KEMTRAK

ETHYLENE GLYCOL DETECTOR

Trace leak detection

PROCESS MONITORING

PRODUCT CONTAMINATION

LEAK DETECTION

LEAK DETECTION

BENEFITS

01 / Continuous monitoring for ethylene glycol contamination

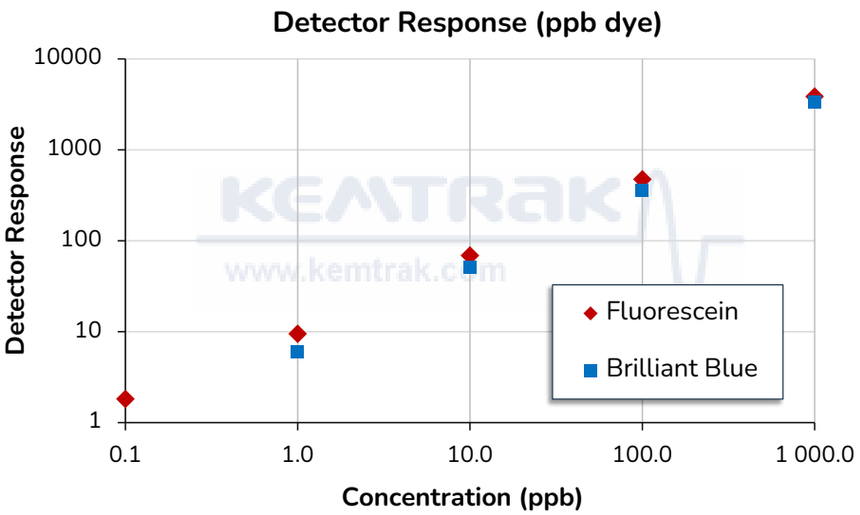
02 / Trace detection down to ppt concentrations

03 / Ultra low maintenance requirement

04 / Reduced downtime, product loss and cost

05 / Product, brand, and process protection

The fluorescent dye fluorescein is added to ethylene glycol used in car radiators to visually distinguish leaks from other vehicle fluids. This dye fluoresces bright green when illuminated with blue light and can withstand harsh conditions present in car engines without degrading. The same type of fluorescing dye can be added to glycol in industrial processes with automatic fluorescence detection to signal the presence of minute leaks in real time.



Detector response using a Kemtrak Leak detector used to measure ppb concentrations of Brilliant Blue and Fluorescein dyes.

Heat exchangers are commonly used in industrial processes to provide temperature control by transferring heat between process streams. Leaks occur, leading to the contamination of one fluid with the other. Ethylene glycol is widely used as a coolant and heat transfer agent in food and bio-pharmaceutical processes.

Ethylene glycol is toxic, and a leak can have disastrous consequences. Product contamination is often detected in the laboratory long after the product has left the facility, worst case already at the customer. Protect your brand, limit product loss and reduce costs by detecting leaks at the source when they occur.

Monitoring ethylene glycol is challenging because it is a colorless liquid that cannot be measured directly. A commonly used technique is to mark the coolant with a dye and monitor traces of this marker in the steam condensate or product in real time. Suitable FDA-approved dyes for the coloring of food and drugs include Brilliant Blue and Fluorescein.

Brilliant Blue is a synthetic organic dye used primarily as a blue colorant for processed foods, medications, dietary supplements, and cosmetics. A Kemtrak leak detector can detect glycol leaks with Brilliant Blue down to ppb concentrations. Fluorescein is an organic dye widely used as a fluorescent tracer for many applications and is FDA approved for intravenous injection for eye disease. Fluorescein is detected down to ultra-low ppt concentrations.

The Kemtrak glycol detector performs well even in the presence of air bubbles, turbid water, or other particles, avoiding false positive readings. It is known for its high accuracy and broad range of detection. The Kemtrak glycol detector offers additional advantages such as ultra-low maintenance, no need for reagents, and continuous real-time protection.

APPLICATIONS

01 /

Food industry

The Kemtrak glycol detector is an essential tool for identifying the instantaneous presence of toxic glycol in pre-cooking water, ensuring food safety and brand protection.

02 /

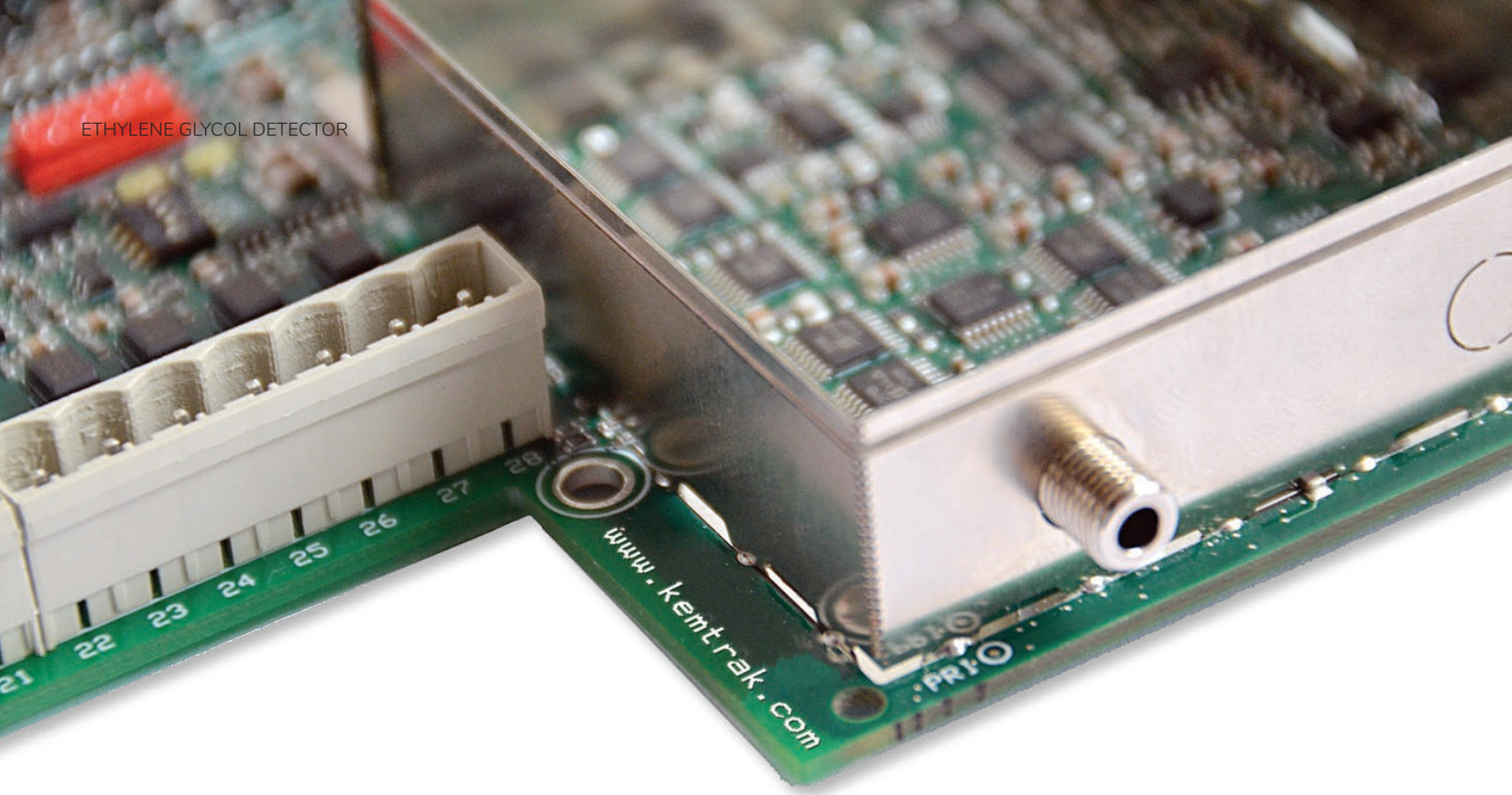
Beverage industry

Leak detection is crucial in breweries, where water cooling in the final stages of production is often performed using heat exchangers containing glycol. The Kemtrak glycol detector enables instant on-line leak detection to complement complex and time consuming methods such as gas chromatography.

03 /

Pharmaceutical

Ethylene glycol is used as a solvent in the pharmaceutical industry for the preparation of drugs and formulations. The continuous measuring of its concentration is crucial in ensuring product quality and regulatory compliance.



ABOUT KEMTRAK

Founded in 2006, Kemtrak is the industry leader in LED-based industrial photometers. Low optical power and long lifetime provide dependable products with the highest performance and lowest cost of ownership available.

The Kemtrak 007 analyzer platform is a robust industrial analyzer designed to accurately measure and report specific properties of liquids and gases in-line and in real time. Based upon either absorbance, light scatter, or fluorescence, Kemtrak photometers are used in a wide range of industrial applications for measuring parameters like color, concentration, turbidity, and solids concentration.

Kemtrak is located in Stockholm, Sweden. Kemtrak products are distributed globally. No matter where you are in the world, Kemtrak has a motivated team of skilled engineers ready to help.

- Industrial liquid and gas concentration measurement
- Real-time, in-line
- State of the art with exceptional performance
- Low cost of ownership:
  - No / ultra-low maintenance
  - Long life LED light source
  - Robust and reliable
- Application experience and know-how
- Global sales and support
- ISO 9001:2015 Quality System

At Kemtrak, we believe efficient manufacturing processes are essential for a sustainable world. Our products empower our customers to increase profits by preventing or limiting waste. Kemtrak analyzers provide insight into the process enabling resources to be conserved, waste minimized, energy reduced, and harmful leaks detected.

Kemtrak technology delivers tangible, measurable, and substantial benefits. We help our customers make the transition to a greener future through process optimization.

Our philosophy is to focus on areas that are beneficial for people and the planet, and Kemtrak supports the societies where we conduct business. By leveraging the latest and greenest technologies, we ensure we are doing our best to create a more sustainable process industry for the coming generations.

TYPICAL APPLICATIONS:

1. **Gas Scrubber Optimization:** Kemtrak photometers continuously monitor exhaust gases such as ClO_2 and Cl_2 to limit harmful emissions and loss of product into the environment.

2. **Leak Detection:** Continuous monitoring of leaks is an essential part of any process and Kemtrak analyzers provide ultra-low (ppt) levels of detection.

3. **Distillation Optimization:** Reduce energy consumption in distillation processes through real time measurement of tray & distillate concentration.

4. **Centrifuge Control:** Kemtrak turbidimeters optimize separators used to remove SO_2 and particulates from wet scrubbers that clean marine exhaust gas.

5. **Interface Detection:** Kemtrak analyzers minimize product loss, process downtime, and waste through precise interface control, ensuring consistent performance at any concentration.

OUR APPROACH:

Eco-Friendly Products: Kemtrak products have a no / ultra-low maintenance requirement, helping companies lower their ecological footprint and reduce costs. Our products are mercury-free, comply with RoHS directives, and are made from durable materials like stainless steel.

Minimizing Carbon Footprint: Kemtrak promotes environmental awareness, has energy-efficient facilities with eco-friendly electricity, recycles waste, and encourages remote meetings and responsible travel.

Research & Development: Kemtrak invests in sustainable technologies and practices, and develops products used to create a more sustainable process industry.

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