



CONTROL EQUIPMENT

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PTY LTD

Gas Detection and Industrial Hygiene

FumiTest PH3 2000

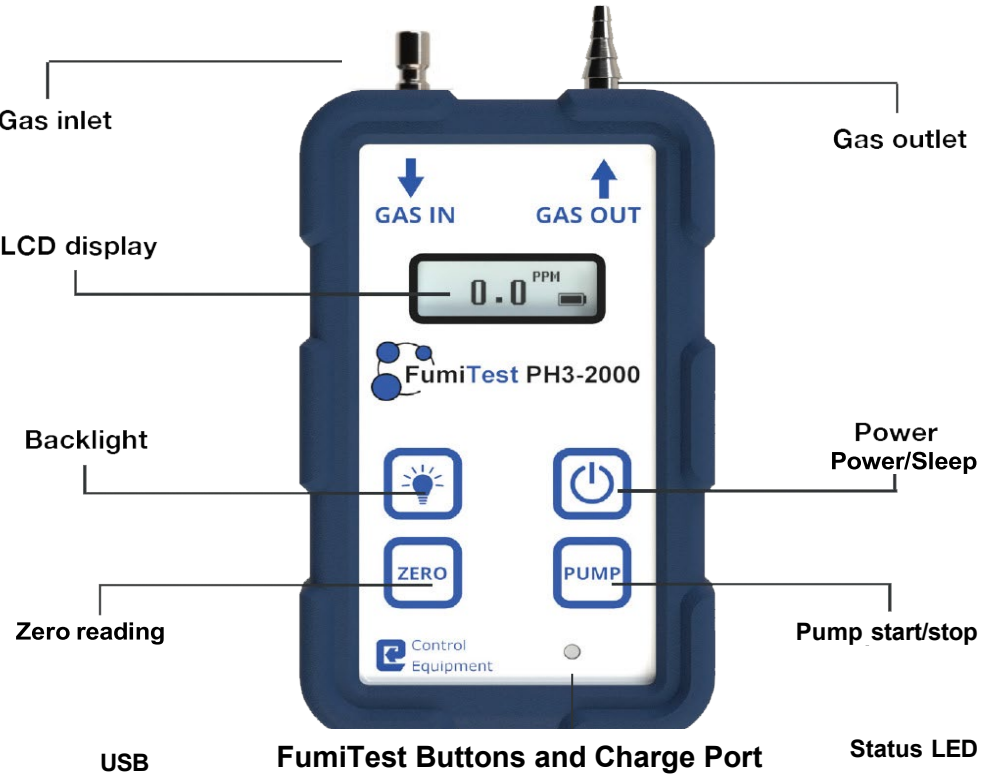
Quick Reference Guide



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Accessories included with the instrument purchase



TURNING THE INSTRUMENT ON AND OFF

FumiTest has 3 power modes: '**power off**', '**sleep mode**', and '**On**'.

When first supplied, and for situations where the unit will not be used for long periods (such as 6 months or longer), the monitor can be set to power-off mode.

- In **power-off** mode, the display will be blank. All electronics and the internal gas sensor are inactive.
- To power up the unit from the **power off** state, press and hold the  'Power/Sleep' button until the Status LED flashes **Green**, then release the button. The display will indicate 'SLEEP MODE'.
- In **Sleep Mode**, the unit is powered on and in a low-power state. In this mode, the internal gas sensor is kept powered and ready for immediate use when the unit is turned on (see below).

 Each time the unit is powered on from **power off** mode to **sleep mode**, it is recommended to wait 20 to 30 minutes to allow the gas sensor to stabilise – this will ensure the most accurate measurement results.

- To turn the unit to **on mode** to take measurements, press and hold the  'Power/ Sleep' button until the Status LED flashes **Blue**, then release the button. The display will show a 5-second countdown as it starts up and initialises ready for use. After 5 seconds, the display will show **0.0** and the unit is ready for use.
- To return the unit to **sleep mode** when measurements are complete, press and hold the  'Power/Sleep' button until the Status LED flashes **Blue**, then release the button. The unit will return to **sleep mode**, and the display will indicate 'SLEEP MODE'. If the button is held down for an additional 5 seconds after the Status LED flashes **Blue**, the LED will flash Green and the unit will enter **power off** mode.

 When in **on mode** and the pump is not running, the unit will automatically return to sleep mode after 5 minutes. If the pump is running, the unit will remain active and not automatically enter **sleep mode**.

BASIC CONTROLS

Display Backlight:

To toggle the display backlight between on and off, press the backlight button.

Pump On/Off:

To toggle the sample pump between on and off, press the pump button.

Zero Reading:

Over time and under certain operating conditions, the internal gas sensor may need to be 're-zeroed'.

Re-zeroing ensures that FumiTest gives a proper zero reading when not sampling gas.

If FumiTest requires re-zeroing, the left-hand side of the display will indicate 'ZERO' with a downward-pointing arrow.

To perform a Zero Reading, follow the steps below.



Zero Reading is performed with no fumigant drawn into the unit. The gas inlet and outlet should be left open to the atmosphere and not connected to a fumigant source.

- Turn on the sample pump and allow it to run for around 10 seconds.
- Press and hold the  'Zero Reading' button until the status LED illuminates **Cyan**, then release the button.
- The reading will now indicate 0.0, and the 'ZERO' and downward arrow indicators will not be visible.
- Turn off the pump.

CONNECTING SAMPLE PROBE AND EXHAUST LINES

The FumiTest kit includes a sample probe with an integrated, replaceable air filter and a quick-connect fitting.

To connect the sample probe:

1. Retract the spring-loaded collar on the quick-connect fitting.
2. Slide the fitting fully onto the mating connector on the instrument.
3. Release the collar once the fitting is fully engaged.
4. Gently pull on the fitting to confirm that it is securely locked in place.

To disconnect the quick-connect fitting, reverse the connection procedure: retract the spring-loaded collar, pull the fitting away from the instrument, then release the collar.



CONNECTING THE EXHAUST LINE

Always connect the exhaust line before operating the FumiTest. The exhaust line returns the sampled phosphine gas back to the fumigation enclosure, preventing phosphine from being released into the surrounding work area.

This is important for maintaining operator safety and reducing the risk of exposure to hazardous phosphine gas. Ensure the exhaust line is securely connected and correctly routed back into the fumigation enclosure before starting a test.

The exhaust line fitting (GAS OUT) features a barbed interface that accommodates a wide range of tube sizes.

To establish a sealed connection, firmly push the tube onto the fitting until it is securely in place.



Exhaust line fitting

TAKING PHOSPHINE MEASUREMENTS



When taking phosphine measurements, it is the operators' responsibility to follow relevant industry and local site-prescribed safety practices.

Specifically, when using the FumiTest monitor, both the inlet and outlet sample lines must be properly connected to the monitor's inlet and outlet tube fittings with compatible tubing, free of leaks.

To make a measurement, follow the steps below.

Turn FumiTest on. 

- Ensure that the display is reading zero and that the 'ZERO' and down arrow indicators are not visible. If the display is not zero and/or the 'ZERO' indicators are visible, perform a re-zeroing operation as described above. 
- Connect FumiTest's inlet port to a sample line from which to draw in fumigant.
- Connect Fumitest's outlet port to a return line, either back into the location from where the sample is being taken from or to a designated safe location that is sufficiently far away from other personnel.
- Turn on the sample pump.  A 'pump running' indicator will be displayed above the fumigant reading.
- The unit will start taking measurements, and the display will start to indicate the fumigant concentration once the sample has been pulled from the source to the monitor. The time that this takes will depend on the length of the sample inlet line.
- Wait for the reading to stabilise and note the reading.
- As per prescribed safety practices, remove the inlet sample line from the monitor and continue to let the sample pump run until the display reads zero. This 'purges' the monitor of fumigant, leaving it in a safe condition.

WARNINGS AND INDICATIONS

During operation, the display shows various indicators if necessary.

OVER RANGE WARNING:

If the sampled fumigant concentration exceeds the monitor's full-scale range by 10%, the display will indicate an over-range condition. Once the fumigant concentration falls below this limit, the display will begin indicating the concentration again.

 ***It is not recommended to subject the monitor to fumigant concentrations beyond the full-scale range, as this can cause the sensor to take considerable time to return to zero even when no gas is present. Additionally, the life of the gas sensor may be reduced if repeatedly exposed to over-range concentrations.***

The FumiTest instrument has a maximum operating range of 2,000ppm PH3. In cases where the instrument is exposed to amounts greater than the operating range, the following results can be expected:

In cases where the instrument is subjected to a level of PH3 that is slowly increasing and eventually increases above 2,000ppm (eg measuring initial dosing level changes):

- The display will indicate '**OVER-RANGE**' and will continue to display the measured ppm value even though the accuracy of the reading cannot be guaranteed. At this stage, a **Green** LED will illuminate at the bottom of the instrument.

The instrument should be immediately disconnected from the gas source, and fresh air should be introduced to the instrument until a reading of "0ppm" is displayed. The instrument can then be returned to service.

- If the instrument has not been disconnected from the gas source and the gas level continues to rise, the display will indicate '**CHECKING RANGE – PLEASE WAIT**' followed by the message '**FUMIGANT EXCEEDS SENSOR LIMIT**'.

- *The instrument should be immediately disconnected from the gas source as the sensor may have suffered permanent damage. The instrument should not be returned to service until it has been checked by an authorised service technician.*

In cases where the instrument is subjected to a level of PH3 that is above 2,000 ppm, causing a near-instant change in the instrument from 0ppm (eg when connecting to a silo with a gas level above the operating range):

- The display will indicate '**CHECKING RANGE – PLEASE WAIT**'. It will then indicate '**OVER-RANGE**' and will continue to display the measured ppm value even though the accuracy of the reading cannot be guaranteed. At this stage, a **Green** LED will illuminate at the bottom of the instrument.

The instrument should be immediately disconnected from the gas source, and fresh air should be introduced to the instrument until a reading of "0ppm" is displayed. The instrument can then be returned to service.

- If the instrument has not been disconnected from the gas source and the gas level continues to rise, the display will indicate '**CHECKING RANGE – PLEASE WAIT**' followed by the message '**FUMIGANT EXCEEDS SENSOR LIMIT**'.

The instrument should be immediately disconnected from the gas source as the sensor may have suffered permanent damage. The instrument should not be returned to service until it has been checked by an authorised service technician.

BATTERY STATUS

The battery icon indicates the remaining battery life before recharging is necessary.

- FumiTest can run for around 20+ hours continuously with the pump running before requiring a recharge.
- For usage where the monitor is turned on and off and not running continually, it shouldn't be necessary to recharge the battery any more frequently than every few months.
- When the battery indicator is showing its lowest number of segments, there is still at least a few hours of use remaining. However, maintaining a properly charged battery is recommended.

CHARGING THE BATTERY

To recharge the monitor's battery, plug a USB-C cable into the monitor's charging port.

- During charging, the Status LED will illuminate **Red**.
- When charging is complete, there will be no status LED illuminated.
- Charging takes around 6 hours from a completely empty battery.



FumiTest's charging circuitry is designed to safely charge the internal battery when connected to commonly available power sources such as the supplied charger, phone chargers, PC USB ports / USB hubs. Do not connect FumiTest's charge port to power sources other than the above-mentioned types as this may damage the charge port and/or the connected power source.

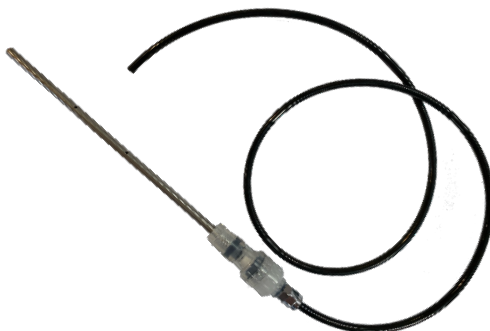


USB charge port

SAMPLING TUBES

Gas Sampling probe 500mm Stainless Steel and 1m hose

Part No: FUMITEST.PROBE.500



Gas Sampling probe 12mmOD Stainless Steel 000mm

Part No: FUMITEST.PROBE.12



Gas Sampling probe 10mmOD Stainless Steel 1000mm



Part No: FUMITEST.PROBE 10

CASE

(instruments and accessories not included)

Medium Moulded ABS case, Black with foam

Part No: TREKA300





SERVICE

Booking your instrument in for a service is as simple as scanning the code, downloading our service request form and sending it to us with your instrument.



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