# Agilent Technologies

# GC Troubleshooting Series Part Three: Fronting Peaks

**Daron Decker** is a GC Applications Specialist for Agilent's Columns and Supplies Division. **Herb Brooks** is an Agilent service engineer.

### Possible Cause: Column Overload

Column overload is the most common cause of fronting peaks.



Ways to prevent column overload:

- Decrease injection volume
- Dilute sample
- Increase split ratio

## Possible Cause: Improperly Installed Column

Improper column installation is the next most common cause of fronting peaks. You can view a video about installing GC columns at <u>www.agilent.com/chem/installgccolumn</u>.

#### Possible Cause: Injection Technique

Using an autosampler is a good way to keep injections consistent and avoid problems like fronting peaks

#### Possible cause: Reversed Solvent Effect

If you're running trace compounds, the compound is very soluble in the injection solvent. Something called the Reverse Solvent Effect can occur. Using a retention gap is the best way to deal with this. For more information on retention gaps (guard columns), visit www.agilent.com/chem/retentiongap.

To order a guard column, visit <u>www.agilent.com/chem/duraguard</u>