

QUANTITATIVE DETERMINATION OF ASCORBIC ACID IN SOME DIETARY SUPPLEMENTS

Coliban Alla, Donici Elena

Department of Pharmaceutical and Toxicological Chemistry,
Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction

Dietary supplements should contain substances not exceeding the maximum daily dose, otherwise they are considered drugs. The legislation of Republic of Moldova does not require a compulsory quantitative state control of dietary supplements.

Keywords

Ascorbic acid, dietary supplements.

Purpose

Determination of the quantitative content of ascorbic acid in some dietary supplements registered in the Republic of Moldova.

Material and methods

It was used: five dietary supplements containing ascorbic acid: tablets, capsules, effervescent tablets, solution and syrup; 0.1 mol/l iodine titrant solution; 2% starch solution; OHAUS DV215 CD electronic balance.

Results

As a result of experimental research, it has been determined that the percentage of ascorbic acid in the food supplements that were taken for analysis was between 95.48-99.67% and the deviations from the prescribed values were not higher than 5% (Fig. 1).



Fig. 1. Iodometric titration

The highest percentage of ascorbic acid was found in dietary supplements in the form of tablets (99.67%), effervescent tablets (99.62%) and capsules (98.75%), followed by syrup (97.36%) and the lowest concentration was found in solution (95.48%), in which ascorbic acid is less stable due to its rapid oxidation at contact with air.

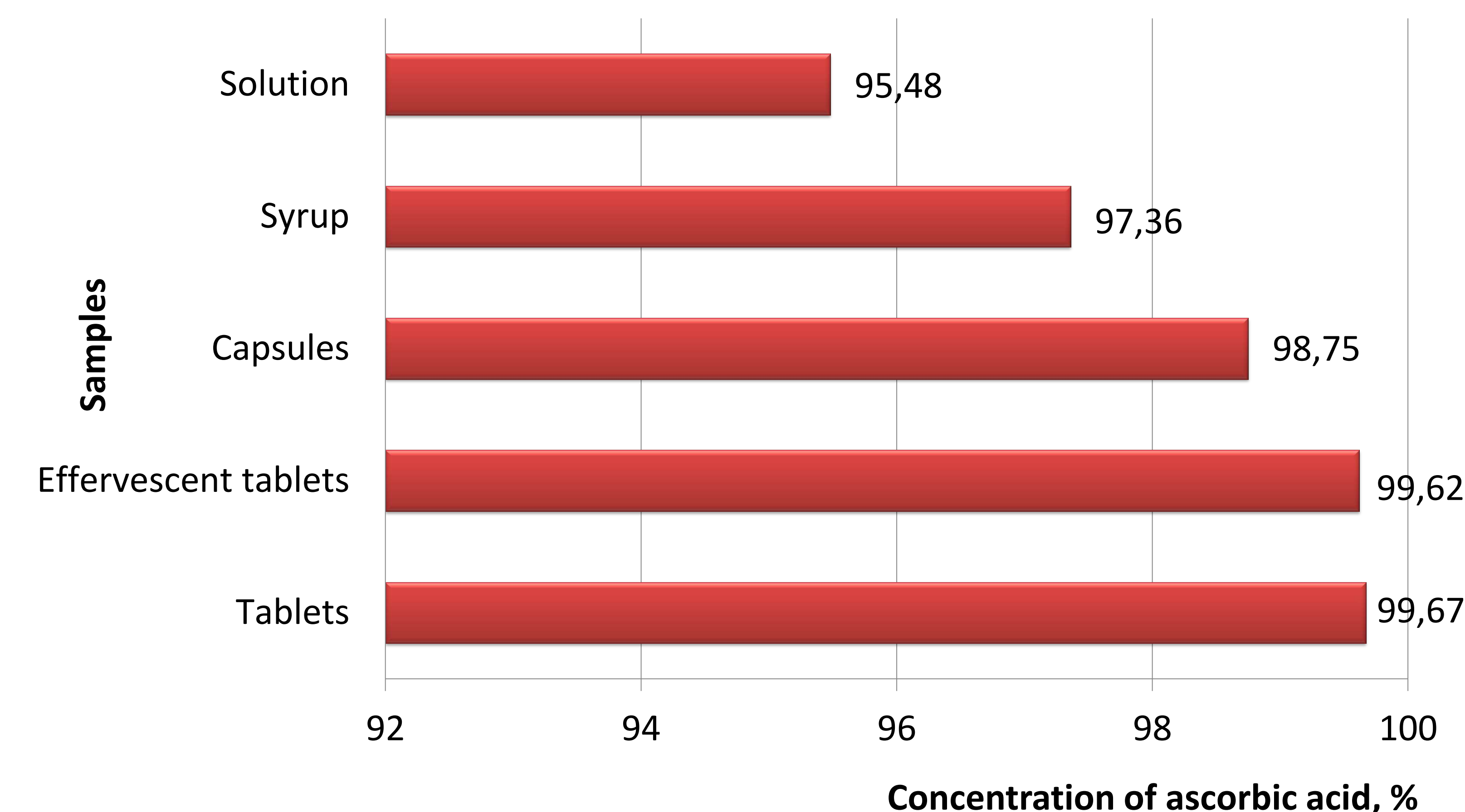


Fig. 2. The percentage of ascorbic acid in the samples of dietary supplement

Conclusions

It was determined the content of ascorbic acid in food supplements in the form of: tablets, capsules, effervescent tablets, solution and syrup, which is in accordance with the values indicated on the package.