

Laboratory analysis according to Lab 4.0 requirements

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The increased interconnectivity of devices has not only infiltrated our private lives, but also the workplace, including laboratories. When performing analytical testing, multiple procedures are necessary: from sample preparation, to system calibration and the analysis itself. Often, these procedures rely on different analytical systems and softwares from various manufacturers.

All raw data created by the instrumentation (e.g., from the analytical balance to the measurement result) must be guaranteed and harmonized among the different systems in order to obtain accurate and traceable results. In terms of audits and data integrity, there must be no gaps in the raw data – from the chemical reagents used, to the measuring device, analytical system, measurement parameters, and so on. This can be challenging to coordinate as different manufacturer softwares may not speak a common language.

This presentation covers the challenges of integrating different systems into one working analytical system, and describes the aspects of traceability and data integrity in wet chemical analysis.