

DoD Guidance for PFAS Analysis in Biota

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Unlike other media such as soil, groundwater, and wastewater, there is no consensus on the sample preparation steps needed for analysis of PFAS in biota. In addition, little work has been published on biota analysis and may not cover the wide range of biota that facilities may be asked to evaluate. As a media class, biota tends to be a more complex matrix than other media, requiring a more prescriptive, extensive sample preparation in order to release PFAS from the sample matrix and render it extractable (commonly called extraction efficiency). Biota extraction procedures often extract a higher amount of compounds that can cause matrix interference during analysis, therefore extract clean-up steps must be included in sample preparation procedures. Each type of biota (e.g., fatty fish tissue, grasses, and fruit) can present unique challenges with respect to PFAS extraction efficiency and matrix interference. Until a multi-laboratory validated method is published, the EDQW recommends additional quality control elements be included with each sample batch to evaluate the inter- and intra-laboratory variability and bias associated with biota results. These include performing laboratory split sample analyses, duplicate analysis on each sample, matrix spike analysis at a greater frequency, and analysis of a standard reference material (SRM) of biota (<https://www-s.nist.gov/srmors/browseMaterials.cfm?subkey=9&tableid=247>) with the extraction of each sample batch.