

VALIDATION STUDIES OF KARL FISCHER REFERENCE METHOD FOR MOISTURE IN COTTON**J. G. Montalvo****T. M. Von Hoven****T. F. North****S. Cheuk****Southern Regional Research Center****New Orleans, LA****Abstract**

Many different fields of research utilize the technology of volumetric Karl Fischer titration to measure moisture content. In fact, it is actively used in 126 ASTM methods, 14 NIST SRMs, and testing labs run constantly. The technique is widely used and lauded for its selectivity for water, easy sample preparation, small sample size, quick measurement time and of course, the accuracy and precision. Since moisture in cotton fibers is such an important parameter, such a method is desirable for the cotton industry. With current oven drying techniques lacking precision and accuracy statements, a new standard reference method is needed. In order to submit the KFT technique to measure cotton fiber moisture to ASTM, it must be validated and compared to other independent methods of measuring moisture in cotton. Once such comparison is low temperature distillation. This can explain some of the variation between standard oven drying and KFT. The authors also plan to educate potential users through workshops and collaborations. In order to submit the method to be considered for an ASTM standard, round robins need to be conducted. Laboratories to be included SRRC in New Orleans, Metrohm in Riverview, Florida, CQRS in Clemson, SC, a gin or mill, labs in Australia, Germany and China.