Yi Ding et al., J Anal Bioanal Tech 2016, 7:5(Suppl)
http://dx.doi.org/10.4172/2155-9872.C1.025

Method development of carbohydrate profile for Abbott nutrional products using HPAEC/PAD

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The purpose of this research method is to determine sugar profile (mono- and disaccharides) of Abbott nutritional products in fulfillment of the "Sugar" label claim. In this method, the sugars (galactose, glucose, fructose, sucrose, lactose and maltose) were extracted from product primarily by dilution in water. The sugars were analyzed via high performance anion exchange coupled with pulsed amperometric detection (HPAEC/PAD). The HPAEC/PAD Dionex ICS5000 system was equipped with a triple pulsed electrochemical cell (ED) with a pH reference electrode (Ag/AgCl), a gold working electrode, and a borate trap in tandem with a PA1 analytical column. Quantitation was accomplished using a six level quadratic curve and peak area. Sugars were analyzed by HPAEC/PAD via a new gradient elution program to ensure adequate resolution of the analytes of interest and known interferences from AN commodities. Method specificity was successfully evaluated by comparing the retention times of a sugar standard mix vs. commonly used commodities and ingredients. Method accuracy and precision were evaluated by comparing results generated for AN research samples using this research method relative to third party laboratory results.

Biography

Yi Ding has completed his PhD in Chemistry from Division of Chemistry and Biological Chemistry, Nanyang Technological University, Singapore in 2010. He is currently a Senior Analytical Scientist of Abbott Nutrition Research and Development, Singapore.

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