Iodine Fortification in Thailand

Biography

Prof. Visith Chavasit is Faculty Member at the Institute of Nutrition, Mahidol University, Thailand. During 2007-2015, he was the Director of the Institute of Nutrition, Mahidol University. His research interests are on food fortification and health food product development which allowed him to serve as a consultant for many international organizations such as ICCIDD, World Bank, GAIN, UNICEF as well as Thailand’s Food and Drug Administration. A number of his innovations and developments have been adopted for commercialization and national policies. He graduated with Ph.D. in Philosophy and in Food Science from the Department of Food Science and Technology, Oregon State University, USA.

Abstract

Table salt iodization had been mandated in Thailand for more than 4 decades, but the quality of most iodized salts was below standard. In 2011, the government decided to categorize iodized salt as a specially controlled food item and adopted the Universal Salt Iodization (USI) strategy, which specified that iodine in iodized salt must be between 20-40 ppm. All salt used for food and feed production must be iodized. The problem of production, process control and quality control had been the challenge for Thailand’s Food and Drug Administration, especially among small and medium entrepreneurs. In addition, fish sauce and soy sauce, which are more commonly used condiments than table salt in Thailand, were also mandated in using iodized salt as the raw material; however, this process is not practical to the food industry since it can cause technical complication during fermentation and is not economically feasible. To ensure that the new regulation regarding USI strategy is implementable for small- and medium-scale salt producers, Thailand’s Food and Drug Administration and Institute of Nutrition, Mahidol University developed mixing machines appropriate for uses in batch process commonly used by small scale, low production capacity plants, and continuous process for medium production scale plants. These machines were developed aiming to be at affordable price and operation-friendly to the respective production scales. For iodization of fish and soy sauces, it was agreed to allow the industry to fortify their finished products instead of using iodized salt for fermentation. This technique is unique, much more economical and practical for industry. The in-line quality assurance is encouraged for the salt and sauce producers since the control at finished products using standard analytical methods is costly and needs technical support.