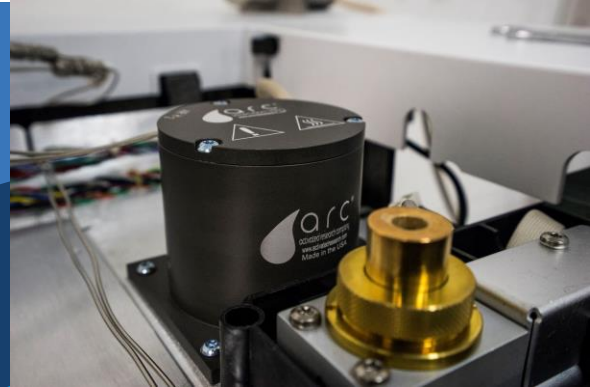


# The Polyarc<sup>®</sup> System

## Universal GC/FID Response



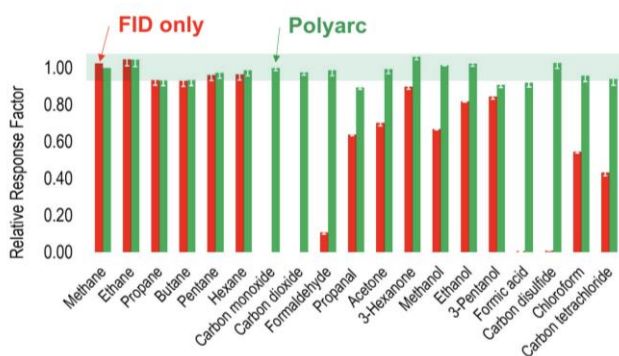
**For use with these GC models:**

Agilent 5890, 6890, 7820, 7890, 8890.  
Shimadzu 2030, Thermo Fisher, Varian,  
Bruker, Scion, and more.

## What is it?

The Polyarc is the next evolution of flame ionization detection (FID). It converts the FID into a truly universal carbon detector using proprietary catalytic reactors that convert organic molecules to methane immediately prior to detection.

## Polyarc/FID vs. FID Relative Response Factors (RRF)

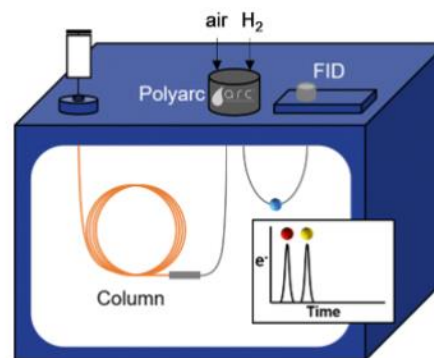


## Why is it important?

The FID has two main challenges: Lack of uniform response and low response to certain compounds. The Polyarc enhances your FID to solve these challenges by giving your FID a uniform response to nearly all organic molecules. The result is more accurate data, improved productivity, lab efficiencies, and the ability to detect more compounds.

## How it Works

1. The Polyarc is always located between the column and the FID but can be mounted in many different locations.
2. It is a two chamber microreactor with an initial combustion reaction followed by a reduction step, resulting in complete conversion of all organic molecules to methane.
3. Only methane passes is detected by the FID. This results in a uniform response for all compounds.



## Benefits of the Polyarc

- Polyarc converts all compounds to methane allowing for the universal detection of millions of organic compounds.
- >99% conversion to methane
- Reduce the need for traditional calibrations.
- Quantify compounds with unavailable commercial standards.
- Increase sensitivity for compounds that respond poorly in the FID (e.g., CO, CO<sub>2</sub>, formic acid, formaldehyde)

