FROG-4000

BTEX and Chlorinated Alkenes Settings

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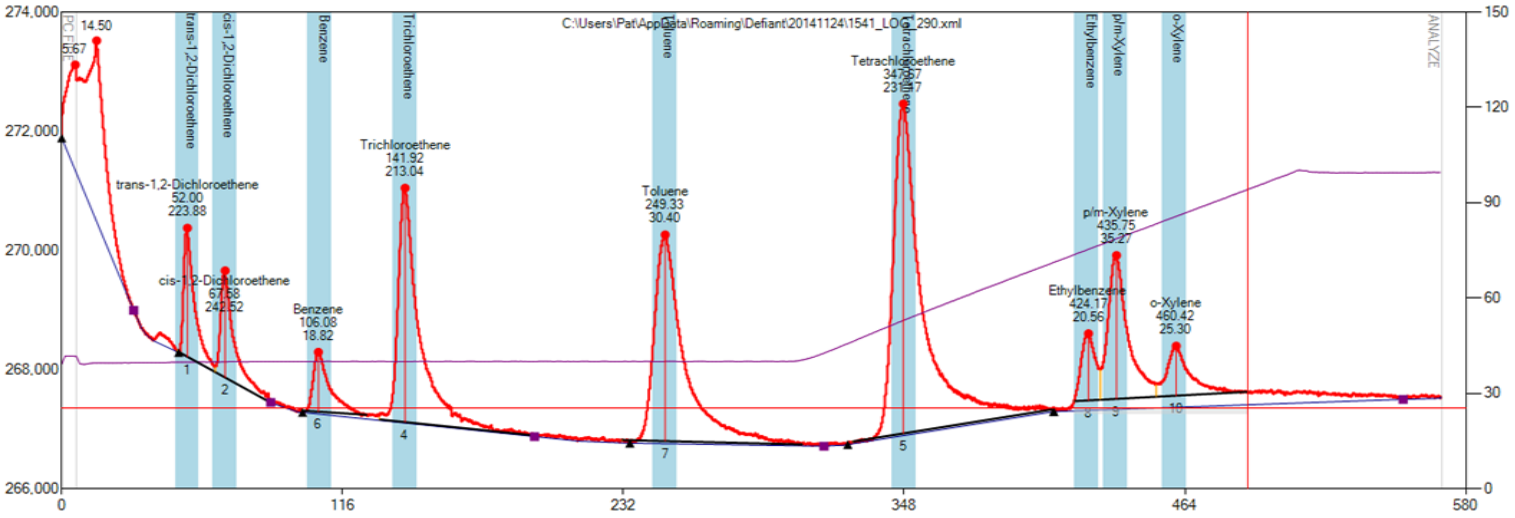

Parameter	Value
Ta	300
Tb	210
Tc	60
Ct	40
Ht	100
Collect	30
Clean	4
Presettle	4
Settle	2
Fire	6

If you are analyzing chlorinated alkenes and BTEX on the FROG-4000, the parameters on the left are the appropriate parameters. Vinyl chloride and 1,1-dichloroethene are difficult chemicals to analyze even under perfect conditions. We recommend the following. For many analytes, it is okay to drop the bottle while loading a sample when analyzing for these two compounds keep the empty sparge bottle secured to the sparge block and load the sample through the introduction valve as normal. Also, it you are collecting the water sample from a grab sampler, pour the water directly into the end of the syringe and then insert the plunger. This will minimize loss of volatile compounds.

The elution order for the chlorinated alkenes and BTEX can be seen in the chromatogram above. As you can see from the above chromatogram, p-xylene and m-xylene coelute. During calibration these two chemicals are combined under the name p/m-Xylene. Combining them means that for every calibration concentration level, their concentrations will be added together. For example, if the calibration standard contains 100ppb of p-xylene and 100ppb of m-xylene then their combined concentration as p/m-xylene is 200ppb.

Helpful hint: If you want better retention and separation for the early eluting compounds, you can lower the cold temperature if ambient conditions allow. We recommend that the cold temperature be at least 5 C hotter than the ambient temperature. Sometimes it is easier to start with the last peaks than trying to identify peaks starting with the first one. The picture on the right shows the feature that application support looks for when we are identifying the various peaks in MTBE/BTEX. Then we go backwards in elution next looking for toluene, benzene, and finally MTBE if it is present. This trio of peaks is ethylbenzene, pm-xylene, and o-xylene. The feature is distinctive in a chromatogram and can often help if peaks at the beginning are confusing.