

A New Low-Cost Measurement Platform for Urea Quality Monitoring

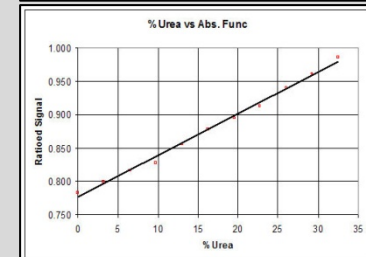
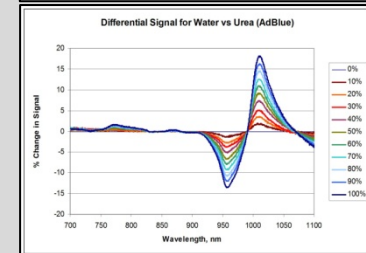
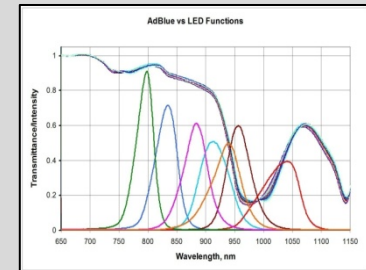
Poster P-8

Bill Linden, President/COO and John Coates, Chief Technical Officer
Sentelligence, Inc., Noblesville, IN

- **Versatile sensor platform for in-line spectral measurement of fluids**
 - Spectral methods – correlate to concentration and material ID
 - Benefit – reliable and low cost
- **Platform adapted as a real-time, in-line Urea Quality for SCR**

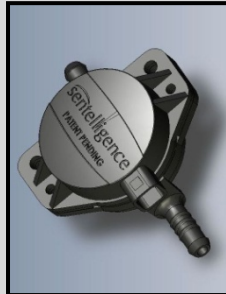
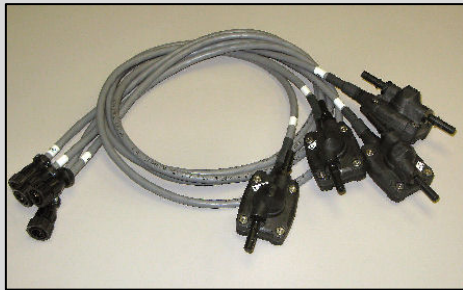
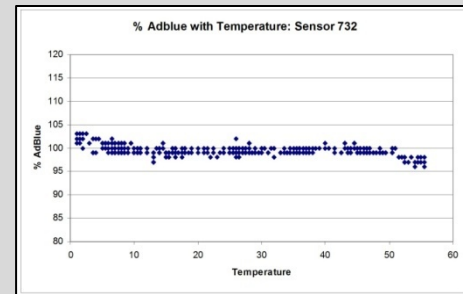
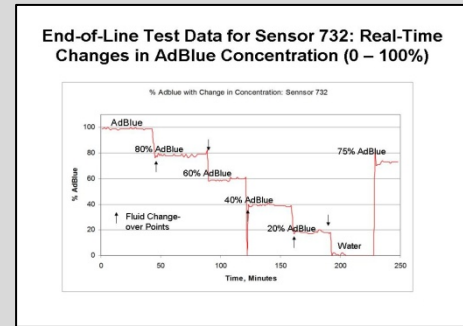


- 18 month development
- Input from major OE
- Validated in OE test lab



- **Specifications defined for Urea Quality based on input from end-users and vehicle/Engine OEs**

1. Provides positive ID for AdBlue (32.5% urea) and water
2. Provides a calibrated output as %Urea at normal temperatures
3. Differentiates AdBlue from contaminants and wrong fluids...Coolant and Fuel.
4. Detect the incidence of an empty fluid line
5. Provide a positive ID for AdBlue at temperatures up to 65°C
6. Designed for operating pressures including hard frost



- **Platform can be expanded to include other relevant emissions control and compliance measurements**