

CHEMISTRY

Design 6: Investigation of ascorbic acid content in fruit juices

Ascorbic acid (vitamin C) is an essential component of the human diet. It is known to be essential in a variety of metabolic functions, including synthesis of collagen, maintenance of the structural strength of the blood vessels, metabolism of certain amino acids, and the synthesis or release of hormones in the adrenal glands. Large doses of ascorbic acid are tolerated, but they may contribute to the formation of kidney stones.

For the detection of ascorbic acid, DCPIP can be used. DCPIP is a blue dye which is reduced to a colorless compound by ascorbic acid, which is a strong reducing agent.

Design an experiment with which you can investigate a factor that affects the ascorbic acid content in fruit juices.