Long Term Stability of the Calibration Process of Optical Particle Counting Systems, *Michael Schumacher, Michael Tscherpel, PAMAS GmbH, Rutesheim, Germany*

For years, PAMAS took calibration material samples aside to gain information about the long term stability of the calibration process. This paper explains what information can be read out of these samples.

The results include estimation of errors coming from batch to batch variability of secondary calibration suspension, master calibration SRM2806 variability, weighing errors, instrument shift and other sources.

The amount of data used for this analysis provide information what can be expected from APC-systems in a controlled environment like in a calibration lab. This is also useful to help analyze the quality of standard laboratory practice.

PAMAS collects retain samples of secondary suspension since the introduction of ISO11171. In 2008, the density of the specimen has been greatly increased. Two bottles of every batch are stored for later inspection. This have been 574 batches from January 2008 to July 2012. This study is based on a sample of 100 bottles of calibration fluid that have been taken from the retain samples with a time-constant sampling.

This presentation gives some information what users can expect of the long term stability of optical particle counting systems.