



Optical Gas Imaging (OGI) is a proven technology for locating Hexane and other Volatile Organic Compound (VOC) leaks in oilseed operations. OGI inspections can improve plant safety during routine operations, and reduce revenue lost to downtime during major overhauls. ROI payback in less than one year has been reported by major oilseed crush operations.

**A new Hexane and VOC leak detection technique using OGI is gaining favor among oilseed producers worldwide. This technique uses passive infrared imaging to make normally invisible gas plumes visible to the camera operator. The EyeCGas® OGI camera has a minimum detectable leak rate for Hexane of approximately 0.3 grams/hour (1 gallon/year liquid Hexane).**

Hexane, a highly flammable and costly gas, is used in most oilseed crush operations to achieve maximum oil extraction efficiency. Hexane loss often ranks as one of the major operating costs in a seed oil plant, costing up to over \$1M USD annually. Hexane losses can occur throughout the process, including in the extractor, in the stripper, and in the waste water boiler. The potential cost and danger of Hexane leaks means that identification, localization, and repair of Hexane fugitive emissions is paramount to both worker safety and process integrity. Sniffer and “Snoop” leak detection methods are traditionally used for this application, but are not always successful at finding leaks in hard to reach locations. These technologies also can’t always geo-locate the leak source, or capture intermittent leaks from pressure relief valves, or during startup or shutdown transients.

Meanwhile, state and federal air quality regulators continue to demand use of the most state-of-the-art technology to control emissions of VOCs, including Hexane. For seed oil producers that adopt better environmental practices, a demonstrated focus on sustainability can create a competitive advantage in the consumer market. These practices also show regulators that companies are taking proactive steps to reduce emissions, through frequent inspection and optimization of the process for identifying Hexane leaks. When all these factors are taken into consideration, control of Hexane fugitive emissions makes sense from an economic, safety, and an environmental standpoint.



## Selecting OGI Cameras for Gas Leak Detection

Optical Gas Imaging cameras can reduce plant operating costs, providing rapid ROI. One international seed oil producer reported that the first EyeCGas® camera they purchased led to \$100K USD of hard savings during the first year of use. They also state that OGI is easy to implement, portable, and requires minimal training. In fact, during the first two-hour EyeCGas® demonstration, many new leaks were identified. As a result, this producer has decided that OGI is the best tool for effectively identifying sources of Hexane loss, and has now deployed EyeCGas® cameras in oilseed processing plants throughout the world.

The EyeCGas® camera has additional uses which can reduce costs and increase safety in a seed oil plant. It can be used to identify fuel gas supply leaks involving natural gas, propane, or butane. Validation of process integrity following repairs can also be easily accomplished using OGI. Acetone and ethanol leaks can be imaged with the same equipment.

EyeCGas® is also the only OGI camera offering all of the following:

- High sensitivity for Hydrocarbon (VOC) emissions
- Camera that can be optimized for 30% better Hexane detection
- Certified to meet the EPA's OOOOa requirement
- Sealed to IP65 for superior dust and water intrusion protection
- Compatible with FDA Title 21 processing environments
- Certified to Class I Div 2 Hazardous Locations

## ■ Summary

With fast ROI and high safety ratings, OGI cameras are the ideal technology for inspections. Leak detection surveys using OGI cameras are extremely cost effective, in addition, third party analyses have demonstrated that OGI can inspect components 5 to 15 times faster than sniffers. Recent federal air quality regulations designate OGI as the "Best System of Emission Reduction" with clear advantages over traditional methods.

**With our unique Hexane kit that optimizes detection by up to 30%, the EyeCGas® camera provides the best Hexane detection in the oilseed production market.**

## EyeCGas®



*High sensitivity to a spectrum invisible to the human eye makes EyeCGas® a critical tool in fugitive gas leak detection. Even from a distance, a user will easily see the exact location of a leak.*