



April 11, 2011

**NEW PRODUCT****Technical Ammonium Perfluorooctanoate**

It is well known that perfluoroalkylcarboxylic acids and perfluoroalkylsulfonates are often detected in the environment as mixtures of linear and branched isomers. Electrochemical fluorination (ECF), the historical method of industrially producing these compounds before the telomerization process was adopted, resulted in complex mixtures. ECF products were mainly composed of structural isomers with the linear perfluoroalkyl chain dominating (at levels of 70-80%) over smaller quantities of branched isomers, lower homologues, and other impurities. Standards for perfluorooctanesulfonate (PFOS), that have been characterized as to their isomer profile and are known to be representative of the technical material, have been available for a number of years, but a standard of technical perfluorooctanoic acid (PFOA) has not yet been released. For this reason, Wellington has characterized a sample of technical ammonium perfluorooctanoate (**T-PFOA**) and is offering this material as a solution in methanol to aid researchers in the qualitative identification of the branched isomers of PFOA.

Catalogue Number	Product (methanol)	Qty	Conc
T-PFOA	Technical Ammonium Perfluorooctanoate	1.2 ml	50 µg/ml

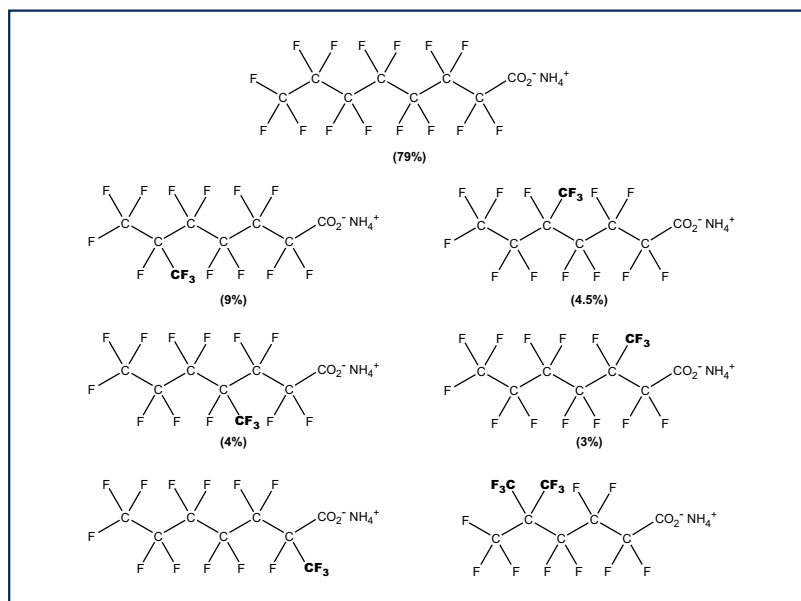


Figure 1: Structural isomers present in technical ammonium perfluorooctanoate (T-PFOA). The percent composition is provided in brackets below the isomer if greater than 0.5%.

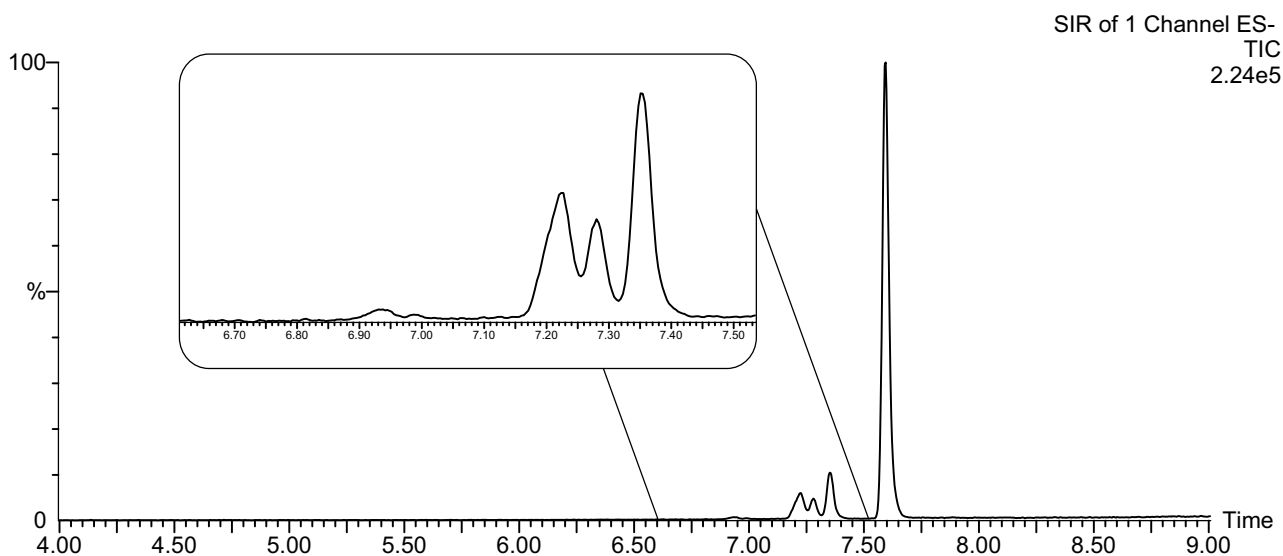


Figure 2: LCMS chromatogram demonstrating the separation of the branched isomers of technical ammonium perfluorooctanoate (T-PFOA).

The isomeric profile of T-PFOA was determined using a combination of  $^{19}\text{F}$  NMR and LCMS analyses. The assignment of the structural isomers as well as their percent composition agrees well with what has already been published in the scientific literature.

Since T-PFOA is technical material, this standard should be used for qualitative and/or semi-quantitative determinations of the branched isomers of PFOA.



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