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Re: CSA Standard C22.2 No.152 and bump testing

C22.2 No. 152 contains a clause relevant to function testing of portable gas monitoring instruments. This clause reflects statements that are to be contained within the instruction manual of the instrument. The clause in the standard reads as follows:

...for intermittent duty and continuous duty portable gas detection instruments, a wording in English and French to convey the following: CAUTION: BEFORE EACH DAY'S USAGE SENSITIVITY MUST BE TESTED ON A KNOWN CONCENTRATION OF _____ (SPECIFY GAS) EQUIVALENT TO 25 – 50% OF FULLSCALE CONCENTRATION. ACCURACY MUST BE WITHIN -0 - +20% OF ACTUAL. ACCURACY MAY BE CORRECTED BY _____ (SPECIFY ADJUSTMENT PROCEDURE)

The clause in the standard is meant to ensure that manufacturers recommend a functional test of the instrument before each day's use. While the suggested wording does imply that the sensor respond to a level greater than the gas that is applied, it leaves open the type of gas to be used, and therefore nullifies the suggested tolerances due to the fact that the sensor will not respond specifically to any one particular gas.

The key phrase in the standard is that the "...wording is to *convey* the following." The term "convey" indicates that the intent of the clause must be met, but the wording does not have to be stated literally. CSA approves the wording used in all instrument instruction manuals and reviews it as such according to this clause. Industrial Scientific has recommended a bump test prior to each use in all **CSA approved** instruction manuals, and has clearly stated the criteria for the bump test along with the fact that it is not a measure of the accuracy of the instrument.

In as much as CSA has approved the content of Industrial Scientific instruction manuals, they have approved the functional test criteria put forth by Industrial Scientific and therefore do not specifically require the performance stated in the suggested wording of the 152 standard.

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