

Test tube C would turn clear; in this test tube chemical digestion of fats by lipase produce fatty acids, which cause a drop in pH level.

16. (a) The insoluble protein, albumin, was digested into soluble amino acids or short polypeptides.
(b) Bile acted as an alkaline pH buffer.
(c) The Biuret reagent test is a biochemical test used to detect proteins in solution. A positive result is indicated by a violet ring caused by the reaction of peptide bonds in the proteins or peptides. Such a result will not occur in the presence of free amino acids that would be present after the protein was digested.
17. Procedure 2 is best because only the independent variable, pH, has been changed. Procedure 1 and 3 do not maintain controls. In procedure 1 the amount of amylase and Benedict's solution varies, but the pH is constant. The pH must change since it is the independent variable. Procedure 3 will not work because the amount of Benedict's solution varies in each test tube.
18. Scientific research is often influenced by a political agenda. This does not mean that data was falsified, but the data was chosen. The research could be biased to protect homegrown products.
Expect a wide variety of answers. Students may be interested to learn about how different statistical methods and types of analysis can produce very different conclusions.
19. Current research indicates that Canadians eat too many processed foods. Little waste is produced and wastes remain in the colon for extended periods of time causing a slow build up of metabolic toxins. More frequent bowel movements, as would be stimulated by eating cellulose-based foods, would help reduce the problem. Roughage is an important part of the diet.