Karl Fischer Titration in a regulated environment

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Karl Fischer (KF) titration is a widely applied method in all industries to determine moisture content in any kind of sample, be they solids, liquids or gases. With increasing regulatory efforts, the number of laboratories implementing GMP/GLP compliance or similar quality assurance is growing. Many small and midsized laboratories cannot afford expertise on all ends and still face the necessity of operating their analysis following strict standard operating procedures (SOP), executing complicated and time consuming validation processes and having to look after ever increasing amounts of traceability data.

With more than 60 years of experience with KF reagents and more than 40 years since the first automatic KF titrators were released, Mitsubishi Chemical presents a uniquely complete package of hardware, software, reagents and know-how to overcome this challenge.

Automatic KF Titrator CA-310 and AQUAMICRON™ KF reagents

While KF titration is a distinct wet chemistry analysis method, many current solutions require the use of a PC to operate the analyzer to assure data integrity and traceability. With its newly designed Multi Controller, Mitsubishi Chemical Analytech provides its model CA-310 with data integrity features at the point of data generation. While all data is handled securely and stored locally, it is still available on the network for further processing. With its modular concept, the CA-310 is able to be scaled from one to four titration channels, all of which can further be equipped with autosamplers or other vaporizers.

The next step is facilitating operation. CA-310 is equipped with a high level of automation, from automatic start up to shut down including connected accessories. Internal surveillance and maintenance functions make prolonged use without external intervention possible. Additional application support tools guide through the necessary validation process up to creation of application specific SOPs.

For many years, Mitsubishi Chemical AQUAMICRON™ is providing a big application database for choosing the best reagent and instrument settings. The peak of performance now is the integration of AQUAMICRON™ reagents into the CA-310 system, thus enabling barcode input of reagent data such as shelf life, LOT number or certified values directly and without errors. Together with reagent lifetime control and automatic exchange, this allows keeping the highest level of measurement performance over a long period of time.

Karl Fischer Moisture Meter CA-310

AQUAMICRON™ Karl Fischer Reagents