



Editorial

Pathways for Product Quality and Safety

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Reliable measurement is one of the pillars of regulatory science [1]; however, measurement science does not start in the analytical laboratory. Rather, representative sampling plays at least an equal, if not more important, role in regulatory science. Addressed in the current issue of the *Journal of Regulatory Science* are several important aspects of sampling for regulatory decision making. One aspect that often escapes public awareness is the process to obtain a representative sample for follow-up analytical testing. The GOODSamples guidance document is the compendium of the collective effort of a group of subject matter experts working to achieve consensus on national sampling guidelines [2]. The surveillance scheme, adopted by any regulatory agency or similar industry, shall be designed to collect defensible samples for analytical procedures [3]. The manuscript by Thiex et al., “Taking and Testing GOODSamples: A Systematic Approach for Representative Sampling from Field to Test Portion” is a short visit to some basic statistical concepts in the Theory of Sampling (TOS). Interested readers can explore more detailed descriptions in the GOODSamples guidance document [4]. The commentary by Dai, “Producing Quality Laboratory Data: a Systems Approach,” discusses the historical background of the modern systemic process of quality management as a systemic process, as well as available tools. ISO 17025 and Good Laboratory Practice are two typical laboratory quality models with international recognition. Reliable measurements as well as defensible samples are pivotal for regulatory decisions.

The importance of validated methods of investigating adulterated food—food containing poisonous or deleterious substances or foreign objects—remains an integral component of food safety enforcement. Loecheit-Yoshioka reports a rapid procedure to investigate non-nutritional objects in “Rapid Procedure for the Testing of Nonnutritive Objects Found in Various Confectionary Products Posing as a Possible Choking Hazard.” The study describes a relatively simple testing procedure that offers a significant improvement over current practices. Historically the US Food and Drug Administration (FDA) has worked with a handful of companies for food label warnings on choking hazards. The agency’s recent Import Alert 34-02 [5] exemplifies FDA jurisdiction over imported food with regard to confectionary products containing non-nutritive components that pose choking hazards. Chamkasem et al. describe in “Direct Determination of 2,4-dichlorophenoxyacetic Acid in Soybean and Corn by Liquid Chromatography/Tandem Mass Spectrometry” a liquid chromatography–mass spectrometry method to

accurately determine the herbicide content in some major agriculture commodities, offering an efficient way to understand the herbicide residual in animal feed and human food.

The current issue of *Journal of Regulatory Science* portrays an integrated pathway that leads to product quality and safety. The integration of science based-sampling, testing, and the quality management system ultimately provide the most comprehensive support for any regulatory decisions.

References

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