

Polyarc® vs. Polyarc® Ultra

Table 1. Applicability of Polyarc vs. Polyarc Ultra

When to use Polyarc

- Increased sensitivity for highly substituted compounds (e.g., formaldehyde, formic acid, CO₂)
- Complex matrices requiring time consuming calibration.
- Difficult or impossible to acquire standards, preventing calibration
- Simplify methanizer replacements to decrease time spent on replacements and avoid handling nickel.
- High throughput chemical reaction testing.
- Closing mass balance for reactions with unknowns.
- Pyrolysis of plastics or biomass.

When to use Polyarc Ultra

All the reasons for the Polyarc plus the following...

- Interest in analytes closely eluting to solvent peak.
- Analyzing highly active compounds that require an inert flow path.
- Frequently diluting with solvents known to cause tailing (e.g., toluene, dichloroethane, etc.)
- Complex mixtures where any peak broadening needs to be avoided.

Table 2. Comparison of half-widths for dichloroethane peak

	Standard Polyarc	Polyarc Ultra	Percent Difference
Half-Width, 10% (min)	0.0125	0.0080	56%
Half-Width, 5% (min)	0.0148	0.0094	57%
Half-Width, 1% (min)	0.0219	0.0125	75%
Half-Width, 0.1% (min)	0.1395	0.0385	262%

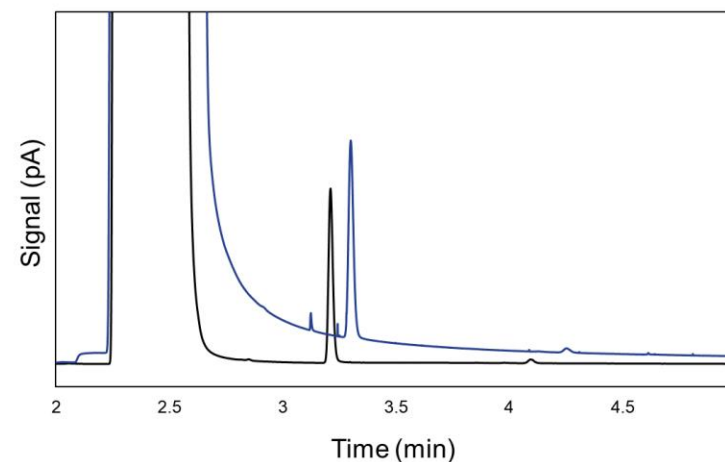


Figure 1. Sample chromatogram of solvent peak (dichloroethane) showing Polyarc in blue and Polyarc Ultra in black.

[Further Reading / Application Note](#)