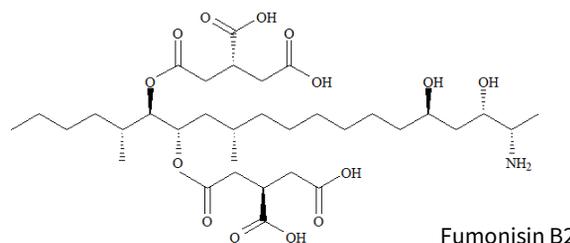
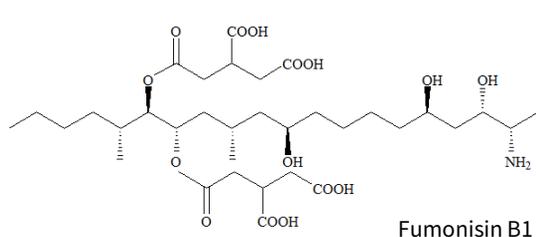


Fumonisin B1 and B2 are mycotoxins found in cereals and are typically analyzed using HPLC with fluorescence detection or LC/MS (/MS). Sample pretreatment, is commonly made using a strong anion exchange phase (SAX) because fumonisin has several carboxylic acids in its molecular structure. However, extraction with SAX alone may result in low recoveries for the samples with a high lipid content or a complex composition e.g. beer. These sample types also require pretreatment to remove lipids and other contaminants with non-polar phases such as C18 prior to treatment with the SAX phase. Two extraction methods are introduced in this application note, the first using SAX only, and the second using C18 and SAX in tandem.

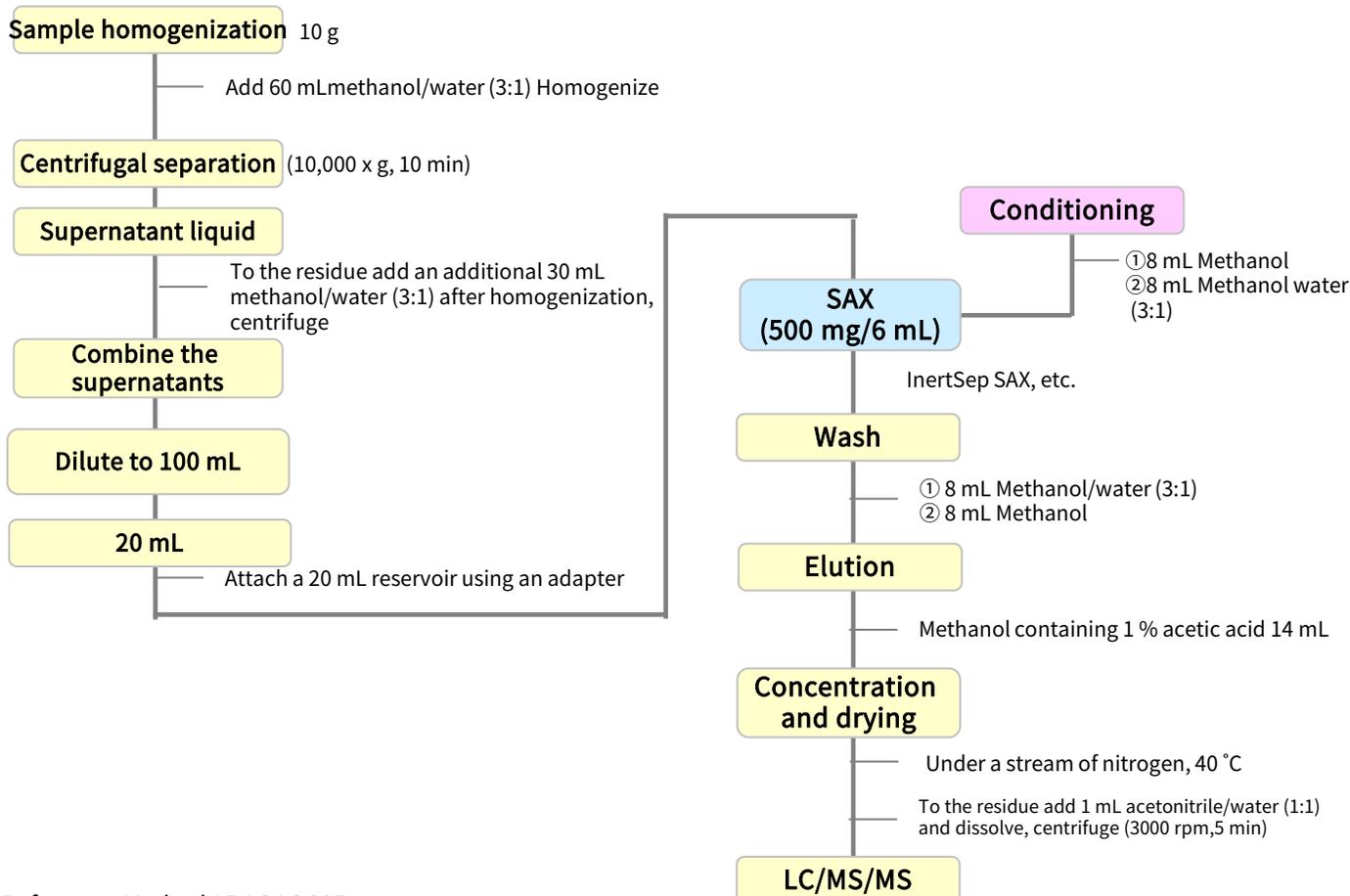
1. Flow diagram of solid phase pretreatment

[Structural formulae of fumonisins]



Structures are created using Chemistry 4-D Draw which is provided by ChemInnovation Software, Inc.

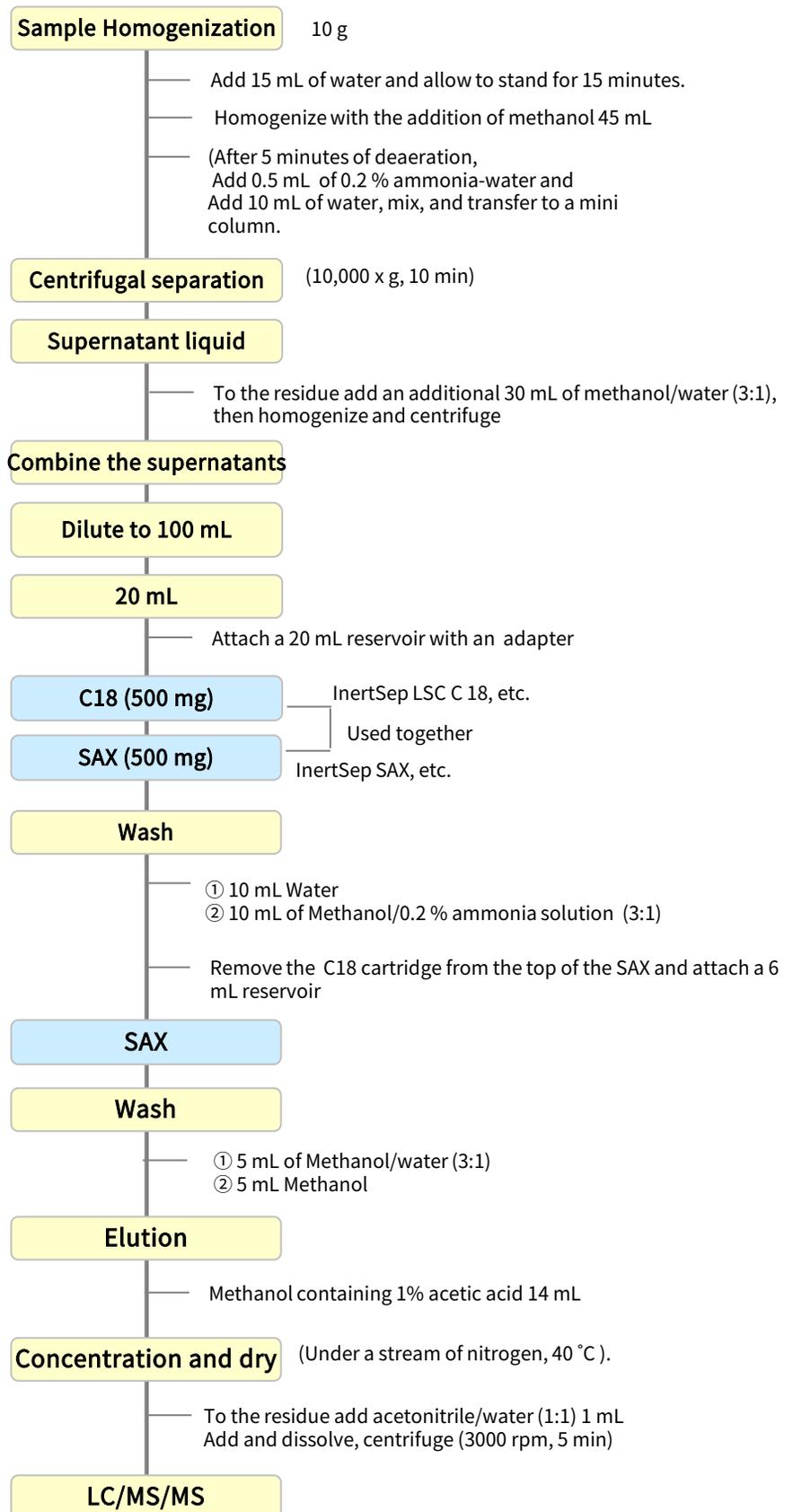
[Example of pretreatment of samples such as corn with low lipid content]



Reference: Method 15 AOAC 995.

Feed Analysis Standards, Agriculture, Forestry and Fisheries Consumption Safety Technology Center
Food Sanitation Magazine Vol.45, No.5, pp. 255-258(2004)

[Examples of Pretreatment of Contaminated Malt, Beer and Lipid-Rich Grains]

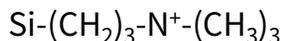


Reference: Method 15 AOAC 995.

Feed Analysis Standards, Agriculture, Forestry and Fisheries Consumption Safety Technology Center
Food Sanitation Magazine Vol.45, No.5, pp. 255-258(2004)

2. Products for solid-phase extraction

[InertSep SAX]



Mean particle size : 45 μm
 Carbon : 10 %
 Surface Area : 450 m²/g
 Pore volume : 0.7 mL/g
 Pore size : 60 Å
 Ion exchange capacity : 0.7 meq/g
 PKa : (-)
 PH range of use : 2 - 8
 Remarks : OH - ion pair

InertSep SAX is a solid phase in which a trimethylaminopropyl group is attached to silica gel. The primary interaction has a strong anion exchange action and, as a secondary interaction, a weak nonpolar interaction. It is commonly used to extract weak anionic substances such as carboxylic acids.

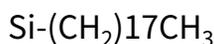
Syringe barrel type cartridge

Product name	Column size	Qty.	Cat.No.
InertSep SAX	200 mg / 3 mL	50 bottles	5010-61642
	500 mg / 3 mL	50 bottles	5010-61643
	500 mg / 6 mL	30 bottles	5010-61644
	1 g / 6 mL	30 bottles	5010-61645
	2 g / 12 mL	20 bottles	5010-61646

Luer device cartridge

Product name	Column size	Qty.	Cat.No.
InertSep SlimJ SAX	500 mg	50 bottles	5010-65640
	1000 mg	50 bottles	5010-64641

[InertSep C18]



Mean particle size : 60 μm
 Carbon : 19 %
 End-caps : Highly End-Capping
 Surface Area : 450 m²/g
 Pore volume : 0.7 mL/g
 Pore size : 60 Å
 PH range of use : 2 - 8

InertSep C18 is a solid phase with non-polar interactions in which octadecyl groups are chemically bonded to silica gel. Advanced end-capping prevents cation-exchange interactions with silanol groups, resulting in reduced adsorption of basic compounds. It is suitable as a clean-up solid phase for removing lipids in the concurrent testing method for residual pesticides.

Large size cartridge LSC

Product name	Column size	Qty.	Cat.No.
InertSep LSC C18	100 mg	50 bottles	5010-63001
	200 mg	50 bottles	5010-63002
	500 mg	50 bottles	5010-63003

[Empty reservoir]



Product name	Specification	Qty.	Cat.No.
Empty reservoir (PP) No frits	20 mL	20 bottles	5010-60104
	60 mL	10 bottles	5010-60105
	150 mL	10 bottles	5010-60106

Product name	Specification	Qty.	Cat.No.
Solid-phase extraction cartridge Connection adapter (PP)	For LSC reservoir	12	5010-60004

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