B&R Compliance Associates LLC

Regulatory Update Bulletin

Bulletin Number

BR11-001

3/19/11

Calibration Standards for Medical Gas Analyzers

In or around 2005 the USP / NF was on a tear to introduce a series of calibration gas standards know as USP reference standards (RS) and re-write the medical gas monographs to require that all medical gas analyzers would HAVE to be calibrated using these standards. This initiative was supported by FDA. This was going to be a huge expense for the industry.

The industry responded, and made a presentation at a joint meeting between industry, USP / NF, and the FDA. At this meeting the industry stated categorically that medical gas calibration standards would now be traceable to NIST. This means that the calibration gas used for medical gas analyzers would have direct traceability to a gravimetrically prepared standard produced using NIST traceable weights.

Resulting from that meeting CGA prepared publication M-8, "*Guideline for the Manufacturer of Calibration Gas Standards Used to Analyze Medical Gases* (2008)", and has provided this to both FDA and the USP as the medical gases industry's current accepted and standard practice. The new USP medical gas monographs (expected this year) are expected to contain requirements for all calibration standards to be certified standards traceable to NIST. This language was inserted at the request of the medical gas industry.

Contents of CGA M-8

Section 6 of the document unequivocally states that "***All calibration standards shall be traceable to nationally recognized standards***." It goes on to state that this includes NIST SRM, NIST NTRM, NIST traceable Class S1 weights, and USP Reference Standards. No other options are provided.

Section 6.2 – Primary Standards – this section defines a primary standard as having been manufactured using the gravimetric method, and the cylinder composition having been determined on the basis of weight using balances that are calibrated with NIST certified S1 weights. Gases may be produced in multiple cylinder lots, but must be individually analyzed.

Section 6.3.1 – Span Gases – states these are certified standards individually analyzed against primary standards. Gases may be produced in multiple cylinder lots, but must be individually analyzed.

Section 6.3.3 – Zero Gases – states these are certified standards individually analyzed against a primary standard. Gases may be produced in multiple cylinder lots, but must be individually analyzed.

Bottom Line – Anyone not using NIST traceable calibration standards as defined in CGA publication M-8 is not following the current industry practices with regards to cGMP compliance in the medical gases industry today.

For more information on this subject, or any other medical gases compliance issue please contact Ron Ball at (317) 297-8518, or ron.ball@brcompliance.com.