

# Magic Chemisorber PDMS

## Solid Phase Extraction Element (SPEE)

Useful for analyzing trace amounts of organics in air or aqueous solutions and for head space analysis of solids or solutions.

### Features

- ◆ Easy, quick, and low cost concentration of organic compounds
- ◆ Magic Chemisorber PDMS is self-cleaning. High boiling components that are not thermally desorbed can be easily removed by immersing in a solvent such as hexane.

### Applications

- ◆ Environmental analysis
- ◆ Food analysis
- ◆ Clinical analysis

### Operation

Magic Chemisorber PDMS is placed in a sample (gas, aqueous solution, or solid). Extraction of target components is effected by agitating the sample or allowing the magic chemisorber to simply sit in the sample for a fixed period of time. The extracted components are then analyzed by GC or GC/MS using Frontier Lab's Multi-Functional Pyrolyzer in the thermal desorption mode.

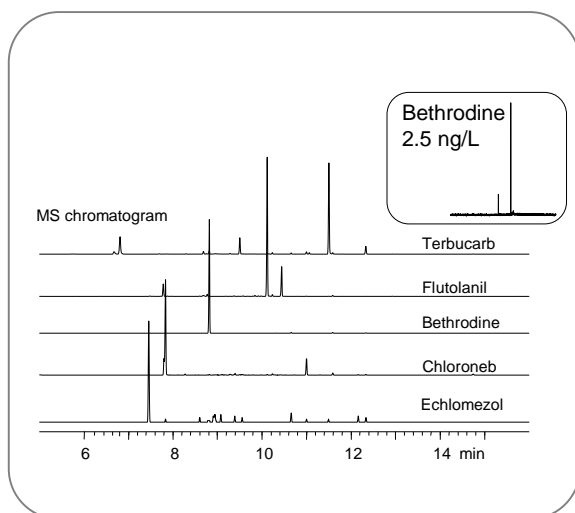
Chemically bonded PDMS layer on a titanium tube  
 Inner film thickness : ~1 μm  
 Outer coating : 100 and 500 μm



### Three kinds of Magic Chemisorber PDSM

Name	Model	Film thickness (μm)	Length (mm)	O.D. (mm)	Features
#1 Magic Chemisorber S500	(MC-S500)	500	6.0	2.5	For use with Auto-Shot Sampler (AS-1020E, Frontier Lab)
#2 Magic Chemisorber L500	(MC-L500)	500	34.5	2.4	Suitable for trace analysis
#3 Magic Chemisorber L100	(MC-L100)	100	30.0	1.2	Bleed is 1/100 that of MC-L500 at 250°C

### Analysis of Pesticides in water using "MC-L500" (concentration: 2.5 μg/L each)

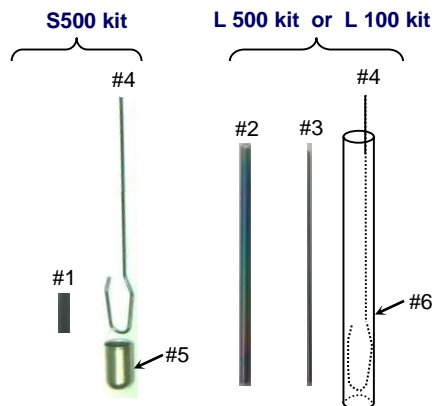


### Specifications of Magic Chemisorber PDMS

	S500	L500	L100
Length	6 mm	34.5 mm	30.0 mm
Film thickness	500 μm		100 μm
Application	Low / Middle (C20 range)		Low / High (C30 range)
Max. recommended temperature	280°C ( temp progr: ~300°C)		
Bleed at 300°C in the thermal desorption mode	20	100	1
Extraction time by thermal desorption (TD)	~ 10 min.	~ 30 min.	~ 60 min.
Relative sensitivity	1	5	1
Compatibility with Auto-shot sampler (AS-1020E)	Yes	No	No

# Kits and Application

## Magic Chemisorber PDMS Kits



- #1 **Magic Chemisorber S500**
- #2 **Magic Chemisorber L500**
- #3 **Magic Chemisorber L100**
- #4 **Eco-Stick DF**
- #5 **MC holder S**  
(Flow through Eco-Cup LHF)
- #6 **MC holder L**  
(Length 40 mm, o.d. 4 mm)

## Content of Kits and part numbers

### Starter Kits

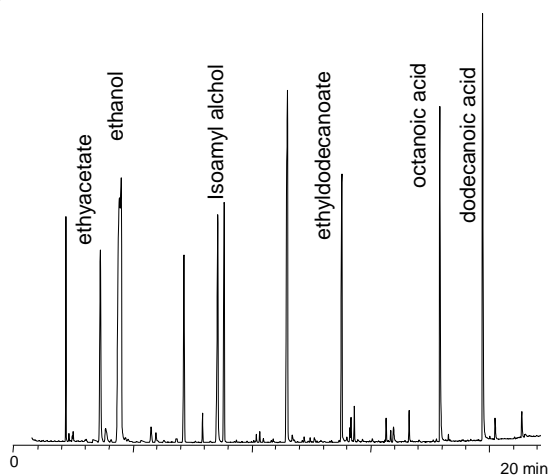
- Magic Chemisorber S500 kit (P/N: PY1-MC01S-K) :
- #1: Magic Chemisorber S500 qty 3
  - #4: Eco stick DF qty 5
  - #5: MC holder S qty 5
- Magic Chemisorber L500 kit (P/N: PY1-MC01L-K) :
- #2: Magic Chemisorber L500 qty 3
  - #4: Eco stick DF qty 5
  - #6: MC holder L qty 2
- Magic Chemisorber L100 kit (P/N: PY1-MC02L-K) :
- #3: Magic Chemisorber L100 qty 3
  - #4: Eco stick DF qty 5
  - #6: MC holder L qty 2
- \*Magic Chemisorber SL kit (P/N: PY1-MC01SL-K) :
- #1: Magic Chemisorber S500 qty 2
  - #2: Magic Chemisorber L100 qty 2
  - #3: Magic Chemisorber L500 qty 2

\* #4,5,6 are not included in the SL kit (P/N:PY1-MC01SL-K).  
Please purchase them as needed with the following part numbers.

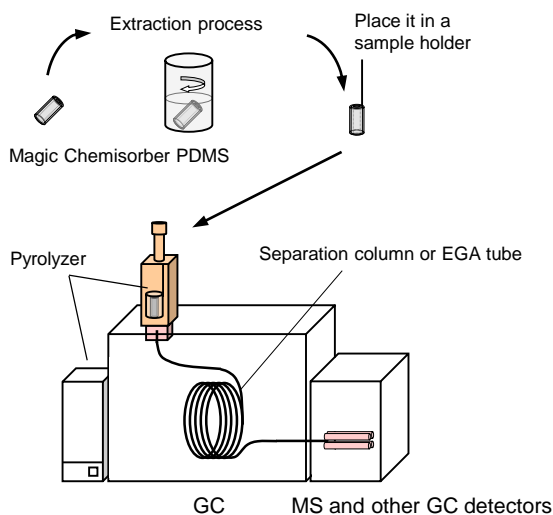
### Single Parts (#1 through #6 in the left figure)

- |   |                          |
|---|--------------------------|
| #1: Magic Chemisorber S500                    | P/N: PY1-MC01S (10 pcs)  |
| #2: Magic Chemisorber L500                    | P/N: PY1-MC01L (5 pcs)   |
| #3: Magic Chemisorber L100                    | P/N: PY1-MC02L (5 pcs)   |
| #4: Eco-Stick DF                              | P/N: PY1-ES20F (50 pcs)  |
| #5: MC holder S<br>(Flow through Eco-Cup LHF) | P/N: PY1-EC80HF (20 pcs) |
| #6: MC holder L                               | P/N: PY1-MCP01 (3 pcs)   |

## Analysis of Red Wine using MC-S500



## Operation of "Magic Chemisorber PDMS" Thermal desorption GC/MS, EGA (evolved gas analysis)



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