

series	cap color	membrane	pore size	part #
eXtremeFV®	●	PVDF	0.45µm	85541

Filtration of Shellfish Extracts prior to final dilution for domoic acid (ASP; AMNESIC Shellfish Poisoning) analysis by HPLC

Data supplied by Canadian Food Inspection Agency

Introduction

The amnesic shellfish poisoning (ASP) toxin, domoic acid, belongs to a group of amino acids, called the kainoids, which are classed as neuroexcitants or excitotoxins that interfere with the neurotransmission mechanisms in the brain. The toxin can be accumulated in shellfish feeding on a number of toxic *Pseudonitzschia* species. Ingestion of seafood contaminated with domoic acid can lead to an intoxication which symptoms include (among others) abdominal cramps, vomiting, disorientation and memory loss (amnesia) and can become severe in certain cases. The Thomson Filter Vials were evaluated for inclusion in the validated method, replacing filtration using a syringe, syringe filter and transfer to the HPLC Autosampler Vial.

Fig 1. Clams spiked with Domoic Acid (5 µg/g); extract filtered using typical Nylon Syringe Filter

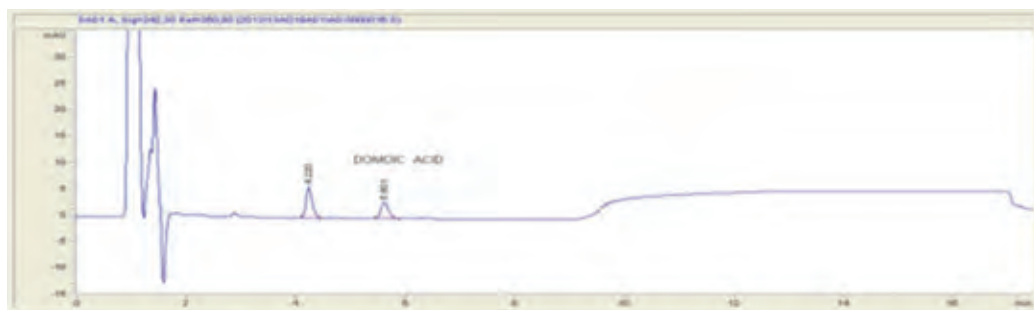


Fig 2. Clams spiked with Domoic Acid (5 µg/g); extract filtered using 0.45 µm PVDF Filter Vial

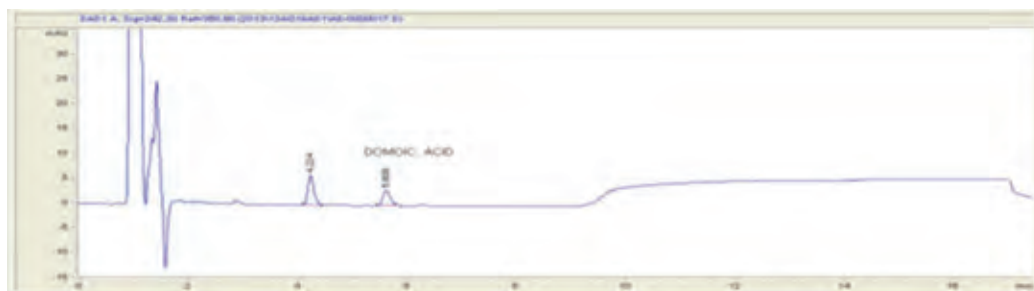


Figure 1 shows typical injection chromatogram of clams extract seeded in domoic acid and filtrated using common filtration with Nylon Syringe Filter de 0.45µm.

Figure 2 shows same extract but filtrated with PVDF eXtreme Filter Vial 0.45µm from Thomson.

Both chromatograms and quantitative results are similars so filter vials filtration represent a faster suitable alternative for domoic acid in clams filtration method minimizing mistakes due to sample transfer.