2475 message, triggered during peak detection: Sample signal is saturated. Gain set too high - WKB17612

**SYMPTOMS**

- At 0.9 minutes, the baseline straight drops to negative 10,000 (-9999) emission units and spikes back up to positive 1000 emission units
  - After peak detection finishes, the signal drops back down to zero; stable baseline
  - Baseline at injection is stable
- 2475 passed both normalization and calibration

**ENVIRONMENT**

- 2475 Multi-Wavelength Fluorescence Detector

**CAUSE**

- When the gain setting for the peak of interest is set to high, the photomultiplier tube (PMT) shuts down momentarily to protect itself.
• This results in a -9999 negative peak as the voltage shuts off.

This is normal behavior, documented in the 2475 Operators and Maintenance Guide, section 3.4.10, "Setting Gain and EUFS".

**FIX or WORKAROUND**

1. Incrementally reduce the excitation gain setting by a factor of 2 to 10 until the error clears.
   ◦ It's best to reduce the gain setting via programming within the instrument method.
2. The auto-optimize gain function tests the correct settings to use in the instrument method.
   ◦ See section 3.4.10 in the screen capture below
Note: The gain settings for one 2475 may not transfer to another because the light is generated in the flow cell and is dependent on lamp age, quality of the mirrors/windows, and variations in the flow cell.

3. If the gain setting is already at its lowest, you can set the PMT to a low sensitivity mode via the diagnostics menu.

ADDITIONAL INFORMATION

id17612, 2475, 2475B, A-10FL, A-30FL, UPFLRARC, UPFLRDET, UPPFLR