Certification and Calibration of Oxygen analysers

It is not normally necessary to calibrate an analyser against standards.
The analyser is a digital or analogue meter with a self contained sensor.
The normal requirement is calibration by the user.
The sensor is exposed to 100% oxygen 1Bar and the calibration control set to 100%.
The sensor is then exposed to dry air (20.9%) 1Bar.
The accuracy should be +/-2% full scale deflection.
In normal use the user calibrates in air for measurements up to 50% oxygen and in 100% oxygen for measurements above 50%
As the sensor accuracy is limited to +/-1% or +/-2% FSD further calibration to more accurate limits are futile.
NB The sensors have a finite life and indeterminable end of life date. i.e. a sensor tested here could fail before it reaches the user (unusual but possible). We also advise the unit be calibrated at least in air every 8 hours or before each use.

Under ISO9000 calibration certificates are required. Common sense dictates that the user calibration is sufficient.
However a calibration certificate can be obtained under ISO conditions and traceable to NAMAS

Certified oxygen and dry air are used as the gases.
The above calibration is carried out.

The electronics can be independently calibrated using a voltage source and a digital voltmeter traceable to NAMAS. Readings are checked over the range 0-100%
On monitors with alarms the alarms are checked under the final QA.
However they can also be calibrated and traceable to NAMAS.

This is time consuming, involving test set-up including administration and record keeping, test instrument traceability and to be 100% valid to all ISO auditing bodies, the tests must be carried out by an ISO certified company.

Depending on the minimum level of tests the charge for this is a minimum £45 +

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