

“Magic Chemisorber”

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™ 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™ is placed in the 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.

Chemical bonded PDMS layer on a titanium tube
(Film thickness of Inside ~1µm, outside coating : 100 and 500µm)

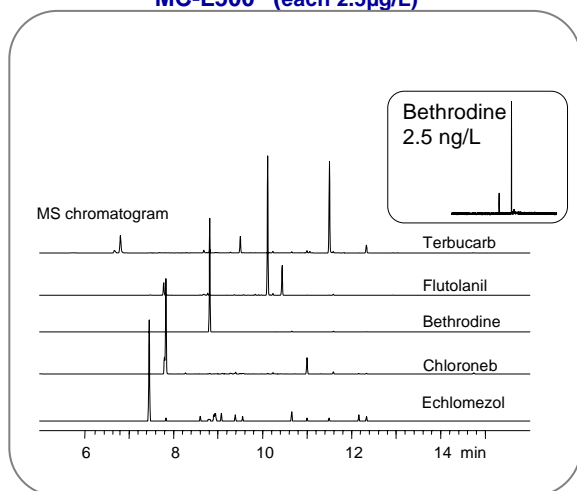


Three kinds of Magic Chemisorbers

Name	Model	Film thickness (µm)	Length (mm)	O.D. (mm)	Features
#1 Magic Chemisorber S	(MC-S500)	500	6	2.5	Available for Auto shot sampler (AS1020 of Frontier-LAB)
#2 Magic Chemisorber L500	(MC-L500)	500	30	2.5	Suitable for trace analysis
#3 Magic Chemisorber L100	(MC-L100)	100	30	1.5	Bleed is 1/100 that of MC-L500 at 250°C

New

Analysis of Pesticides in water using “MC-L500” (each 2.5µg/L)



Specifications of Magic Chemisorbers

	Magic Chemisorbers		
	S	L500	L100
Length	6 mm	30 mm	
Film thickness	500 µm		100 µm
Application	Low / Middle (C20 range)		Low / High (C30 range)
Max. recommended temperature	~300° C		
Bleed at 300°C in the thermal desorption mode	20	100	1
Extraction time is a function of the compounds of interest	~ 10 min.	~ 30 min.	~ 60 min.
Relative sensitivity	1	5	1
Available for Auto-shot sampler (AS-1020)	Yes	No	No

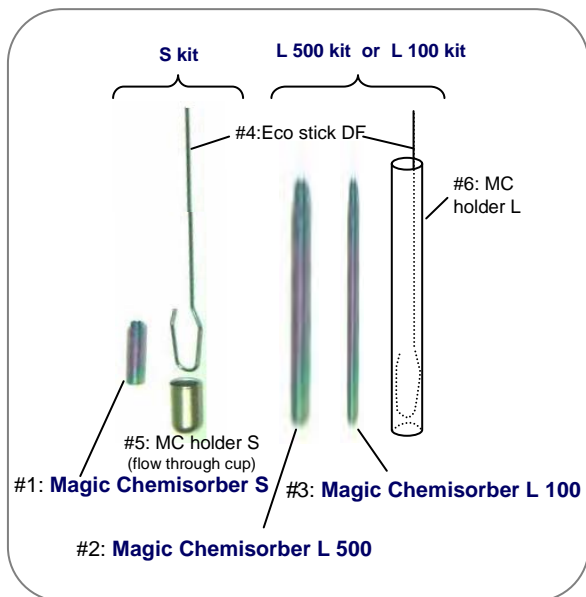


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Kits and Application

Magic Chemisorber Kits



Content of Kits and part numbers

STARTER KITS

Magic Chemisorber S kit (P/N: PY1-MC01S-K) :

- #1: Magic Chemisorber S qty 3
- #4: Eco stick DF qty 5
- #5: MC holder S qty 5

Magic Chemisorber L kit (P/N: PY1-MC01L-K) :

- #2: Magic Chemisorber L500 qty 3
- #4: Eco stick DF qty 5
- #6: MC holder L qty 2

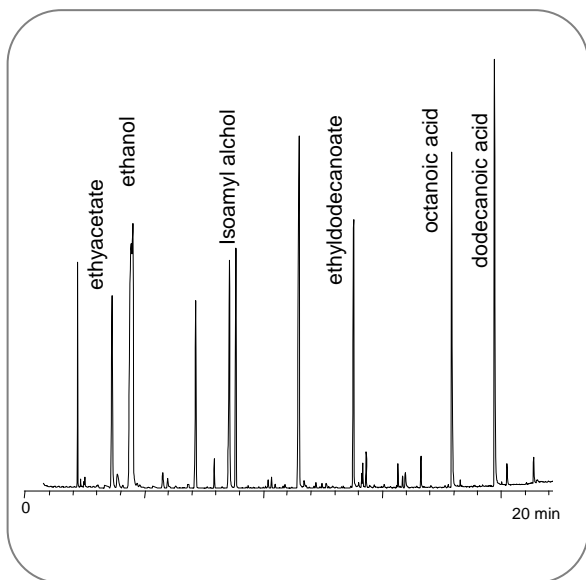
Magic Chemisorber L kit (P/N: PY1-MC02L-K) :

- #3: Magic Chemisorber L100 qty 3
- #4: Eco stick DF qty 5
- #6: MC holder L qty 2

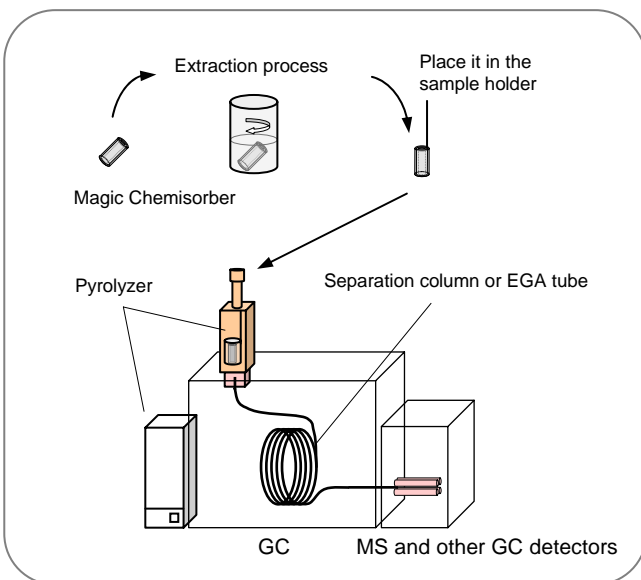
Single Parts (#1 through #5 in the left figure)

- | | | |
|----------------------------|--------------|-------------------|
| #1: Magic Chemisorber S | : PY1-MC01S | (a set of 10 pcs) |
| #2: Magic Chemisorber L500 | : PY1-MC01L | (a set of 5 pcs) |
| #3: Magic Chemisorber L100 | : PY1-MC02L | (a set of 5 pcs) |
| #4: Eco Stick DF | : PY1-ES20F | (a set of 50 pcs) |
| #5: MC holder S | : PY1-EC80HF | (a set of 20 pcs) |
| #6: MC holder L | : PY1-MCP01 | (a set of 3 pcs) |

Analysis of Red Wine using MC-S500



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



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