Packing the RGD reaction tube

1) The RGD detector is located at the right rear of the SRI 8610C GC’s column oven.

2) A 1/16” od stainless tube and 1/8 to 1/16 soft graphite reducing ferrule connects the column effluent to the RGD’s inlet bulkhead fitting inside the column oven. The soft graphite ferrule seals against the reaction tube to insure that column effluent actually passes through the reaction tube and not around it.

3) Withdraw the reaction tube from the detector inlet. Be careful, the tube may be HOT.
Packing the RGD reaction tube

4 The reaction tube is open on one side and is closed with a stainless steel frit on the other. The tube is shipped empty. It is the customer’s responsibility to pack the tube with mercuric oxide (HgO).

5 Obtain HgO power from Aldrich or other supplier.

6 Obtain quartz wool (fused silica wool) from restek or other supplier.
Packing the RGD reaction tube

7 Transfer a small amount of HgO powder into a dish.

8 Roll a bit of the quartz wool into a cigar shaped plug and coat it with the HgO powder. Insert the plug into the blank reaction tube. Optionally insert another plug of un-coated quartz wool after.

9 Insert the packed reaction tube into the detector inlet. Set the reaction tube temperature to 260C. RGD cell temperature to 180C. Note the transmittance reading on the detector before heating the tube. When the tube is first heated some mercury vapor may be released lowering the transmittance. Condition the system until the background drops to a usable level.