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Determination of the concentration of benzoic acid and sorbic acid in ready to serve products using High Performance Liquid Chromatography (HPLC)

H W C Krishanthi Karunaratne
University of Peradeniya, Sri Lanka

Sodium benzoate and potassium sorbate are two major chemical preservatives which are used in ready to serve products. In this study, a total of 50 commercial brands of highly consumed ready to serve products were analyzed. The HPLC determination of the preservatives was performed using a reversed – phase C18 column and UV detection at 235 nm. Flow rate approximately 1.2 ml/min. Eluent for HPLC, mix 50 volume parts of ammonium acetate solution with 40 volume parts of methanol for HPLC and adjust to a pH of 4.5 to 4.6 with acetic acid. The preservative concentration in samples was using authentic external standard sodium benzoate and potassium sorbate. Among 50 samples, the minimum and maximum concentration of benzoate content in various brands were 80ppm and 874ppm and for sorbate was 60ppm to 562ppm respectively, 22% of samples do not compliance with standard regulations in Sri Lanka. Exposure to these chemical preservatives could be a risk factor for the human health, especially when their intake was being occurred by various foodstuffs simultaneously.

Biography

H W C Krishanthi Karunaratne has completed her MSc. in analytical chemistry, University of Peradeniya, Sri Lanka. She is the Assistant Government Analyst in Government Analyst Department in Sri Lanka. She has published more than 10 papers in some reputed journals.

krishanthikaru@gmail.com

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