

Abstract

The diet of adults as well as children should fulfill the recommended daily allowance (RDA) to meet the nutrient needs for a healthy life. Vitamins play a big role in the nutrition as the other main nutritional components including carbohydrates, protein, fat, fibre and essential minerals. RDA recommends having previtamin A, provitamins carotenoids and vitamin E in the forms of α , β , γ or δ tocopherol acetate as a daily supply. Therefore, a normal well balanced diet composes of a variety of foods is believed to supply all necessary vitamins in sufficient quantities. To address the vitamin deficiencies, fortification or enrichment of vitamins to consumable food items is a common practice. Sri Lankans get their vitamin A and E requirements in the form of natural & synthetic form of food & feed, pharmaceutical items and cosmetics. Though the consumer products have a label describing the content of the active ingredients, often the labels are misleading or do not state all the active ingredients.

Quantification of the vitamins from fat soluble consumer products often does not produce quantitative results. The reliability of the analytical protocols often introduces higher analytical uncertainties to the light and heat sensitive vitamins. The aim of this study was to test the available analytical methods and the validated method was used to analyze the levels of vitamin A and E in selected items in the Sri Lankan market.

The method involves a base saponification and thereafter simple extraction with hexane. Separation of the vitamin A and E was done by reversed- phase HPLC using C_{18} column and the separated compounds were monitored using a fluorescence detector with the excitation wavelength of 344 nm and the emission wavelength at 472 nm for vitamin A and the excitation wavelength of 290 nm and emission wavelength of 327 nm for vitamin E.