Model 66 Flame Microsample Injection Accessory Instructions

Installation

NOTE For all instrument operational procedures required for microsampling methods, refer to your spectrophotometer operation manual. Observe all warnings and cautions specified in the spectrophotometer operation manual.

To install the Model 66 Flame Microsample Injection Accessory:

1. Cut off a suitable length of capillary tubing. For side arm nebulizers and mounting bracket type A you will need about 8 cm of tubing. For barrel nebulizers and mounting bracket type B you will need about 16 cm of tubing.
2. Push one end of the capillary tubing through the hole in the underside of the funnel. The end of the capillary tubing must not protrude through the bottom of the funnel cone otherwise the solutions will not be aspirated into the flame. See Figure 1.

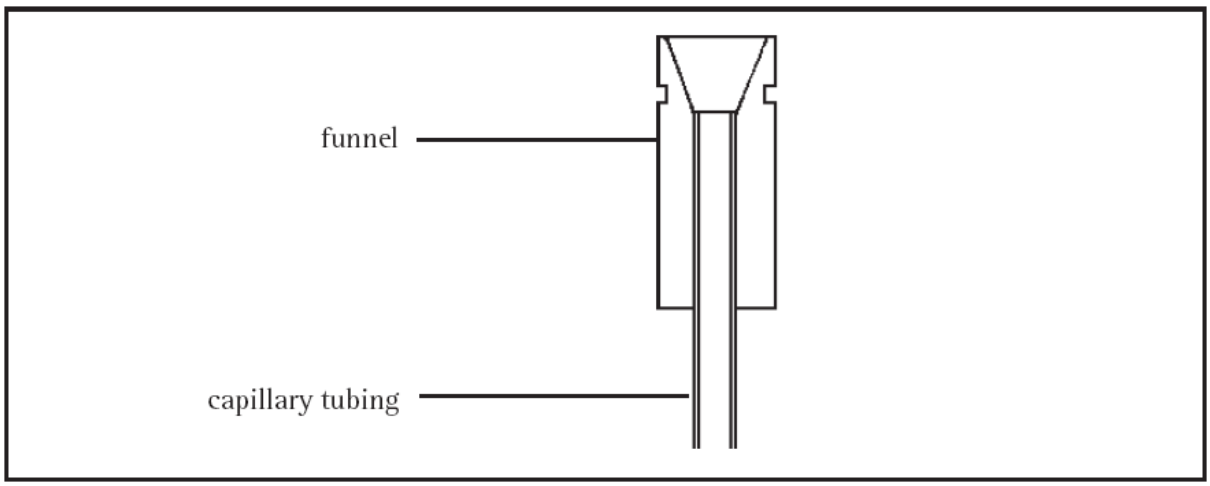

Figure 1. Funnel with capillary tubing correctly inserted

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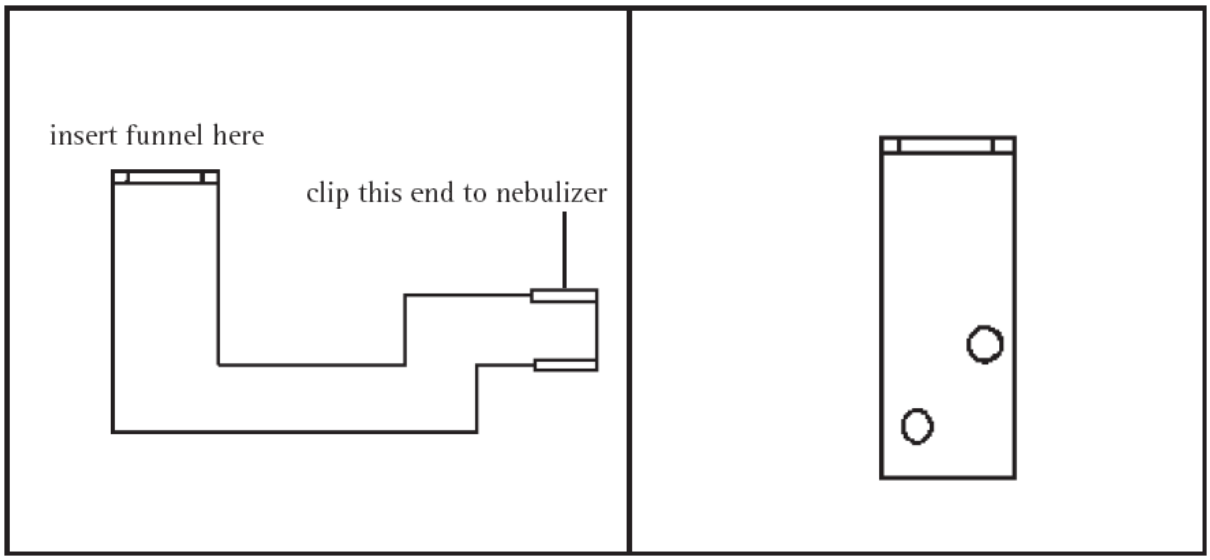

Figure 2. (a) Mounting bracket type A (b) Mounting bracket type B

3 For side arm nebulizers, use mounting bracket type A. Simply clip the mounting bracket to the nebulizer.

For barrel nebulizers, use mounting bracket type B. Attach the mounting bracket to the side of the sample tray using the two screws and nuts provided.

See Figure 3.

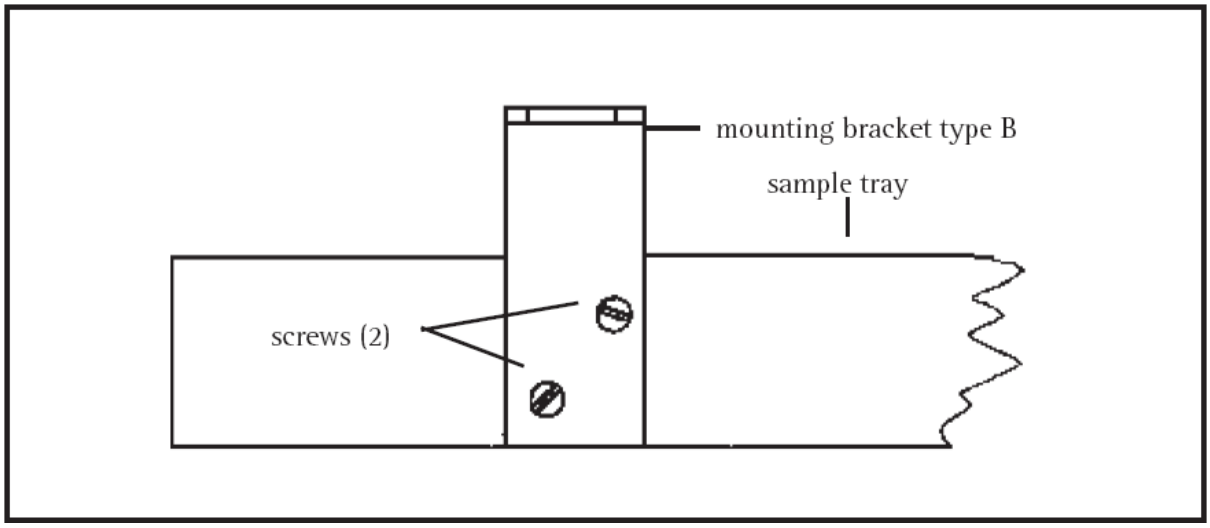

Figure 3. Mounting bracket type B attached to the side of the sample tray

4 Leave the existing capillary tubing connected to the nebulizer. Light the flame and optimize all instrument parameters using a solution of the analyte element at a concentration which will give an absorbance of about 0.4.

Turn the flame OFF.

5 Remove the existing capillary tubing from the nebulizer, push the funnel into the forked clip on the mounting bracket. Connect the capillary tubing from the funnel to the nebulizer.

6 Load the sample tray with either the ASD-53 type vials (2 mL) or Technicon disposable vials. The large hole at the front of the tray can be used to hold a 50 mL beaker of rinsing solution. See Figure 4.

Figure 4. Sample tray

WARNING

Fire Hazard

In this illustration the flame shield and front panel have been removed so that the complete installation may be clearly seen. Always operate your instrument with the front panel in place and the flame shield closed.

7 The microsample injection accessory is now ready for use. You can use either a fixed-volume or a variable-volume microsampling syringe.

Light the flame and take measurements. Remember to use the ‘read’ button for every measurement

Manual Dipping

For the manual dipping method, you do not need to use the injection funnel. Simply replace the existing capillary on your nebulizer with a new piece of capillary tubing about 25 cm long. Use the microsample holder as in Step 6, and simply insert the free end of the capillary into the sample vials to obtain measurements.

Operation Notes

- With the injection method you may use either peak height or peak area readout. With manual dipping, you must use the peak height readout mode.
- An observation period of 5 seconds is generally adequate, but this can be varied according to analytical conditions.
- For additional information about the microsample method, refer to lecture transcript ‘Flame Microsampling’ (supplied with the Model 66 accessory).
- Rinse your dispensing syringe after every sample.
- Use a laboratory wash bottle to rinse the funnel at appropriate intervals.

For further information about Agilent and our products, contact your local Agilent representative.

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