

Calibration of Portable Instruments Technical Notes

Thermo Electron's series of portable gas detection instruments use several types of detectors, including catalytic oxidation for hydrocarbon detection and electrochemical for toxic gases and oxygen. It should be noted that all detectors can experience extreme loss of sensitivity if exposed to certain materials (for instance, silicone for the catalytic detector). The instrument should always be checked if exposed to extreme concentration, suspected poisons, or contaminants.

Thermo Electron recommends a "bump" test be performed periodically to verify proper instrument performance. The "bump" test should be performed at least monthly, after mishandling, or if exposed to extreme concentration, suspected poisons, or contaminants. A "bump" test is accomplished by exposing the instrument to a known concentration of gas from a gas cylinder and verifying that the instrument's response is within $\pm 10\%$ of marked value on the gas cylinder. The gas cylinder's concentration should be such that the instrument goes into alarm. Calibration is required when response of the instrument deviates from the marked value on the gas cylinder by more than $\pm 10\%$.

Please refer to your operator's manual for complete calibration instructions

