FL 6500/8500 Rapid Mixing Accessory 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

- The rate constants define the reaction kinetics
- Easy to mix two compounds
- Simultaneously measure just behind injection

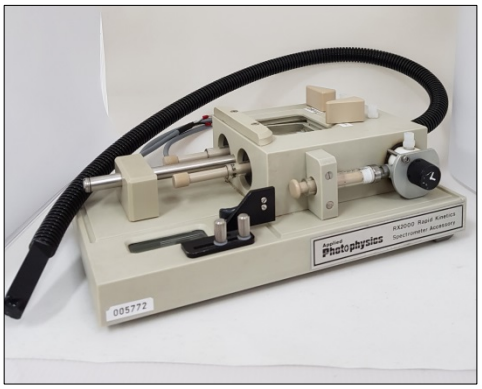


Figure 1 FL 6500/8500 Rapid Mixing Accessory [P/N:N4201014]

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

Produced in the USA.

Dimensions and Specifications

Dimensions

Physical Characteristic		Specification
Rapid Mixing Accessory Only	Dimensions (mm)	250 x 150 x 70 (WDH)
	Weight (Kg)	1.66

Specifications

Physical Characteristic	Specification
Dead Time	8 ms
Optical Pathlength	2 mm and 10 mm for absorbance/fluorescence/circular dichroism
Widow Size	40 mm^2 for fluorescence detection
Cell Material	Silica
Beam Height	15 mm from base of cuvette holder
Minimum Vol./Shot	120 µl/Shot for each reactant
Syringe Volume	2.5 ml
Ratio mixing	1:1 as standard, but different ratio is also available by altering syringes (up to 1:10)
Temperature Range	4 to 60°C
Triggering	TTL, open-collector and switch-contact
Flow Circuit	Biocompatible and chemically inert

Configuration of the Rapid Mixing Accessory

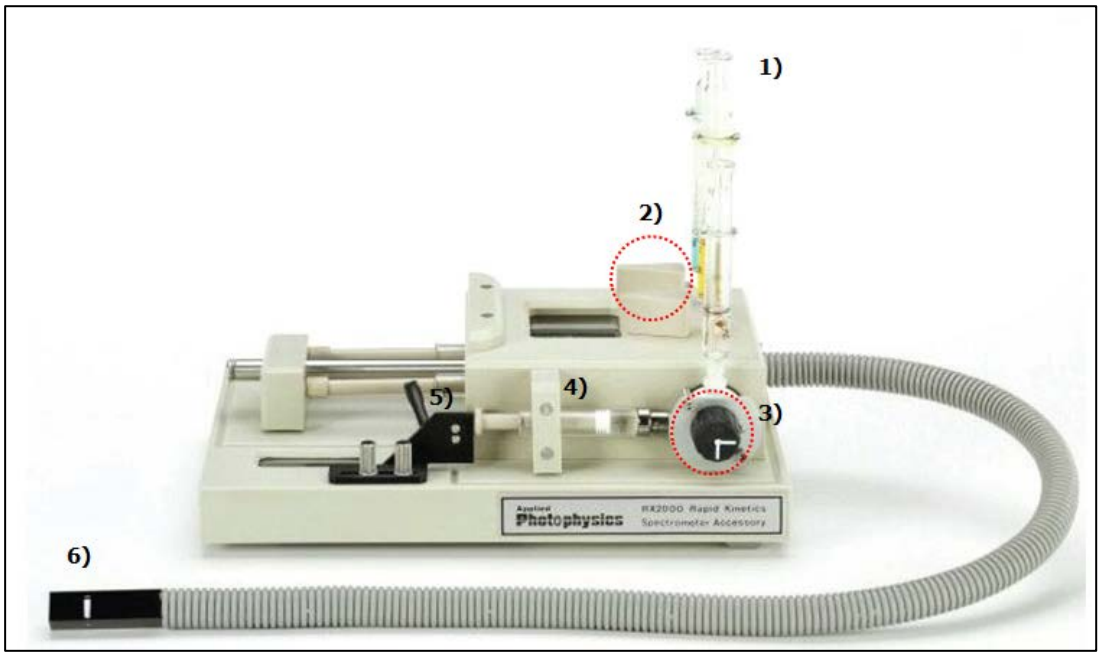


Figure 2 Rapid Mixing Accessory Configuration

1) Syringes
2) Reactant control valve
3) Circle valve
4) Stop syringe
5) Trigger-switch
6) Micro cell

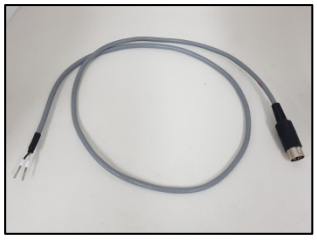


Figure 3 Rapid Mix Trigger Cable

Figure 4 Rapid Mix Cover

Installation

1. Prepare the FL 6500/8500 Fluorescence Spectrometer to install this accessory.
2. Connect the power cord and the communication cable.
3. Prepare a single cell holder. When using the Rapid Mixing accessory, remove the stopper of the cell holder. Unfasten the stopper fixing bolt and pull the stopper forward.

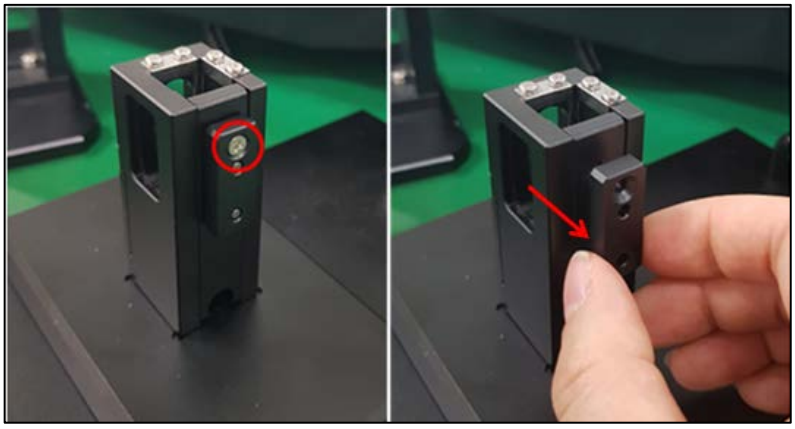


Figure 5 Removing the Stopper

4. After checking the pogo pin position of the sample compartment, attach the Single Cell Holder to the pogo pin.

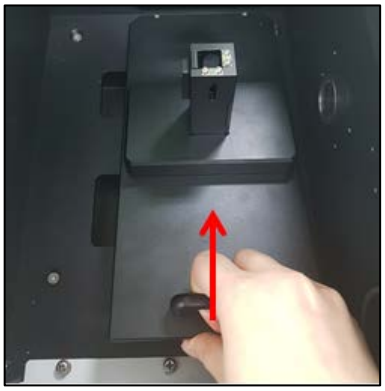


Figure 6 Install the Accessory

5. Tighten the accessory fixing bolt.

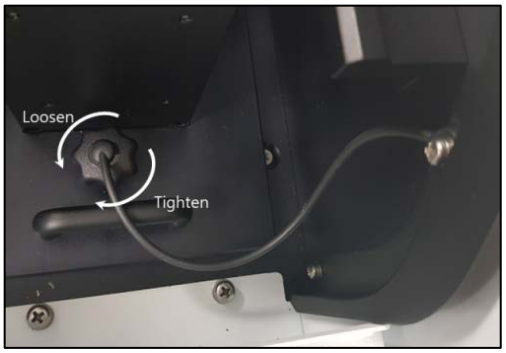


Figure 7 Tightening the Accessory Fixing Bolt

6. Prepare a Rapid Mixing Accessory and Rapid Mix Trigger. Connect the Rapid Mix Trigger to the Rapid Mixing Accessory.

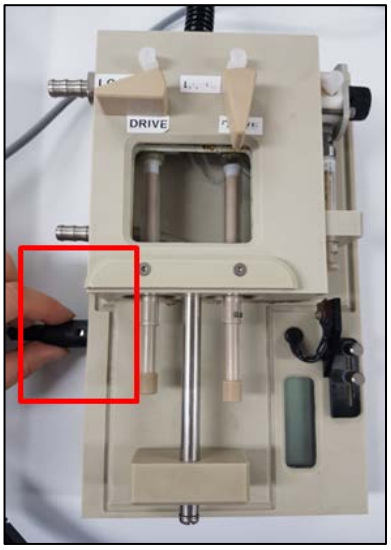


Figure 8 Connect the Rapid Mix Trigger to the Rapid Mixing Accessory

7. Connect the other Rapid Mix Trigger cable to the I/O port of the instrument. Connect **the white wire to port 2 and the black to port 4**.

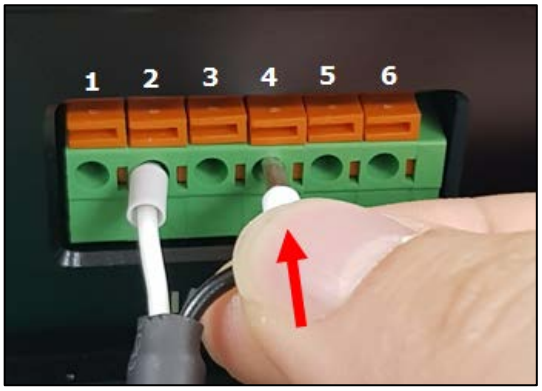
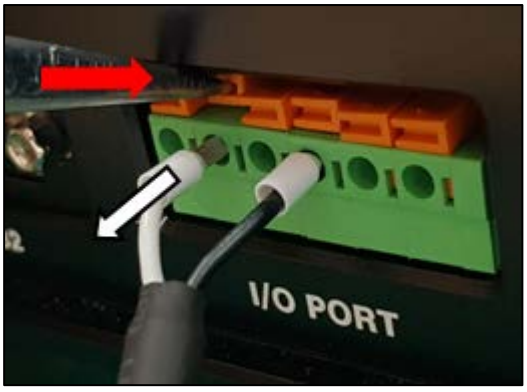


Figure 9 Connect the Rapid Mix Trigger to the instrument

NOTE: *Push the wire firmly into each port.*

NOTE: *When disconnecting the Rapid Mix Trigger Cable, push the wires with the orange part in fully.*



8. Place the micro cell which is connected with Rapid Mixing Accessory into the cell holder.

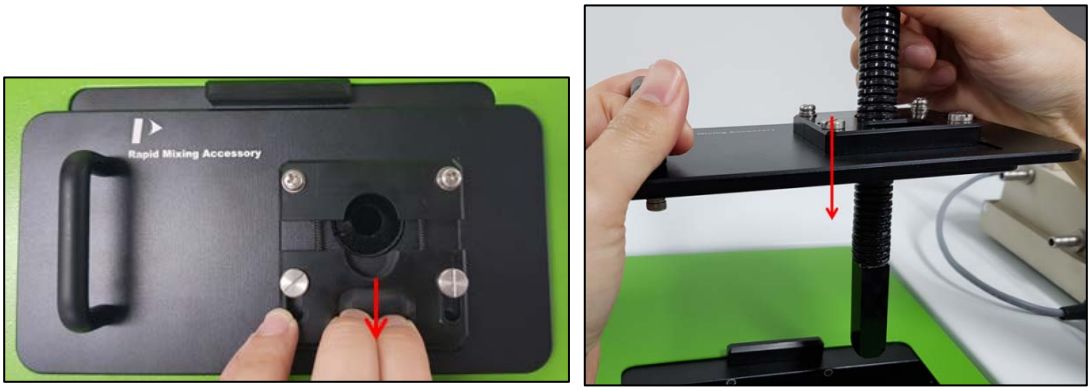


Figure 10 Inserting the Micro Cell

9. Open the lid door and attach the Rapid Mix Cover.

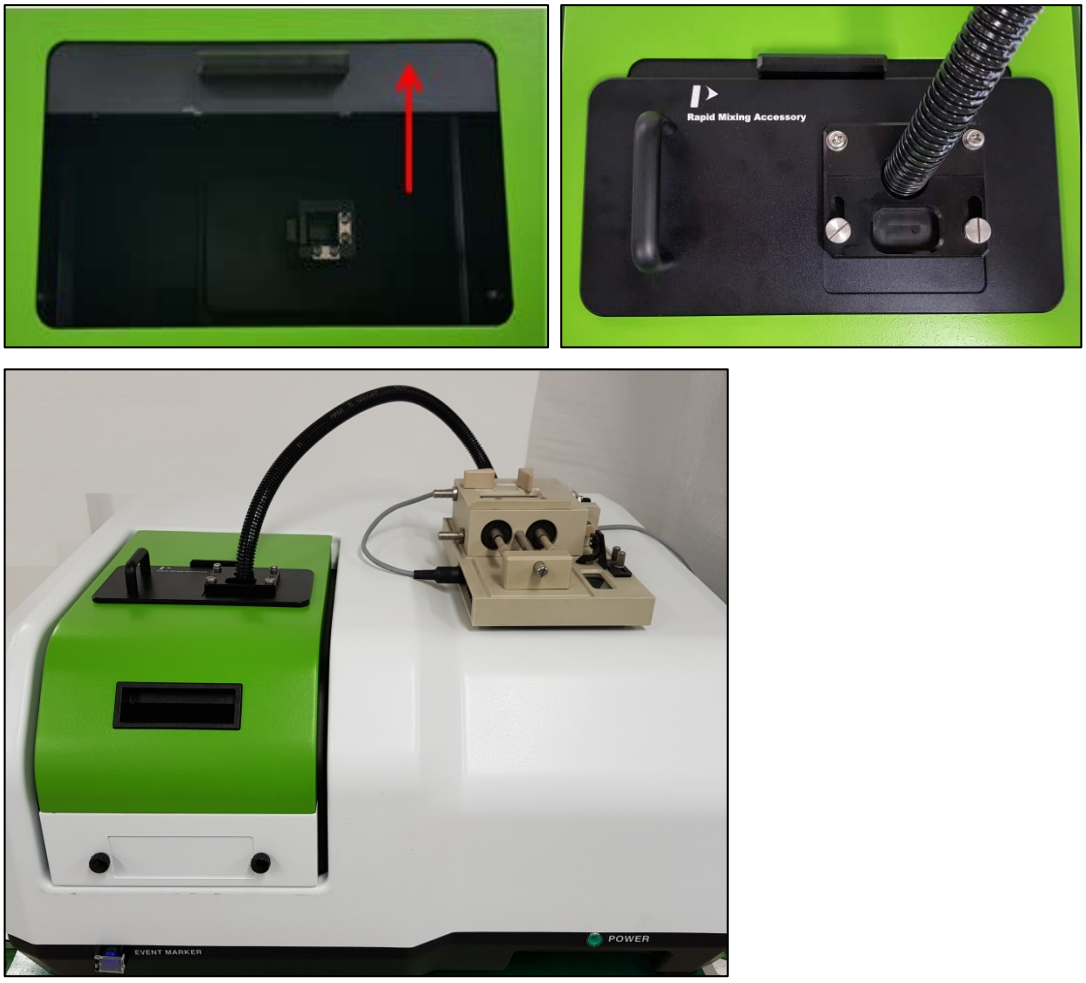
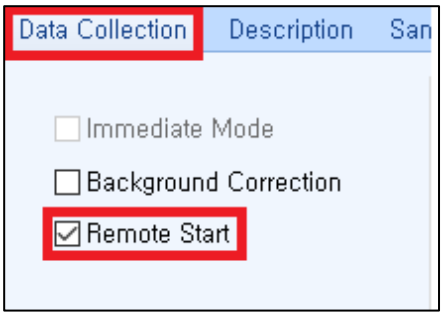


Figure 11 Attaching the Rapid Mix Cover.

Measurement

NOTE : *When using Rapid Mixing accessory, the measurable modes are Time Drive, Life Time, Wavelength Program and Kinetics.*

1. Double click on the **Spectrum FL** software and select a measurement mode.
2. Check **Remote Start** in the Data Collection tab.

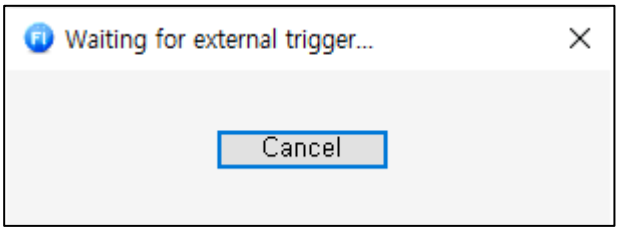


3. Check the recognition of the accessory.

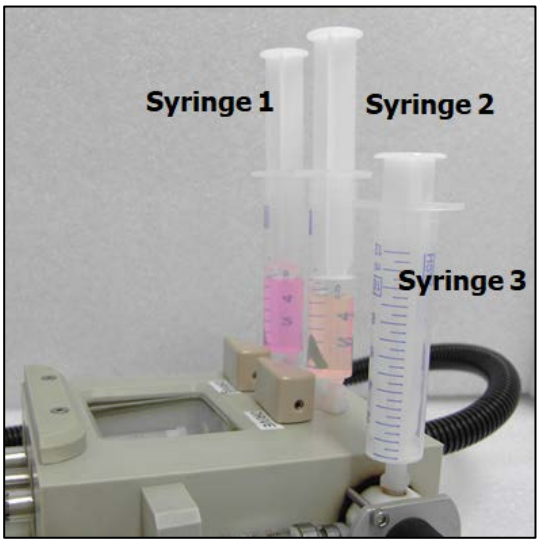
4. Set up the measurement parameters.

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

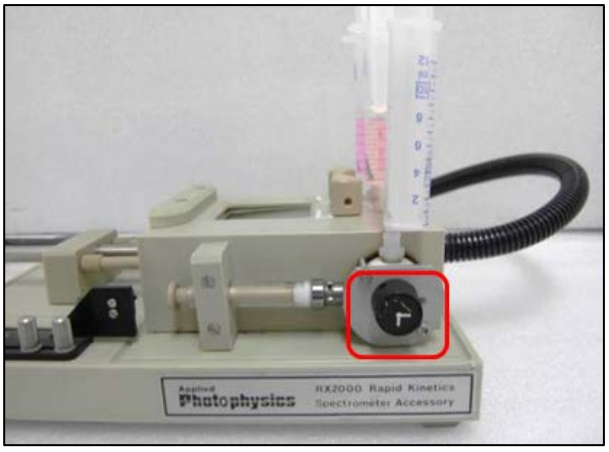
5. Click **Save** to save the method.
6. Click **Run** icon.
7. Write the experiment's name and click **Save.**
8. A pop up window appears and waits for the signal of the trigger switch.



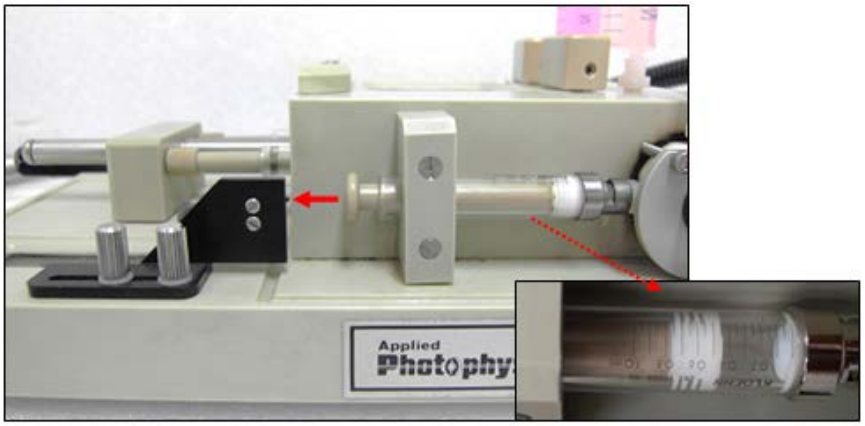
9. Input the sample into Syringe 1 and Syringe 2. Syringe 3 is used for throwing the mixed one away.



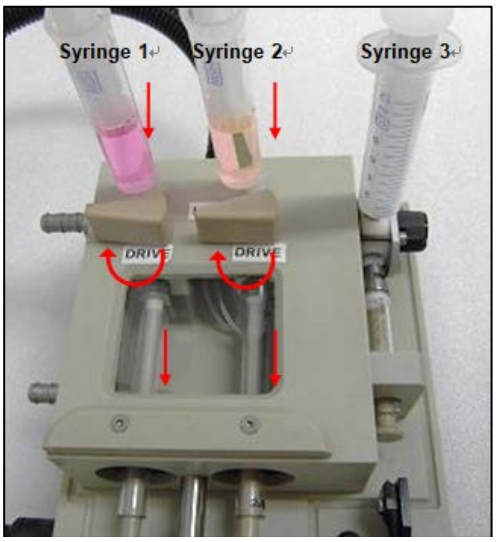
10. Place the position of circle valve as shown below.



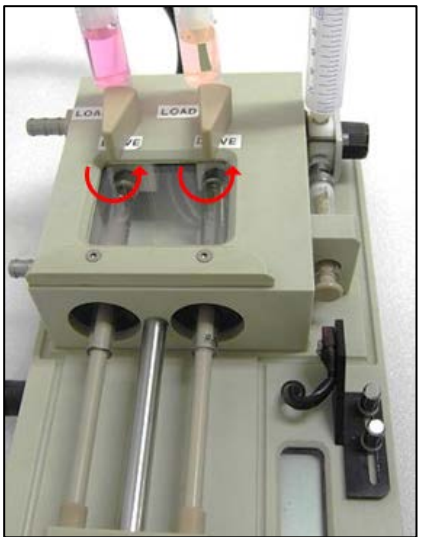
11. By pulling stop syringe, decide the sample volume which will be injected to the cell. Notice that the volume is adjusted by the reading graduation, it is an approximate value, not an exact volume.



12. Place the Reactant control valve to the LOAD direction. After that, push the Syringe 1 and 2 simultaneously for the samples to go to each reactant.

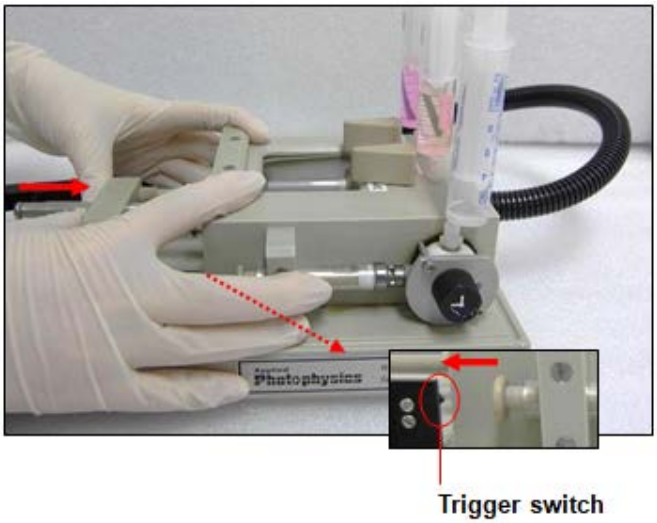


13. After that, place the Reactant control valve to the DRIVE direction.



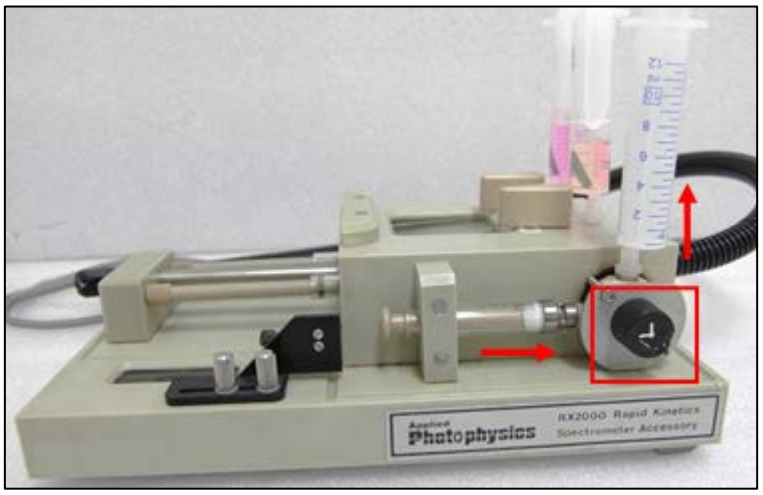
14. Place the position of the circle valve as below.

15. Press the Push block by hand, as shown in the figure below, to inject the sample into the cell. When your hands finished pressing the Push block, the Stop syringe will tap the Trigger switch.



16. The measurement is started as soon as the trigger switch is pressed.
17. Confirm the spectrum and the results. Save or print the data.

18. Place the position of the circle valve as shown below. Then press the piston of the Stop syringe to waste so the sample in Stop syringe goes to Syringe 3.



Troubleshooting

When sample is not injected from Syringe 1 or 2

1. Check whether the Reactant control valve is correctly directed.
2. Check that the sample is already fully injected.
3. Make sure that the circle valve rotation is correct.

When the intensity fluctuate abnormally

1. Cover the sample compartment entirely with the cloth.

When sample is not wasted to Syringe 3

1. Make sure that the circle valve rotation is correct.