

Vitamin C: Which types of food contain the most Vitamin C?

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Purpose: This experiment was conducted to find out which types of foods, subsistence or store-bought, contained the most vitamin C.

Procedures: First we collected samples of different types of store-bought and subsistence foods. To figure out the vitamin C concentration of each food we used a 1% starch solution for the indicator, and an iodine solution. The iodine and vitamin C react in such a manner that the iodine cancels out the vitamin C in the different foods. When there is no more vitamin C for the iodine to react with, it then begins to react with the starch solution, which causes it to turn a purplish color. To calculate the concentration of vitamin C we used the formula that may be found on our project board.

Data: The subsistence meats contained more vitamin C than that of the store-bought foods. Also, the store-bought fruits and vegetables contained more vitamin C than most of the subsistence fruits and vegetables

Conclusion: The results from the oily foods, such as seal oil, Crisco, and whale blubber, were probably less accurate than they could have been; the reason being that the oil in the foods didn't mix well with the starch and iodine solutions. In order to test the Crisco and seal oil, we had to heat them up so they would mix with the starch and iodine solutions. Our information on vitamin C shows different ways that vitamin C is destroyed; one of these ways is by heating and cooking. This may be another reason why the oily foods had less vitamin C than the other foods we tested.

We also thought that a reason why our subsistence blueberries had a lower vitamin C concentration than the store-bought blueberries was because the hand-picked berries were not frozen until after they were shipped up to Barrow. While the berries were being shipped they may have been heated a little or begun to rot, which is another way vitamin C is destroyed. Also, the store-bought blueberries were bigger and had a higher concentration of vitamin C. This could mean that the blueberries either had more time to grow and mature or they may have been genetically altered with a nutrient designed to increase the natural growth and/or production of vitamin C.

Application: A person might consider having a diet of subsistence meats and store bought fruits and vegetables if they want, or need to consume more vitamin C.