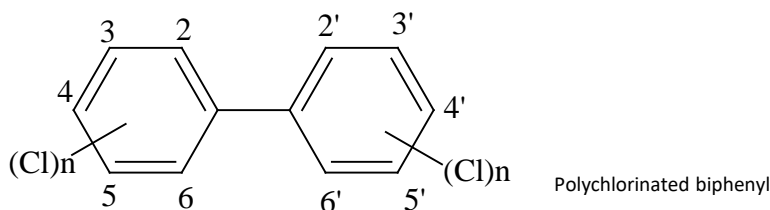


PCB analysis in river water, groundwater, sewage effluent, and test solutions eluted from soil has been studied using GC/ECD after solvent extraction with *n*-hexane and purification with a silica gel column. However, since this solvent extraction method is a long and complicated operation, a solid-phase extraction method that offers a simple and efficient extract with few solvents has recently been developed and is described in this application note.

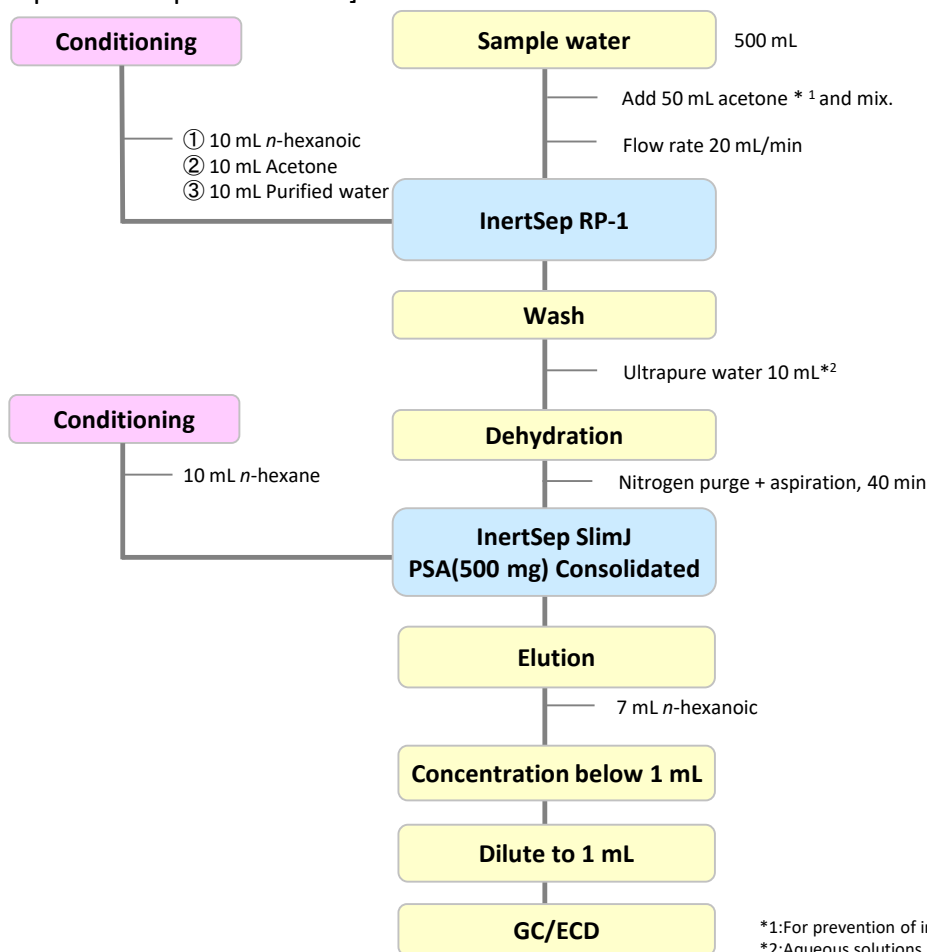
## 1. Flow diagram of solid phase pretreatment

[Structural formula of PCB]



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

[Example of PCB pretreatment]



\*1:For prevention of internal adsorption to the container

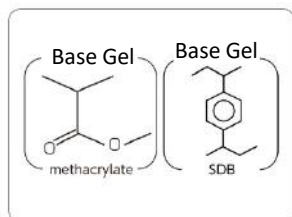
\*2:Aqueous solutions containing organic solvents are used as necessary. The ratio of organic solvents needs to be studied in advance.

NOTE)This is a method developed byGLSciences based on literature information.

Reference: Solid Phase Extraction Guidebook Solid Phase Extraction Seminar Materials Environmental Fields Ver. 5, p73 (2004)

## 2. Products for solid-phase extraction

### [InertSep RP-1]



Mean particle size	: 70 µm
Surface Area	: 650 m <sup>2</sup> /g
Pore volume	: 1.5 mL/g
Pore size	: 90 Å
PH range of use	: 1 - 14

InertSep RP 1 is a polymeric SDB and methacrylate based solid phase. It is optimal for enrichment of a wide range of compounds from low to medium high polarity.

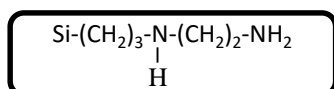
#### Syringe barrel type cartridge

Product name	Column size	Qty.	Cat.No.
InertSep RP-1	250 mg/6 mL	30 bottles	5010-27000

#### Luer device cartridge

Product name	Column size	Qty.	Cat.No.
InertSep mini RP-1	230 mg	50 bottles	5010-27200
		500 bottles	5010-27220

### [InertSep PSA]



Mean particle size	: 65 µm
Carbon	: 11.5 %
Surface Area	: 450 m <sup>2</sup> /g
Pore volume	: 0.7 mL/g
Pore size	: 60 Å
Ion exchange capacity	: 1.5 meq/g
PKa	: (10.1, 10.9)
PH range of use	: 2 - 8

InertSep PSA is a solid phase in which an ethylenediamine N propyl group is attached to silica gel. As a primary interaction, it has an anion exchange mode, and as a secondary interaction it has a weak non-polar mode.

#### Luer device cartridge

Product name	Column size	Qty.	Cat.No.
InertSep Slimj PSA	500 mg	50 bottles	5010-65620

GL Sciences disclaims any and all responsibility for any injury or damage which may be caused by this data directly or indirectly. We reserve the right to amend this information or data at any time and without any prior announcement.

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