

**Title: Operational Guideline for PhD Ultra  
Multi Gas Detector**

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**Purpose:**

To establish a guideline for the use of the PhD Ultra Multi Gas Detector. The Multi Gas Detector is a commercially produced device used to detect the presence of specific gases in the atmosphere.

**Scope:**

The intent of this guideline is to instruct personnel on the use of a specific piece of equipment. It is recommended that all personnel train with, and become familiar with the operation of this device.

**General:**

Initiation of the following safety procedures should be used during department operations where any type of toxic or explosive gas may be present.

Operations included would be: Confined space, fire salvage and overhaul, reported gas odors or leaks, haz-mat leaks, or any other situation where the atmosphere content is unknown.

**230.08.01. Personnel Considerations:**

Personnel should consider any unknown gas or fluid to contain toxic or flammable vapors until such material is deemed safe through positive identification.

After a structure fire has been extinguished and overhaul procedures are in progress the atmosphere should be monitored for toxic gases anytime the work is being performed without SCBA.

Do not give an "ALL CLEAR" to discontinue use of SCBA or any other protective gear until it has been determined that all levels of toxic and explosive gases are at safe levels.

## 230.08.02. Operational Considerations:

Each PhD Ultra Multi Gas Detector comes in a kit form. The kit contains: One Gas Detector with protective case that monitors Oxygen, Explosive gas, Carbon monoxide, and Hydrogen sulfide gases all simultaneously. The kit also contains a hand aspirated sample draw assembly with replacement filters. Also included are instruction manuals and maintenance tools.

- Turning Unit On: Press Mode Button (Large Black Button on Top) for approximately 2 seconds and then release.
- Turning on cont. The Detector will then go through a self-check mode before it is ready for use.
- Auto Zero: After the unit goes through its self-check the Oxygen reading should be 20.9 and all other gases should read zero. If they do not read the proper levels and you are in a fresh air atmosphere you can zero the readings. To start Auto Zero press the Mode button three times, then when the display reads Auto-Cal push the Mode button one additional time, this will set all the readings at their proper levels
- Turning Unit Off: Press Mode button until display reads, "Release".
- Battery replacement: The Detector will alarm when the battery level reaches 3.2 volts, and will begin protective shutdown at 3.1 volts. To replace the batteries make sure the unit is turned off. Remove the snap on protective case. You may then remove the alkaline battery pack located on the top of the unit. To open the pack turn it over and remove the single Phillips head screw. Now you can open the pack and replace the 3-AA alkaline batteries. This process should be reversed to re-install pack.
- Special uses: The PhD Ultra Multi Gas Detector has many uses and features. All personnel should review the operational manuals on a regular basis in order to stay familiar with the detectors many functions.

**230.08.03. Special Considerations:**

- Unit Problems: Any functional problems should be documented and forwarded to your Battalion Chief.
- Unit Maintenance: One person on each shift from the TRT team will be responsible for general maintenance of the detectors.