

Installation or Removal of DRA from Cary 5000 spectrometer.

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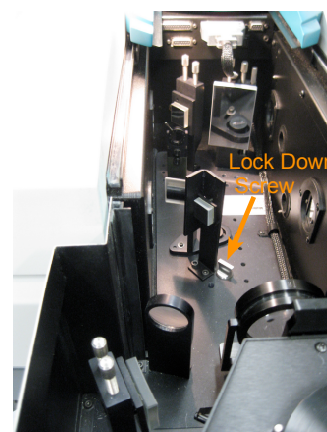
Guide on how to remove and install the DRA

Important warnings!

- Do not unplug or plug in the external DRA attachment when the instrument is on. This will ruin the detectors of the integrating sphere
- Do not put white light into the integrating sphere to do not use the align command in the scan program.
- Wear clean gloves while using the instrument

Removing the DRA from the instrument

1. Turn the **spectrophotometer off**.
2. Open the sample compartment lid and disconnect the accessory cable.
3. Remove the cover of the DRA.
4. Remove the guillotine/light seal.
5. The lockdown lever is accessible just underneath the DRA base plate.
6. Slide the lockdown lever below the DRA to the right.
7. Put on clean glove and extend them up the wrist as far as possible.
8. Be careful not to touch any mirror with your arm.
9. Remove the front lockdown pin (see Figure below). You might need to jiggle the DRA to get the pin out.
10. Tilt the front end of the accessory up. Using the accessory handle inside the DRA and the front left corner of the DRA, lift the DRA up and out of the sample compartment and store it in its wooden box (normally under the Cary table).
11. Put the lockdown pin back in the hole in the DRA.
12. Replace the sample compartment front panel.



Installing the DRA in the instrument

1. Turn the **spectrophotometer off**.
2. Remove the sample compartment front panel.
3. Open the sample compartment and remove all cell holders and base plates.
4. Store base plates and cell holders in a drawer.
5. Put on clean gloves.
6. Remove the lockdown pin from the DRA.
7. Use the "T" handle and the corner (marked "Lift Here") to lift the DRA (Note it is heavy and weights about 60 lbs)
8. Using the accessory handle, lift the DRA up and slide the DRA into the sample compartment at a 20° angle. The end with the integrating sphere should be higher.

9. Take care to align the metal edges of the DRA with the guide tabs on the edge of the instrument sample compartment. This will correctly align and engage the rear lockdown pins into the sample compartment floor. See photos to see how to line up the tabs, note in particular the red circle indicating where the tabs should sit.



10. Align the tabs on the DRA with those on the instrument sample compartment.
11. Place the front lockdown pin into the hole in the DRA floor next to the "T" handle. Make sure your arm does not touch a mirror.
11. Gently maneuver the DRA until the pin falls into place.
12. Flick the lockdown lever below the DRA on the front instrument panel to the left.
12. Make sure the Cary is off!
13. Plug the DRA into the accessory port.
14. Align the DRA.