



Since the 1940s, per- and polyfluoroalkyl substances (PFAS) have been used in a large number of industrial and household products. Recent public and regulatory attention has sent analytical laboratories scrambling to bring PFAS analysis on line. This rush to add PFAS services—coupled with the very low levels of potential concern (in the parts per trillion)—can lead to a lot of data quality issues.

Barr helps clients evaluate the quality of their data so that they can make informed decisions. We tailor our services to the needs of individual clients and projects to make sure the data quality is sufficient. Our understanding of PFAS environmental chemistry, analytical methodologies, and laboratory processes provides confidence in the data and context for what it means.

## method evaluation

Currently, the only analytical method promulgated by the U.S. Environmental Protection Agency to analyze for PFAS is EPA Method 537, which was designed and validated for drinking-water matrices only. ASTM Method 7979 has been created for non-drinking water matrices but has not been validated through laboratory studies. In practice, laboratories have taken the basic elements of these methods and modified them for use on environmental samples. These method modifications vary between laboratories and are often not clear to the data user—this can cause variability within sample results and have unforeseen consequences. Barr's data quality team continuously works with laboratories to understand these modifications and helps determine the best method for the situation.

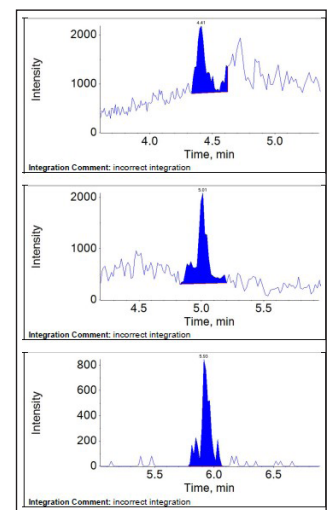
## PFAS data evaluation

With state and federal standards in the parts per trillion, any low-level detection by the laboratory can have large consequences. Barr's data quality staff have reviewed and validated thousands of PFAS sample results and can evaluate any laboratory-provided data to verify that any and all detections of PFAS are not false positives or false negatives, evaluate the accuracy of the results, and determine any limitations on the data.

This can involve a more cursory review of all quality assurance data or a full data validation that examines all laboratory raw data. We review:

- blanks
- matrix spikes
- duplicates
- laboratory control samples
- laboratory dilutions
- quantitation
- calibration
- compound identification
- interference evaluation
- linear vs. branched PFAS compounds

These reviews help eliminate errors and give context for how data should or should not be used.



*Barr has performed data validation on thousands of samples analyzed for PFAS. We identify and correct data issues and give the project team confidence in their results.*