C26 Faster Analysis, Custom Spreadsheets, and Lower Detection Limits Don't Guarantee Defensible Data

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After attending this presentation, attendees will learn to recognize a variety of software, hardware, and method-related issues that may adversely impact the usability of their data.

It is the goal of this presentation to help data users recognize potential differences between numbers on report forms and valid, defensible results.

Recent efforts to retrieve and review analysis results for volatile organic compounds in groundwater samples collected at an industrial site brought to light a variety of problems with data integrity, created by a laboratory's efforts to increase throughput, keep costs down, achieve low detection limits, and maximize computer software use. Some problems encountered with low detection limits, short analytical run times, laboratory contamination and carryover, the use of turn-key software systems, and the retention of records will be introduced. Laboratories are competing in a tough market and make use of the newest technology to shorten preparation and analysis times, limit the need for human activity in data handling, and move toward a paperless system in order to lower the costs and keep the throughput high. They are forced to strive for ever lower detection limits to meet their clients' needs. These factors can impact the accuracy and defensibility of the data produced. As data users, we need to be aware of this increasing problem and be on the lookout for warning signs. We have a duty to those who rely on our expert- ise to make sure that we can rely on the data we are using.

Defensible, Data, Detection

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