SUMMARY

Glycogen is a storage form of glucose made and stored in the cells of liver and muscle. It functions as an energy reserve and fuel storage for many functions of the body. In the liver, glycogen synthesis and degradation are regulated to maintain blood-glucose levels whereas, in muscle, these processes are regulated to meet the energy needs of the muscle itself. The metabolism of glycogen, comprising its synthesis and breakdown is regulated by particular enzymes and hormones. Certain disorders are associated with the faulty accumulation or depletion of glycogen due to the abnormal functioning of enzymes involved in glycogen metabolism. In the muscle cells where glycogen is present as an insoluble component in granules, it forms a substrate in anaerobic respiration and generates energy, however lower than aerobic respiration. Muscles subjected to antemortem and postmortem stresses tend to have subnormal glycogen levels, leading to alteration in the desirable pH to be attained and hence affect the quality of meat. It is therefore important to minimize the stress in animals to attain desired glycogen levels and meat quality.