

VITAMIN C CONTENT IN FRUIT JUICES

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This discussion will cover the nutritive value of some common fruit juices from the standpoint of vitamin and mineral content.

Fruit juices are defined as "the fluid content of fruit."¹

Vitamins are "any of a group of constituents of most foods in their natural state of which very small quantities are essential for the normal nutrition of animals and possibly of plants. Six distinct vitamins are known."¹

A recognition of the antiscorbutic property of some foods led to the isolation and later synthesis of vitamin C. It came to be called the antiscorbutic vitamin, water-soluble C, and most commonly vitamin C.

From all that is given in literature as a result of extensive research, vitamin C not only protects from scurvy but has important functions also in normal nutrition and in the maintenance of a high level of positive health.

If vitamin C is so important for normal nutrition the questions naturally follow: What is vitamin C? How do we know we have it? Where can it be obtained? Is vitamin C destructible and how much is required for an average person?

Vitamin C is a vitamin called ascorbic acid.

Vitamin C can be detected by reduction-oxidation reactions and its detection can be made iodimetrically due to its ease of oxidation. Because of the unsaturation of ascorbic acid it is easily oxidized

and therefore the vitamin C value of food, especially fruit juices, deteriorates upon standing (oxidation of air).

The best sources for this vitamin are asparagus, oranges, lemons, grapefruit, raw cabbage, tomatoes, spinach and potatoes.²

From a series of studies the National Nutrition Conference set 75 mg. daily as the requirement.³

The following are a result of our investigation:

Vitamin C Content in mg./100 ml.			
Juices	Fresh	A.R. ^o	Canned
Grapefruit	56	47	
Orange	72	65	33
Tomato		20	30
Pineapple	50	35	10

^o After Refrigeration

These values have been checked with the publication issued by the United States Department of Agriculture. Our results are higher, perhaps due to the fact that vitamin C is regenerated by reducing agents, such as hydrogen sulfide, which is usually present in the laboratory.

BIBLIOGRAPHY

1. Webster's Collegiate Dictionary—Fifth Edition.
2. Sherman, Chemistry of Food and Nutrition, MacMillan Co., New York, 1933.
3. What's New in Home Economics, Feb. 1943, p. 35