Study on L-ASCORBIC acid contents from exotic fruits

Silvia CILIAC, Catalina HORGAN, Maria CIOROI - Universitatea "Dunarea de Jos" din Galati

L-ascorbic acid (AsA) occurs in fruits and many vegetables. In plants, L-ascorbic acid (AsA) is essential for photosynthetic activity via the detoxification of superoxide and hydrogen peroxide in chloroplasts in the absence of catalase. AsA is also involved in the regeneration of α-tocopherol.
L-Ascorbic acid is an anti-darkening substance in food because of its antioxidative properties.
Four commonly consumed exotic fruits from market were analyzed for their vitamin C content.
Extracts of fruits at different temperatures were done. In order to evaluate the vitamin C into fruit extracts the redox iodometric titration with iodine/iodide was used. The redox titration is preferable to an acid-base titration because of a number of other species present into citrus extract can act as acids, but relatively few interfere with the oxidation of ascorbic acid by iodine. Our conclusions are that the content of vitamin C is depending on the variety, location of cultivation and growing seasons. The effects of cooking were also noticed in this experimental work. Many cooking processes commonly destroy the large quantities of ascorbic acid.