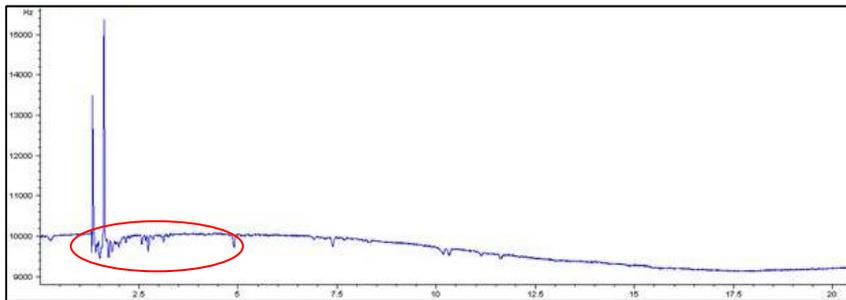




GC Troubleshooting Series Part Two: Baseline Disturbances

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Baseline disturbances and baseline noise can be caused by extra components of your sample that build up over time.



Possible Cause: Inlet Contamination

Inlet contamination is one of the first places to look when you are experiencing a baseline noise problem. Cool down the inlet and see if that stops the issue. If it does, then it's probably in the inlet. Perform basic maintenance.

Look for Inlet Maintenance videos at www.agilent.com/chem/gcinletcare.

Check gas lines going in and out of the inlet, too, as they may need to be cleaned.

The split vent trap is "downstream" from the inlet, but it can still be a source of contamination that diffuses into the inlet. Change it regularly.

Possible Cause: Column Contamination

Contamination that is causing baseline disturbances will be semi-volatile in nature for it to make its way to the detector.

A column bake-out is the only way to correct this issue in the column.

Possible Cause: Detector Contamination

If the baseline noise increases slowly over time and not suddenly, consider the detector as the source of the problem.

Detector consumables:
FID or NPD: jets, collectors
FPD: lamps
MS: Filaments, electron multipliers

Keep a log of when you replace electron multipliers, filaments and lamps. Knowing when you replaced them may help eliminate them as the possible source of your problem.

Potential cause: Incorrectly Installed Column

For most detectors, the column should be installed to the point it stops, then pulled back approximately 1 mm. This may vary for some detectors.

See the column installation video at www.agilent.com/chem/installgccolumn

Possible Cause: Incorrect detector gas flow rates

Sometimes, flow rates aren't set to optimized values, which can affect your results. Check your GC manual for the right flow rates for your instrument.

Possible Cause: Septum Degradation

Agilent BTO septa are plasma-treated to eliminate sticking and coring, keeping the inlet free of external contamination. They are blister-packed for cleanliness and convenience.

- 11mm BTO septa, 50/pk: p/n 5183-4757; 100/pk size, p/n 5183-4757-100
- 5 mm BTO septa through-hole for on-column injection in glass jar, 50/pk: 5183-4758

For more information about Agilent BTO Septa, visit www.agilent.com/chem/btosepta

Summary:

Key ways to correct a baseline noise or baseline disturbance issue:

- Start with basic GC inlet maintenance. Clean the injector, replace the liner and gold seal.
- Bake-out your column.
- Trim 10-20 cm off the front of your column.
- Check and, if needed, change your gas flow rates
- Clean the detector.
- Replace old filaments, lamps and electron multipliers.
- Check your septum and change it if needed.
- Change gas tanks