

Exercise 7.13 – The properties of bases

Q713-01 Which base is suitable for preparation of copper (II) sulphate solution by neutralisation?

Q713-02 Which gas is produced when sodium sulphate (IV) neutralises an acid?

Q713-03 Car batteries contain strong sulphuric acid solution. Which of the following household substances would be suitable for neutralising a spillage from a car battery?

- A. toilet bleach (sodium hypochlorite)
 - B. sugar (sucrose)
 - C. table salt (sodium chloride)
 - D. washing soda (sodium carbonate)
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Q713-04 Many stomach antacid powders contain magnesium oxide and magnesium hydroxide. Why are these substances effective against indigestion?

Q713-05 Insect stings sometimes contain a solution of methanoic acid. Which of the following substances could NOT be rubbed on the sting to relieve the pain?

- A. Dilute ammonia solution
 - B. Sodium hydrogen carbonate solution
 - C. Indigestion medicine
 - D. Lemon juice
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Q713-06 Sodium hydroxide is used to clean drains as the compound rapidly breaks down fat and grease. Which of the following substances could be used to remove excess sodium hydroxide from the pipes?

- A. Ammonia
 - B. Sodium hydrogen carbonate
 - C. Methanoic acid
 - D. Calcium carbonate
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Q713-07 Methanoic acid is used to clean central heating system pipes that have become blocked due to the formation of limescale. Limescale is formed when calcium hydrogen carbonate solution evaporates leaving solid calcium carbonate. Show the reaction that is occurring in the pipes when the methanoic acid dissolves the limescale.

Q713-08 Limestone is a form of calcium carbonate. Why is limestone used to counteract the effect of acid rain in rivers and lakes?

Q713-09 Vinegar is a 15% solution of ethanoic acid. What would be produced if vinegar were to be reacted with baking powder (sodium hydrogen carbonate)?

Q713-10 Tartaric acid is often used in making cakes in conjunction with baking powder (sodium hydrogen carbonate). What is the purpose of these ingredients in the cake baking process?
