

## **Automated Filter Weighing System for PM- Fine 47mm Filters at the Wisconsin State Lab of Hygiene**

John Strauss, WI

The US-EPA has promulgated a health standard for fine (respirable) particles in ambient air that required states to implement a PM-2.5 monitoring program. A necessary component of the monitoring program is a laboratory that can supply and process a large number of 47mm Teflon filters used to support this monitoring. The small size and large volume of these filters coupled with the high precision and accuracy requirements for their gravimetric analysis, created a need to automate the gravimetric analysis process. The Wisconsin State Laboratory of Hygiene and the Wisconsin Department of Natural Resources have implemented an Automated Filter Weighing System to efficiently weigh filters and produce quality data. The problems and solutions experienced during the implementation will be presented. Future research applications of the new technology such as mass stability studies will also be described.