

DATA SHEET



Data Sheet 003 – UKAS Accreditation Explained

What is UKAS? UKAS is the United Kingdom Accreditation Service. It is the sole national accreditation body recognised by government to assess, against internationally agreed standards, organisations that provide certification, testing, inspection and calibration services. Accreditation by UKAS demonstrates the competence, impartiality and performance capability of these evaluators.

UKAS is an organisation. It is not in itself a standard. So, to be UKAS accredited actually means to be accredited **by** UKAS as complying with the standard against which you are being assessed. In the case of pipette calibration, Sartorius Pipette Doctor was assessed by UKAS and found to comply with the standard ISO 17025. It is as simple as that.

IEC/ISO 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories to give it its full name. This is actually a quality system in its own right, encompassing all the elements required to comply with the ISO 9000 standard with which so many are familiar. There are however two very important distinctions.

Firstly, Sartorius Pipette Doctor had to demonstrate competence in the field of pipette calibration. The UKAS assessors who audited Sartorius Pipette Doctor were experts in the field of pipette calibration and we had to demonstrate to them that we were technically competent to calibrate pipettes.

Secondly, Sartorius Pipette Doctor had to demonstrate that the results we were reporting were valid. This meant we had to demonstrate how we looked after the balances used in the calibration process and that we had examined all possible sources of error that could have an impact on the reported results. To do this we constructed an 'uncertainty budget', a method by which we could list and place a value on all the sources of error within our calibration process. By doing this we are able to place an uncertainty value in microlitres for any given volume dispensed. For example, if we calibrated a pipette with a mean volume of 1000µl we can state with a 95% confidence level that the reported value will be 1000µl ± 4µl. This means that you can be 95% confident that this pipette is dispensing between 996 - 1004µl

This is the real crux of a 'UKAS' level calibration. The confidence you can have in the performance of a UKAS calibrated pipette. That we have been audited and found to be competent to the highest level in the area of pipette calibration and that we are operating a robust and successful quality system.

Actually though, the most important factor for Sartorius Pipette Doctor in the process of accreditation by UKAS is not necessarily that all our clients should require UKAS level calibrations. It is that we have assessed by them in the specific field of pipette calibration and found to be technically competent.

Now, due to the subjective nature of pipetting there are many arguments relating to the validity of a "UKAS" calibrated pipette but the most important point to carry forward as an accredited company is that our clients can be assured of the technical competence of the work we carry out on their pipettes.

In the case of Sartorius Pipette Doctor the assurance of our technical competence is as applicable to our non-UKAS servicing as to our UKAS work since the same staff and equipment are used for both.