FL 6500/8500 Fiber Optic Probe Installation Instructions

This instruction sheet describes the installation of this accessory which is used with the FL 6500/8500 Fluorescence Spectrometer.

NOTE: *Read these instructions before you install this accessory.*

Contacting PerkinElmer

Supplies, replacement parts, and accessories can be ordered directly from PerkinElmer, using the part numbers.

See our website:

http://perkinelmer.com

PerkinElmer's catalog service offers a full selection of high-quality supplies.

To place an order for supplies and many replacement parts, request a free catalog, or ask for information:

If you are located within the U.S., call toll free 1-800-762-4000, 8 a.m. to 8 p.m. EST. Your order will be shipped promptly, usually within 24 hours.

If you are located outside of the U.S., call your local PerkinElmer sales or service office.

Features

- Sample measurement with simultaneous Excitation and Emission beam reflections
- Various sample measurement for solid, liquid, powder sample, etc.
- Include Probe Holding Stand

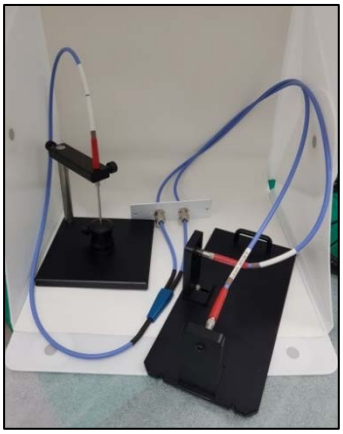


Figure 1 FL 6500/8500 Fiber Optic Probe [P/N:N4201021]

PerkinElmer, 710 Bridgeport Avenue,
Shelton, CT 06484-4794, U.S.A

Produced in the USA.

Dimensions and Specifications

Physical characteristic		Specification
Fiber Optic Probe Accessory	Fiber length (mm)	2000
	Fiber diameter (µm)	600
	Probe diameter (mm)	3.14
	Probe length (mm)	100
	Weight (Kg)	0.16
Base Plate	Dimensions (mm)	130 x 267 x 97 (WDH)
	Weight (Kg)	0.72
Probe Holding Stand	Dimensions (mm)	153 x 153 x 145 (WDH)
	Weight (Kg)	1.04

Measurable Sample

Description
a. Liquid sample (Minimum 7 mm inlet diameter sample container, Maximum 70 mm long immersing probe length)
b. Solid sample (Power, Film, Paper, Plastic, No limit to the thickness and diameter)

Configuration of the Fiber Optic Probe

Figure 2 Fluorescence Probe

Figure 3 Stand Module

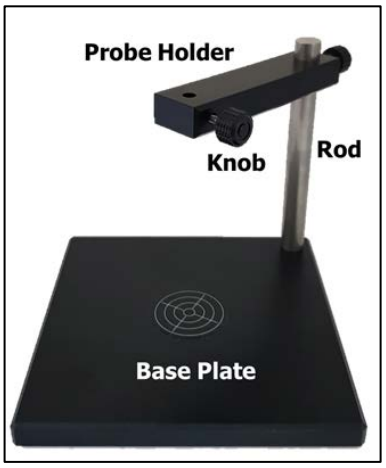


Figure 4 Probe Holding Stand

Installation

1. Prepare the FL 6500/8500 Fluorescence Spectrometer to install this accessory.
2. Connect the power cord and the communication cable.
3. Loosen the accessory fixing bolt to take apart the existing cell holder.

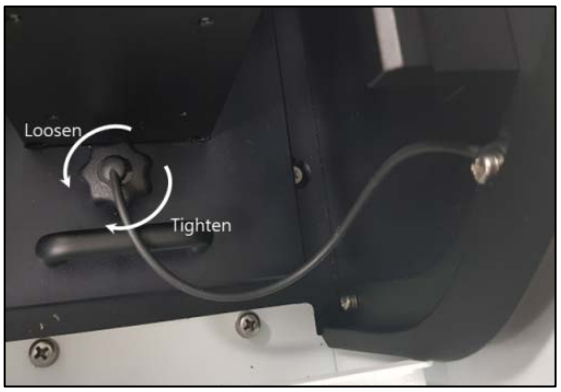


Figure 5 Loosening the Accessory Fixing Bolt

4. Pull out the cell holder by hand.

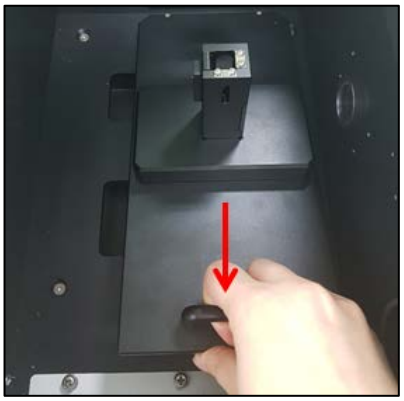


Figure 6 Pulling out the Cell Holder

5. Remove the front cover plate.

Figure 7 Front Cover Plate

6. After checking the pogo pin position of the sample compartment, attach the Fiber Optic Probe Base Plate to the pogo pin.

Figure 8 Install the Base Plate

7. Tighten the accessory fixing bolt.

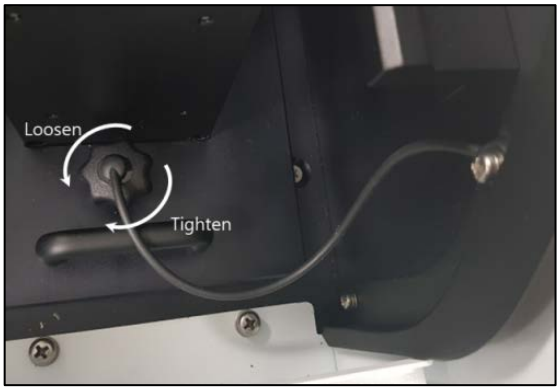


Figure 9 Tightening the Accessory Fixing Bolt

8. Connect the fiber for excitation and emission.

   Excitation Adapter: SPECTROMETER line

   Emission Adapter: LIGHT SOURCE line

Figure 10 Connecting the Fiber

9. Pass the sample line of Optic Fiber outward from inside the sample compartment.

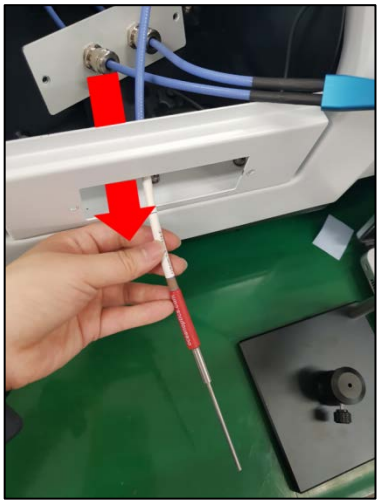


Figure 11 Connecting the Fiber

NOTE: *End side of the Fiber Optic is fixed to the holder in order to avoid scratching because they are polished.*

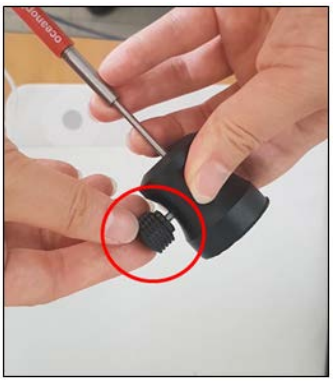
10. Fix the front cover plate attached to the Fiber Optic Probe and tighten the bolts.

Figure 12 Fixing the Front Cover Plate

11. Select one measurement method among the following methods depending sample types.

    a. Solid Samples

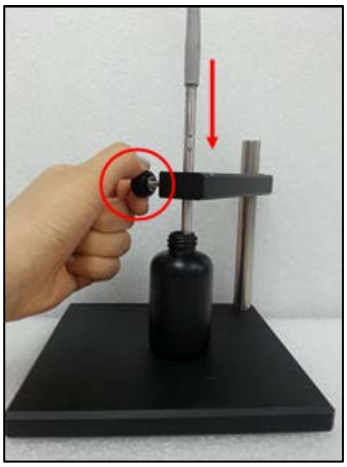
        i) Insert the Probe into the stand module hole and fasten the knob.

        ii) Measure the sample as shown below.

    b. Liquid Samples

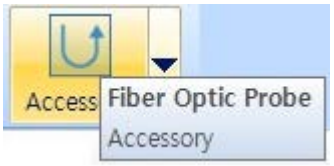
        i) Insert the Probe into the probe hole of the Probe Holding Stand and fasten the knob. And then, measure liquid and powder samples as shown below.



NOTE: *When liquid sample is measured, the bottle container should be light blocked.*

Measurement

1. Double click on the **Spectrum FL** software.
2. Check the recognition of Accessory.



3. Click measurement mode.
4. Set up the measurement parameters.

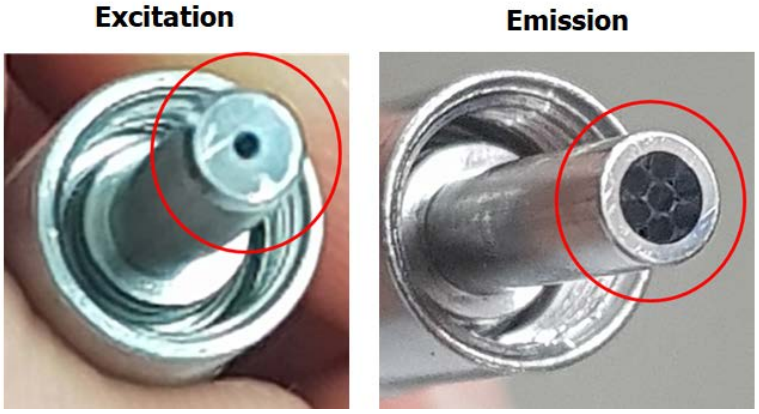
NOTE: *For more detail of method, refer to Spectrum FL Software Users Guide.*

5. Click **Save** to save the method after setting up the parameters.
6. Mount the probe according to the sample type and click **Run** icon.
7. Input the sample name and click **OK**.
8. The results are shown the result window.
9. Save or print the data as required.

Troubleshooting

When fluorescence intensity is too low

1. Check whether the fibers are connected to the right positions, Excitation and Emission.
   - **Distinction of fibers**: The fiber for Excitation has one light path line on the connector tip and the fiber for Emission has a bundle of light path lines.



When Fluorescence is not Measured Through the Fiber Optic Probe

1. Check whether the fibers are connected to the collimator lens tightly, If they are loose, tighten the connections again.

When the Reproducibility of Fluorescence Spectrum is Reduced

1. Holding the probe by hand for measurement is difficult to maintain the stable fixation of the probe tip to the sample. Use the Probe Holding Stand for secured fixation.