

## Personal Monitor Instructions - Active Sampling Only

**Shelf life:** This tube has a shelf life of 6 weeks. Tubes must be exposed and returned for analysis within this period. If tubes are not used they must be returned within 5 weeks and marked clearly that analysis is not required.

**Tube storage and preparation:** Tubes should be stored in a dark place away from a heat source before exposure. A desk drawer is ideal. Tubes should always be stored and handled in clean environments, for example a well-ventilated office, well away from laboratory solvents or major emission sources like photocopiers or laser printers. Brief exposure of the tubes to moderately contaminated air (such as would be typical of laboratory, factory or clinical environments) is inevitable when preparing for sample collection and analysis. However, contamination accumulated during these brief periods should not be significant and can be corrected for with appropriate use of blanks. Once sampling or analysis is completed, tubes should be recapped with the brass end caps as soon as possible and returned to the clean environment for storage. If using a blank tube, do not remove the end caps off the tube. Store in the same conditions as the sampling tubes.

**It is very important that moisture does not enter the tube – if the environment is humid, please contact us for advice.**

### Exposure:



1. Use Tubelock tool to remove both brass end caps.
2. If high moisture is present precautions should be taken to prevent it entering the tube. Please inform our laboratory as to the presence of moisture on the tube by indication on the exposure data sheet. If a trap tube is used before the sorbent tube please contact the laboratory for analysis advice.
3. Fit the pump tubing to the non-grooved end of the diffusion tube. Clip the tube to pocket of the user.



4. Lift up small plastic flap on air pump and press small black button. The pump should now start (confirmed by a green flashing L.E.D.).
5. Run the sampling for the required period – maximum 8 hours. (Gradko recommends a flow rate of 50ml/min. Safe sampling volumes for target compounds should be considered).
6. At the end of sampling, shut pump down. Remove pump tubing from diffusion tube. Use the Tubelock tool to place the end caps on to the tube. **DO NOT OVER TIGHTEN, DO NOT USE SPANNERS.** Test the tightness of the caps by gently pulling them.



7. **Label the tube with the labels provided, stick the smallest area to the tube as possible, do not cover the whole tube with a label. Do not cover tubes with sticky tape. If you want to provide additional protection to the tube, please wrap in tin foil – this is optional.**

**Returning tubes:** Tubes should be returned as soon as possible after exposure. Fill in exposure sheet including **pumping time** and **flow rate**. Please inform our laboratory as to the presence of **moisture** on the tube by indication on the exposure data sheet. Tubes should be returned in a sealed container, such as the plastic bag that they are received in. Tubelock tools should also be returned, if hired.

### Return address:

Gradko International Ltd, St Martins House, 77 Wales Street, Winchester, Hampshire, SO23 0RH.

**Tel:** +44 (0) 1962 860 331 **Email:** diffusion@gradko.com or enquiries@gradkolab.com