

AUTOMATED QUALITY CONTROL IN ETHANOL DELIVERY

THE KAM® CHA™ COLORIMETER HAZE ANALYZER



PROBLEM: Water levels in delivered ethanol are capped at 1% and .3% by ASTM and European Standards (EN) respectively. However, fuels can easily be contaminated by water and/or particulates during transport. During truck unloading, manual sampling and testing for water contamination is a time consuming and expensive process. However, because water is miscible in ethanol even at high percentages, automating water measurement with traditional water cut meters will not work.

SOLUTION: The KAM® CHA™ Colorimeter/Haze Analyzer can be adapted to detect water at the required accuracies in ethanol delivery. The addition of the adapted KAM® CHA™ to a receipt pumping system provides real-time, continuous data on water and particulate content, enabling the operator to reject non-conforming deliveries prior to unloading and without the hassles and expense of manual sampling.

HOW IT WORKS

For water-in-ethanol detection, the CHA will utilize a special LED that emits a light wavelength strongly absorbed by the water and weakly absorbed by the Ethanol, accurately detecting water concentrations within the ethanol flow.



KAM® CHA™
COLORIMETER HAZE ANALYZER
FT Flow Through model
with weld-neck flanges

MORE ACCURACY, EFFICIENCY, AND SAFETY

- Eliminates the need for sampling
- Allows non-conforming deliveries to be rejected or diverted to a separate holding tank
- Reduces system corrosion due to water and/or micro-organisms
- Reduces environmental liabilities and man-hours associated with manual sampling

KEY KAM® CHA™ ADVANTAGES

- Accurate water detection in water-miscible fluids
- Long-term performance with minimal power and maintenance requirements
- Automatically adjusts for electronic noise, LED fluctuations, and varying absorption rates
- All requisite electronics incorporated into unit
- Easily installs between two flanges

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1.
The KAM CHA is placed on the incoming line, easily inserted between two flanges.

2.
Real-time data from the CHA can be sent to a control room or a PLC.

3.
Detection of non-conforming deliveries can signal an alarm, the closing of an MOV, or the diversion of non-conforming fuels to a separate holding tank.

