

6. Indication of ascorbic acid

6	INDICATION OF ASCORBIC ACID	
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The aim of the laboratory practice is evaluation of ascorbic acid content in natural substances.

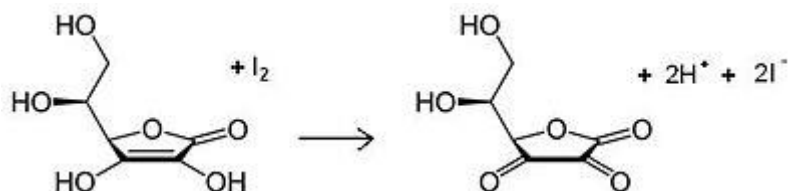
INTRODUCTION

Ascorbic acid (Vitamin C) is a food addition with symbol E-300.

Table 1. Ascorbic acid (Vitamin C) content in the selected natural materials

Fruit	Vitamin C content
	mg/100g
black currant	182.6
red pepper	144
green pepper	91
cauliflower	69
strawberries	66
frozen strawberries	59.6
lemon	50
orange	49
red currant	45.8
orange juice	43.1
Grapefruit	40

Reaction of iodine with ascorbic acid



Ascorbic acid is titrated with iodine solution until the complex compound of iodine and starch appear in the solution giving the stable blue (sometimes brown) color.

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APPARATUSES AND APPLIANCES

GLASS AND CHEMICALS

glass bourette, conical flasks, 1% iodine solution, starch

MEASURING SCHEDULE

1. Prepare the juice from fresh fruits and reference solution of ascorbic acid (50 mg of vit. C per 100g of distilled water)
2. Take three samples of substance (juice or reference sample) of 20 ml to the conical flask
3. Add the 10 mg of starch to every sample
4. Titrate the liquid with 1% iodine solution until reaching stable blue (in some conditions brown) color
5. Notate the volume of iodine solution used for titration

Data processing

Calculate the concentration of ascorbic acid on the base of iodine 1% solution used for titration for given sample of natural material.