the reaction.

Base your answers to questions 8 on the information below and on your knowledge of chemistry.

A company produces a colorless vinegar that is 5.0% $\text{HC}_2\text{H}_3\text{O}_2$ in water. Using thymol blue as an indicator, a student titrates a 15.0-milliliter sample of the vinegar with 43.1 milliliters of a 0.30 M $\text{NaOH}(\text{aq})$ solution until the acid is neutralized.

8 Identify the negative ion in the $\text{NaOH}(\text{aq})$ used in this titration.

Answer Keys

1 3

2 3

3 1

4 4

5 3

6 3

7 Allow 1 credit for calcium hydroxide.

8 Allow 1 credit for OH^- or hydroxide.