

# TELEDYNE ANALYTICAL INSTRUMENTS

## INSTA TRACE

### Micro-fuel Cell Oxygen Sensor



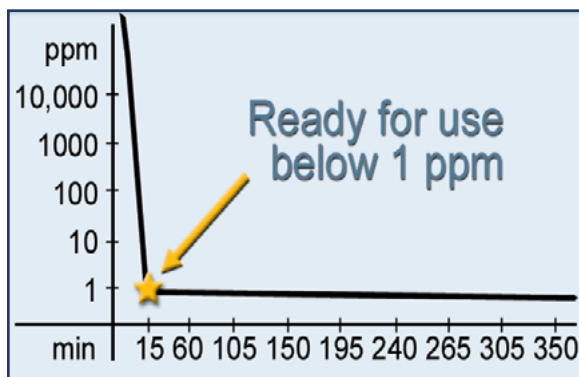
- No waiting
- No diverting product
- No switching analyzers
- No liquid backup

Teledyne's patented\* innovation called INSTA TRACE™ eliminates the greatest inconvenience associated with electrochemical oxygen sensors at the trace level - the wait.

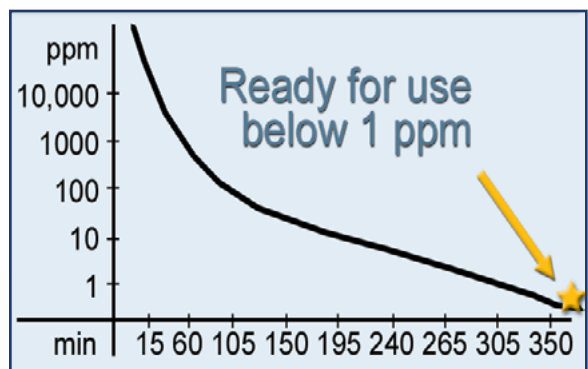
When a typical electrochemical trace oxygen sensor is removed from its barrier bag for the purpose of replacing an expired sensor, it is exposed to ambient air (209,000 ppm O<sub>2</sub>).

During this transition from an oxygen free environment to open air exposure, the sensor's electrolyte becomes saturated with dissolved oxygen – and the longer the exposure, the longer the recovery time. The typical recovery period when replacing a sensor is between 6 to 24 hours.

The INSTA TRACE Micro-fuel Cell oxygen sensor is capable of measuring below 1 ppm of oxygen within 15 minutes of installation. By reducing the recovery period from several hours to just minutes, users will no longer have to divert unanalyzed product, go to liquid back-up (in the case of the air separation industry), or switch analyzers. The intrinsic value of this innovation has extreme significance in plant operation.



*Using Teledyne's Insta Trace technology, meaningful readings below 1 ppm are obtained in only 15 minutes.*



*Without Insta Trace, process downtime can be six hours or more.*

\* U.S. Patent No. 6,524,740 B1

# Insta Trace Micro-fuel Cell


## HOW IT'S DONE

The solution Teledyne engineered to address this recovery concern is simple yet extremely effective. By covering the base of the sensor with a seal, the cell is protected from exposure to ambient air. Insertion in the newly designed cell holder rests the INSTA TRACE sensor against a prong. As the cell holder is closed, the prong punctures the seal thereby allowing the flow of gas to the cathode to begin in a controlled setting. The new cell holder is designed to ensure the prong will not come in contact with the actual reactive sensing surface of the sensor.

## WHERE INSTA TRACE CAN BE APPLIED

Teledyne can retrofit INSTA TRACE sensing capability into all of its Micro-fuel Cell based trace oxygen analyzers currently in service. The retrofit kit contains the cell holder in addition to the INSTA TRACE sensor. Simply replace the old cell holder (the bottom piece that either threads or mechanically clamps to the cell block assembly) and install the INSTA TRACE sensor. Take advantage of this innovation by ordering the appropriate retrofit kit.

TELEDYNE O2 ANALYZER MODEL	RETROFIT KIT PART NUMBER
3000T Series	C-71792-A
316 Series	C-71792-B
311 Series	C-71792-C
3160 Series	C-71792-D



*Teledyne is currently the only oxygen analyzer manufacturer capable of offering this performance in a disposable, electrochemical trace oxygen sensor.*

## MICRO-FUEL CELL BENEFITS

Teledyne's electrochemical Micro-fuel Cells have long been considered the industry standard for accurately detecting ppm levels of oxygen. Our trace oxygen sensors have achieved this position because of the many desirable attributes they offer to the end-user.

- No maintenance requirements
- Easy to handle and replace in the field
- Suitable for use in a variety of background gases
- Unaffected by hydrogen or hydrocarbons allowing users to standardize on one trace oxygen vendor
- Absolute zero feature allowing for single point calibration
- Linear across all ranges of analysis
- Vibration and shock resistant
- Low replacement cost

## **TELEDYNE ANALYTICAL INSTRUMENTS**

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## Warranty

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

