**UltraRAE 3000 Procedure**

**RAE Pro-xxx**

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| **Operating Procedure** |

This unit is designed for instantaneous exposure monitoring of a specific gas. Generally being used to detect benzene. It will also be used to measure total volatile organic compounds (VOC)

**Zero or (fresh air) Calibration**

Zero (fresh air) Calibration is requires a clean air environment. It is done before the start of each shift and before a span calibration.

Step

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| 1 | Insert the tube with arrows pointing toward detector. Ensure that the rubber grommet is in place. (This can be before the zero calibration or before air testing) |
| 2 | Select Zero Calibration. This is a 30 second countdown function |
| 3 | Always attach the carbon filter. There may be small amounts of benzene even in a clean office environment |
| 4 | When complete you will see: Zeroing is done! Reading= 0.0ppm |

**Air Testing**

Step

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| 1 | Turn unit on by pressing and holding the mode button(still on following the zero cal) |
| 2 | Score and break tube tips (if not already in place during the zero calibration) |
| 3 | Unscrew the front of the sampling probe |
| 4 | Insert the tube with arrows pointing toward detector. Ensure that the rubber grommet is in place. |
| 5 | From main display hit arrow right this will go into start sampling mode. It will prompt YES, select the Y button |
| 6 | This will take 60 seconds for the device to draw a sample in to provide a reading |
| 7 | Always have the moisture filter attached |

Do not leave the unit in a moist area such as a tank that is being cleaned. Excessive moisture will cause issues.

Conduct initial tests and at end of each work break but do not use for continuous monitoring.

If a 60 second test

**Span Calibrating**

Span Calibration will be conducted monthly by the Equipment Manager.

Confirm the last calibration date on the sticker attached to the unit.

Step

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| 1 | Select benzene on the device. The unit should normally be on benzene mode |
| 2 | Score and break benzene tube tips and insert with the arrow towards the unit. Ensure that the rubber grommet is in place |
| 3 | Connect the tube to the calibration gas of 5 ppm regulator |
| 4 | Select benzene for the target gas on the detector |
| 5 | Press Y/+ to enter Span Calibration |
| 6 | The device will draw the calibration gas into the device for 60 seconds |
| 7 | The display will show Span is done! With a Reading that is close to the span gas value. |
| 8 | Once the detector has gone into alarm, remove the tubing and the benzene tube and the device has been calibrated and ready for use. |

**Bump Testing**

A daily bump test is not required unless an accurate limit of VOCs is required.

Do not select BUMP when it appears on the screen, hit back to return to main menu.

If BUMP is selected accidentally alarms may occur. Conduct a span calibration to clear alarms.

The personal 4 head monitor or the Gas Clip with the pump is normally used to provide more specific readings.

I (print)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(sign)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ holding the position of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have been trained on this procedure and can perform the steps required.

I(print)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(sign)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ holding the position of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can confirm that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_has displayed competency in the steps of this procedure.

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_