

## Phymetrix moisture analyzer FAQ's and Answers

1. How often should a Phymetrix moisture analyzer be calibrated?  
Typically every 12 months; depending on usage Calibration could extend to 18 to 24 months
2. What gasses, if any, can / will interfere with the Phymetrix moisture sensor measurement?  
Corrosives.
3. How does the sensor deal with the trace amount of typical natural gas pipeline contaminants such as H<sub>2</sub>S, CO<sub>2</sub> (25-50ppm), mercaptans (5-10ppm) and O<sub>2</sub> (10-20ppm)? As well as with Tri-ethylene Glycol (TEG), Ethanol, Methanol and dropped out water in liquid form?  
See attached document on Contaminants  
TEG will not interfere with the accuracy of the readings, due to the unique sensor design, however it may slow down the readings. Phymetrix provides free-of-charge cleaning from Glycols with each calibration.  
Liquid water can be removed by drying the sensor, purging it with Dry N<sub>2</sub> or Bone Dry CO<sub>2</sub>.
4. Does exposure to (very) high moisture content “blind” the sensor? If so, how can the sensor recover?  
Yes, it does, however it can recover by purging the sensor with Dry N<sub>2</sub> or Bone Dry CO<sub>2</sub>.
5. Which gases will damage the Phymetrix Sensor?  
Corrosives if present over 30 PPMv in the presence of moisture over 30 PPMv
6. What is the average life of a Phymetrix Sensor?  
5 to 8 years
7. Is flow control required on the sensor?  
Flow is needed for quick and accurate measurements, recommended => 1 LPM
8. Is pressure control required on the sensor?  
Must stay within the specs in the datasheet
9. Is temperature control required on the sensor?  
Must stay within the specs in the datasheet
10. What is the accuracy of a PhyMetrix Analyzer in dewpoint and in PPMv?  
Accuracy +/- 2 degC dewpoint T  
The relationship between dewpoint T and PPMv is not linear, thus each segment of the curve has to be evaluated separately.

11. How has the Phymetrix moisture sensor technology improved over the other aluminum oxide sensors, specifically with regard to drift?

The Nanopre sensor structure ensures reproducible behavior over a long period of time. We have evaluated sensors which had not been Calibrated for 36+ months and the drift was negligible.

12. Is any 'zero' gas required for zero checking i.e. is there a requirement for a mol sieve driers for calibration?

No

### **Service**

13. Frequency of replacement of desiccant for PPMa or PPBa?

As needed, if the analyzer was exposed to liquids or the sensor was left between chambers, i.e. if the sensor was riding between the desiccant chamber and the sample chamber, repeatedly, the desiccant will be contaminated and has to be replaced

14. Cost for replacing desiccant?

\$ 60

15. Does the instrument need to go back to Factory for Desiccant replacement?

Yes

### **Software Features**

16. Does the Phymetrix software export to a Microsoft Excel format?

Yes