



## **Thermo 42i/42iQ NO<sub>x</sub> Maintenance Schedule**

### **Routinely (weekly/monthly)**

1. Check the instrument for any alarms
2. Check recent ambient data and calibration data for anomalies
3. Check key diagnostics such as flow, pressure and temperatures. Recommend graphing multi-month periods to check for drift.

### **Every 1 month**

1. Replace the sample filter.
2. Check pump for excessive noise/vibration/heat.

### **Every 3 months**

1. Clean fan filter
2. Perform a multi-point calibration and adjust slope/offset if necessary
3. Perform a gas phase titration to check the NO<sub>2</sub> convertor efficiency.
4. Perform flow calibration/leak check
5. Check unscrubbed pump exhaust for high ozone concentration

### **Every Year**

1. Replace capillary o-rings
2. Replace charcoal exhaust scrubber
3. Replace charcoal/Purafil zero scrubber
4. Replace/rebuild 24 Volt sample pump (42iQ)

### **Every 2 Years**

1. Replace permeation dryer

### **Other - as needed**

1. Replace permeation dryer when discoloured and dryer filter when dirty
2. Clean reaction chamber if NO coefficient is high
3. Clean thermoelectric cooler fins when servicing reaction chamber.
4. Replace/rebuild 115 Volt pump (42i or 42iQTL) when flow drops/pressure increases.
5. Replace sample pump if excessive noise/vibration/heat.