DEVELOPMENT AND VALIDATION TITRIMETRIC METHOD F OR QUANTITATIVE DETERMINATION OF FREE ORGANIC ACIDS IN GREEN TEA LEAVES

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Introduction Organic acids are one of the classes of compounds that exhibit a wide range of biological activity. The complex of organic acids is a part of cosmetic peelings as a keratolytic component. They have antioxidant, anti-inflammatory, immunomodulatory activity, participate in metabolism, have a positive effect on digestion, create favorable conditions for the activity of beneficial intestinal microorganisms. Therefore, the search for new plant sources rich in organic acids, as well as the development of methods for their quantitative determination in medicinal plant raw materials is a very important area of research.

Aim. To validate the titrimetric procedure with potentiometric detection of end-point of titration of quantitative determination of free organic acids in the green tea leaves.

Materials and methods. Green tea leaves were collected in Anhui province, China in spring season. A pH-meter Hanna 2550 with potentiometric electrode HI 1131P were used for alkalimetric titration of free organic acids. Titration was carried out by microburette with a grade of accuracy A.

Results and discussion. The suggested titrimetric procedure was validated according to the International Conference on Harmonization (ICH) guidelines. The linearity was in the concentration range of 0.72 – 3.75% (r^2 = 0.9992). The percentage of recovery was found to be in the range of 98.08-101.92%. The repeatability and intermediate precision were 1.76% and 1.59%, respectively. The robustness was 1.24%. The procedure is accurate and reliable, having relative standard deviation of less than 2%.

Conclusions. The alkalimetry method of quantitative determination of free organic acids in the green tea leaves has been developed and validated according to following parameters: specificity, linearity, accuracy, repeatability, intermediate precision, robustness. It has been confirmed to be simple, reliable, accurate and cost-effective.

ESTIMATION OF METHOD OF DETERMINATION OF ROSUVASTATIN IN PHARMACEUTICAL DOSAGE FORMS

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Introduction. Rosuvastatin is a lipid-lowering drug. It inhibits the enzyme 3-hydroxy-3-methyl glutaryl coenzyme A (HMG-CoA) reductase, the rate-limiting enzyme that converts HMG-CoA to mevalonate a precursor of cholesterol and thereby checks the synthesis of cholesterol. The chemical name for Rosuvastatin is (E)-7-[4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]pyrimidin-5-yl](3R, 5S)-3,5-dihydroxyhept-6-enoic acid. In