

WILSON ANALYTICAL



QuatBox

by WILSON ANALYTICAL

**An Integrated Solution for the Measurement
of Chemical Species in Field Environments.**

Presented by

Neil Warrender, on behalf of Ken Schmidt, Wilson Analytical

WILSON ANALYTICAL

**You collect the
samples in the field...**

**But where do
you analyze them?**

Problems Inherent with Central Laboratory Analysis

- Sampling & chain of custody errors
- Sample degradation
- High cost
- Poor statistics
- Delays in problem diagnosis



WILSON ANALYTICAL

The Solution: Rugged, Portable Analytical Equipment



WILSON ANALYTICAL

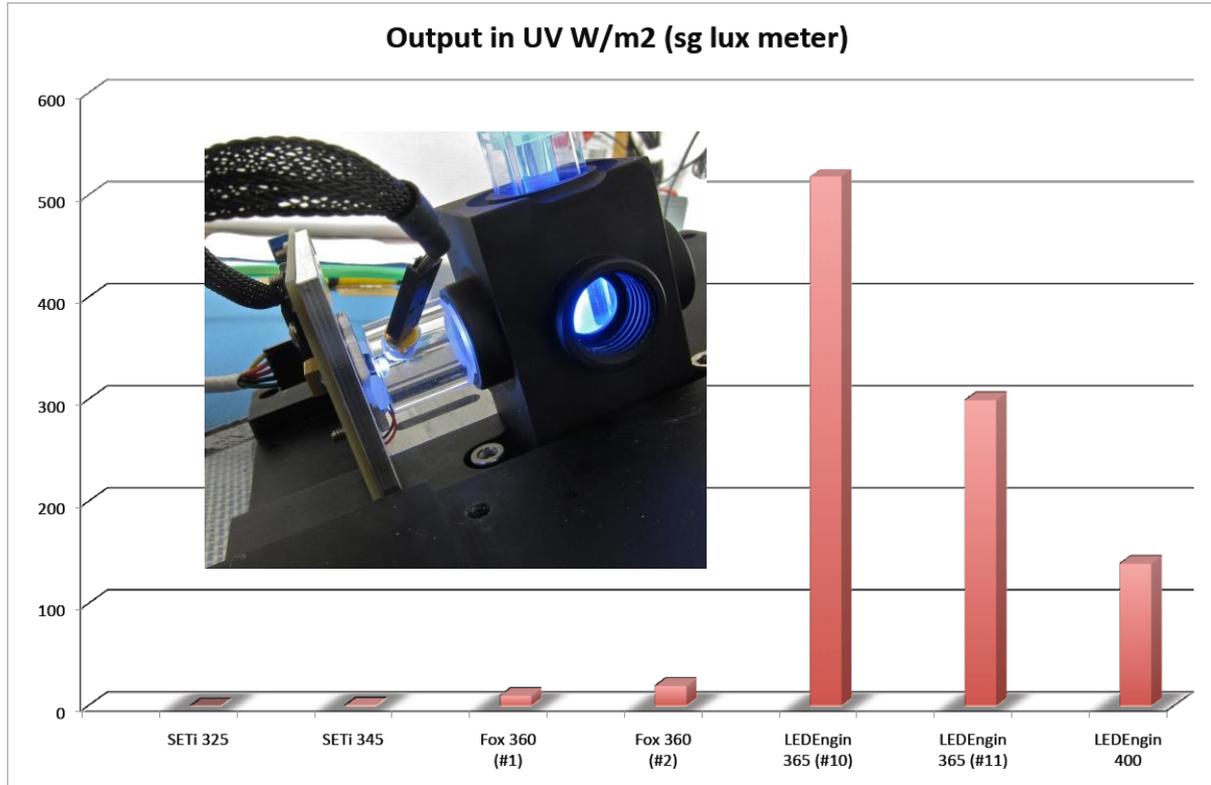
Wilson Analytical's QuatBox technology brings the accuracy of a laboratory fluorimeter directly to the field in one easy-to-use, ruggedized package



WILSON ANALYTICAL

The QuatBox Uses Rugged uv LED Technology

Output in UV W/m2 (sg lux meter)



**No flash lamps
or other delicate
light sources**

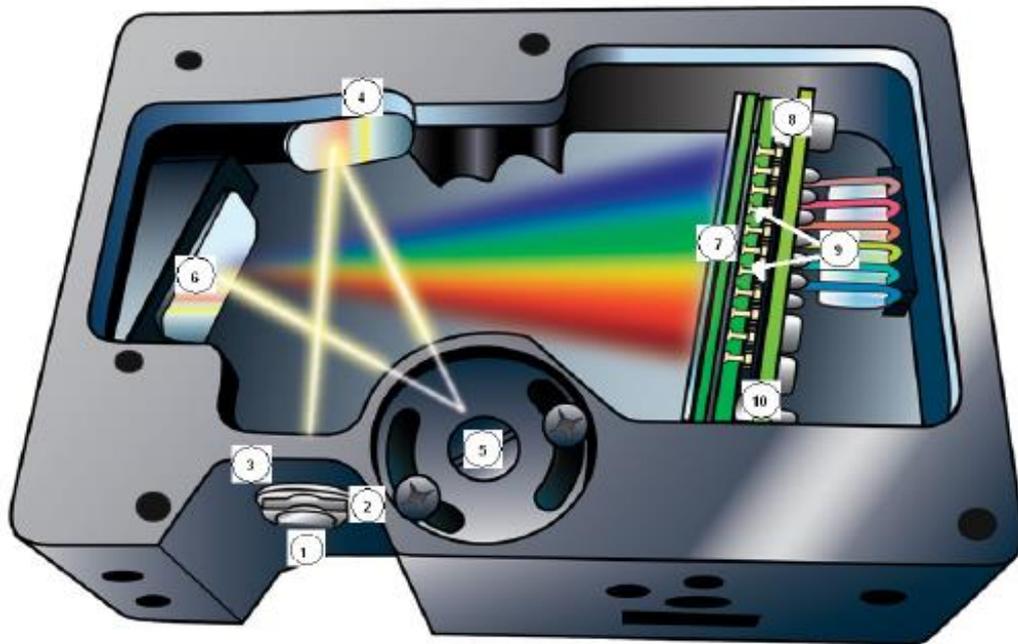
Monochromatic

**Inherently
Robust**

Versatile

WILSON ANALYTICAL

**In combination with a USB-driven
micro-spectrometer**



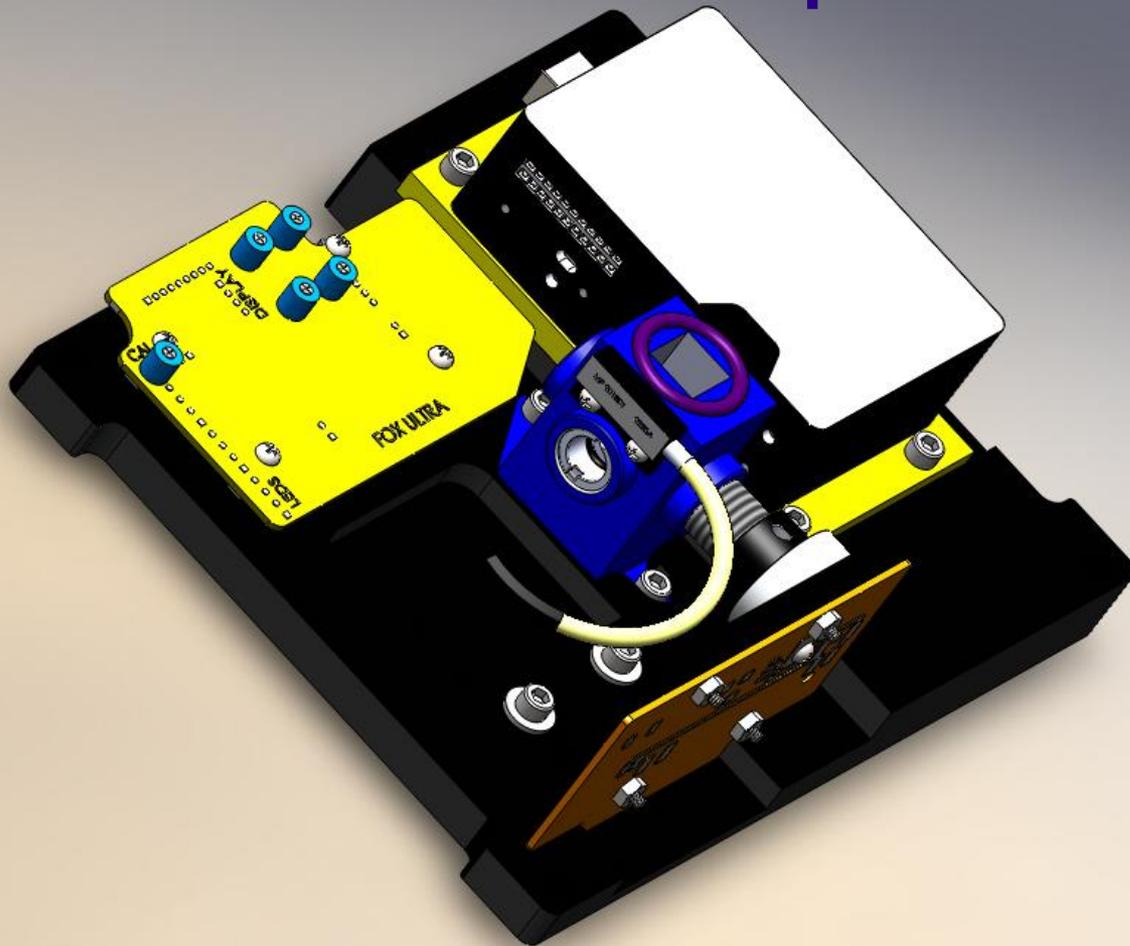
Small

No moving parts

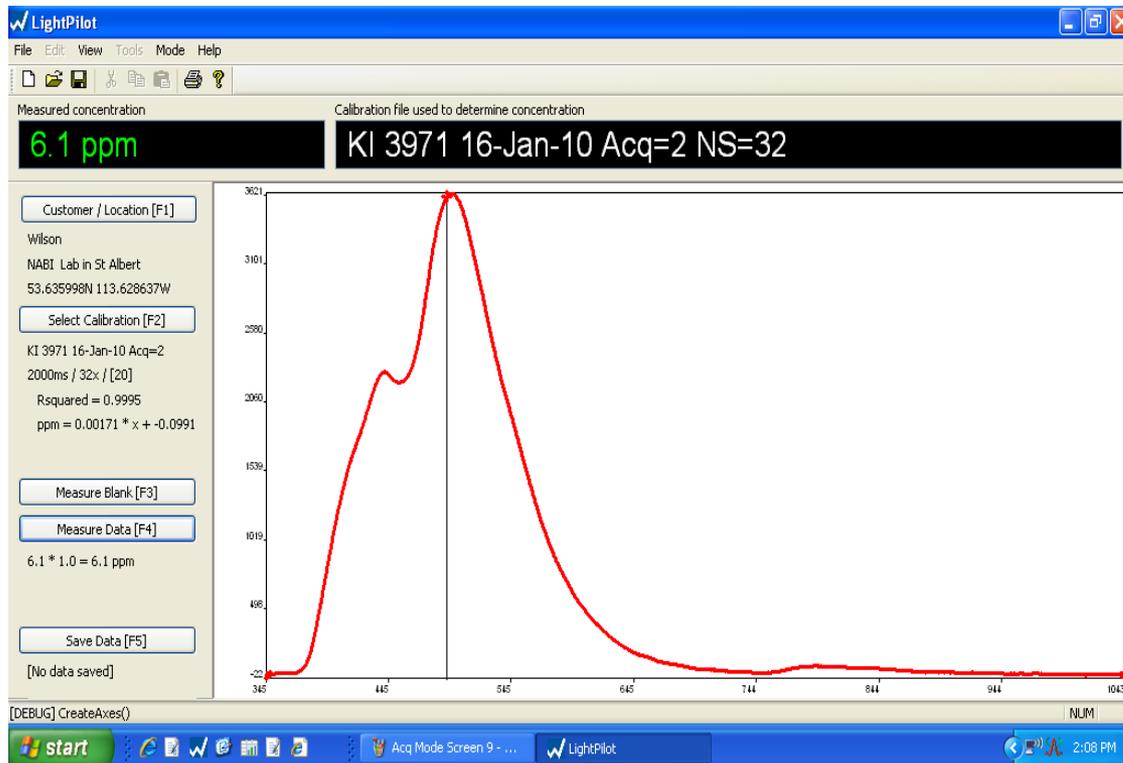
**Full spectrum
detection**

WILSON ANALYTICAL

**Integration of Advanced Optics & Electronics
with a robust mechanical platform is key**



Direct Fluorescence Measurements in the Field

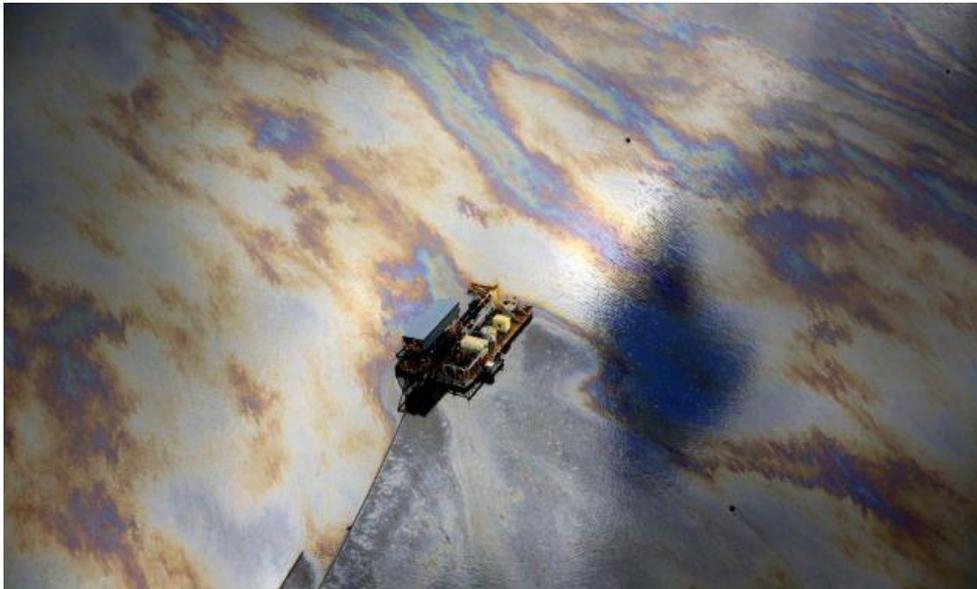


- 1 ppm detection limit for corrosion inhibitors

- less than 1 ppb detection limit for FL dyes



Direct Fluorescence Measurements in the Field



Tailings Ponds

- ppm level detection limits for petroleum and its conjugated aromatic compounds (PAH's, NA's, TPH) in water

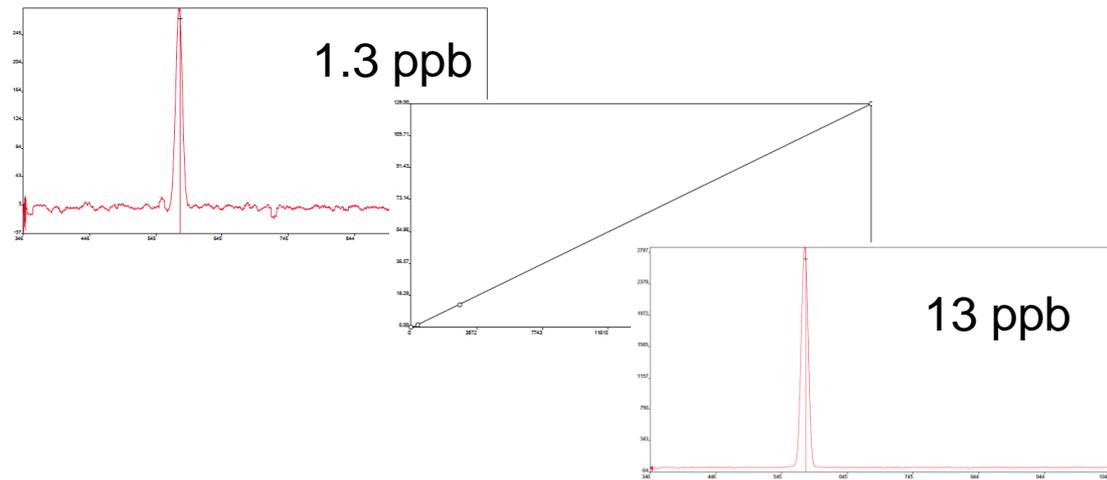


Oil Spills

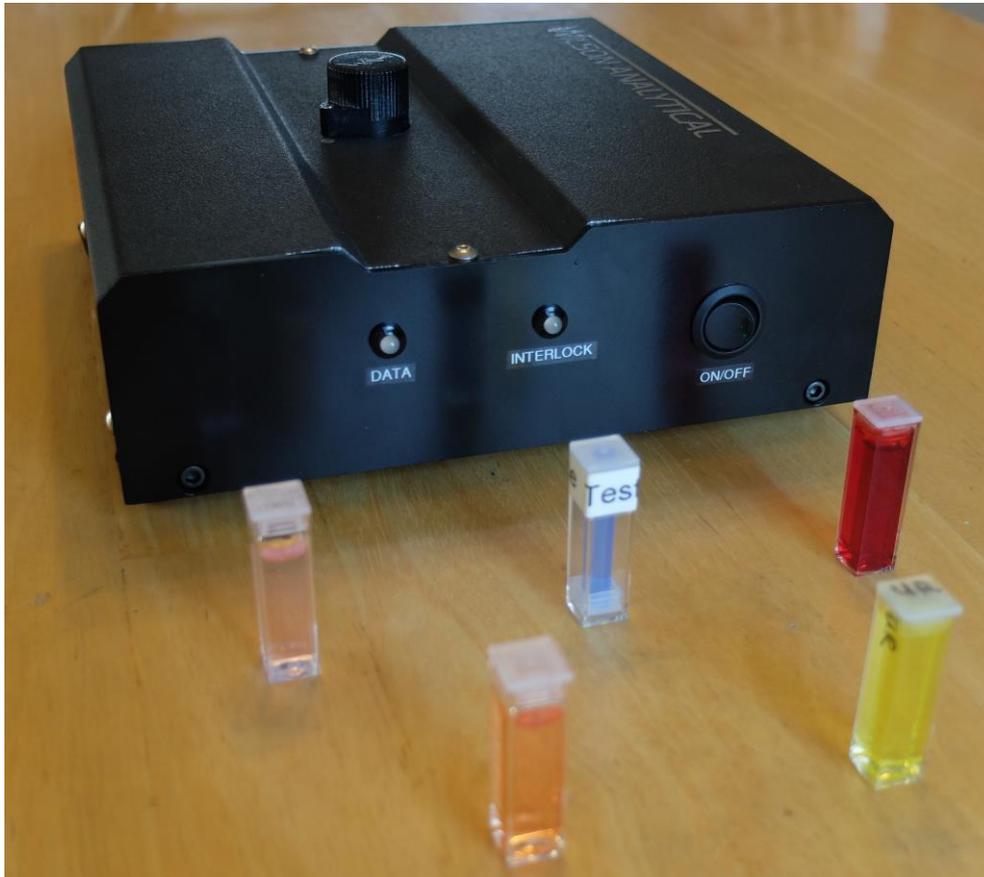
WILSON ANALYTICAL

Future Developments

- Tagged materials for tracing fracturing fluids
- Nanochemistry-based reagents for scale inhibitors

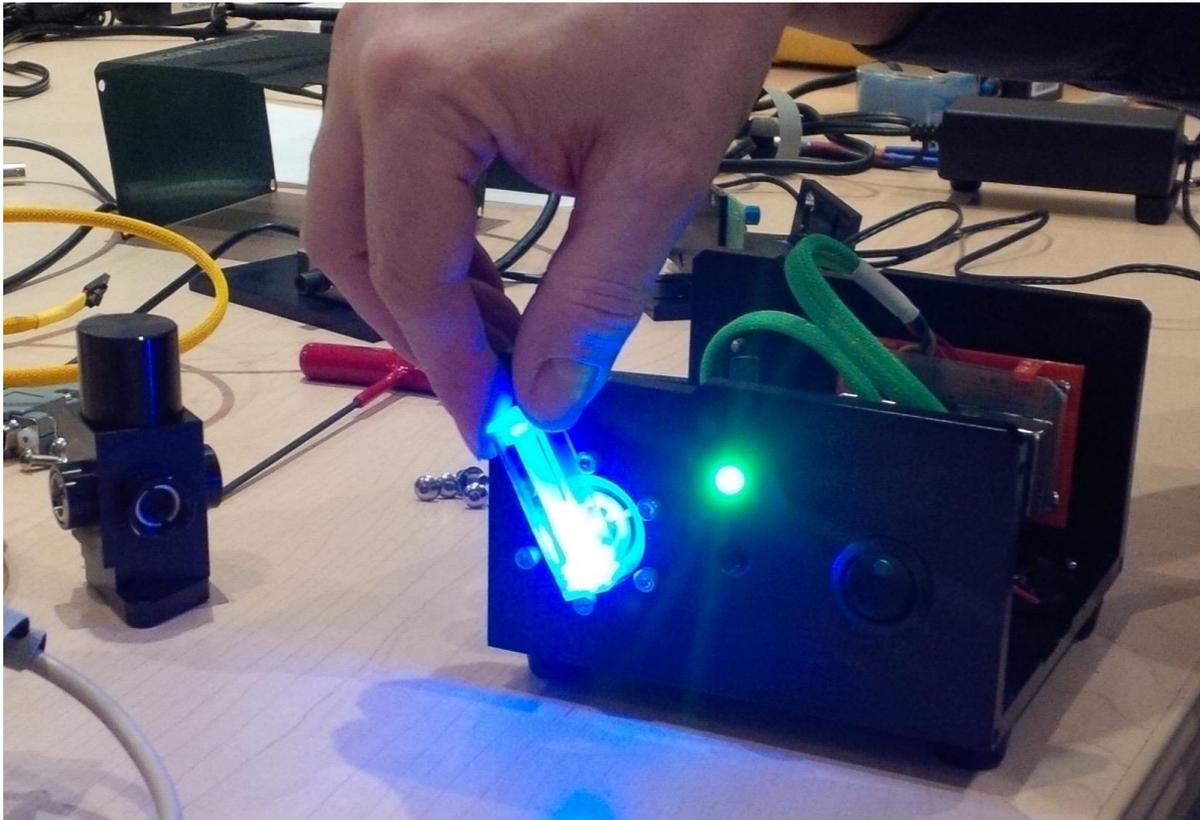


The New Wilson LabBox



- Lab model, no field-use features
- Same high performance as the QuatBox
- Same internal ruggedness
- Fluorescence or Absorbance measurements
- Attractively priced
- Well suited to “rough” labs
- Perfect for process control measurements

The New Wilson LightBox



- Highly stabilized, high-output stand-alone LED Light Source
- Fiber-coupled or free-space light output
- Works with fiber optic probes
- For custom lab spectroscopic setups
- For in-line process analysis systems

Looking for New Field or Process Applications

- The QuatBox is an established technology platform for accurate FL determinations in uncontrolled environments.
- What other applications exist for this technology?
- What analytes are **you** looking for?

