

주식회사 시마즈 사이언티픽 코리아

# 스펙트럼 소모품 제품안내



## Excellence in Science

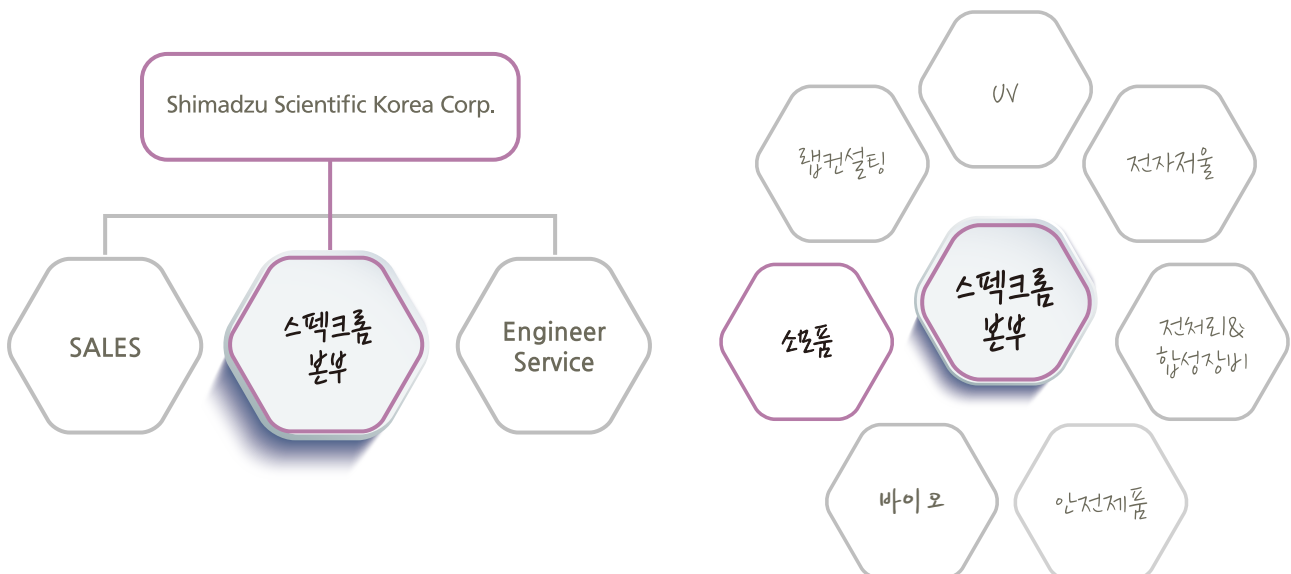
과학기술로 사회에 기여한다.

## 시마즈사이언티픽코리아는

연구개발·품질관리, 제조관리에 빼놓을 수 없는 분석·시험 장치의 판매·Service 제공과 분석·시험 장치에 필요한 주변기기·소모품을 전문적으로 취급하는 조직인 SpeChrom을 두어 분석·시험 분야의 Solution Provider가 되는 것을 목표로 하고 있습니다.

## SpeChrom 본부에서는

SHIMADZU 장비 및 소모품을 취급하며 국공립 연구기관, 기업연구소 및 대학 실험실에 **첨단 분석기기, 실험실 기자재, 기기 소모품** 및 시약을 전문으로 수입, 판매, 기술 지원하고 있습니다. 또한 **크로마토그래피 컬럼 및 약세서리를 전문적으로 제공하고 있습니다.** 공기, 물, 토양, 식품, 의약품, 화학 및 석유 제품의 품질을 모니터링하는데 필요한 혁신적인 제품들을 국내에 공급합니다.



# GC Column

Shimadzu GC/LC 컬럼은 가능한 최상의 분리를 제공하기 위해 엄격한 테스트를 거칩니다. 모든 GC/LC 컬럼은 해당 컬럼의 최대작동 온도에서 테스트되며, 해당 컬럼이 목표로 하는 응용자료를 기반으로 특정 테스트가 수행됩니다.

## Fused silica capillary



- 특정한 GC, GC/MS application 에 따른 다양한 컬럼 제공
- 1, 5, Wax, 624 등 다양한 고정상과 사양 보유

## PLOT – Fused silica and metal



- Permanent gas, solvent 와 hydrocarbon 의 효과적, 재현성있는 분석에 적합
- Alumina BOND/Na2SO4, Alumina BOND/KCl Msieve 5A, Q-BOND, U-BOND 등 보유

## Metal capillary



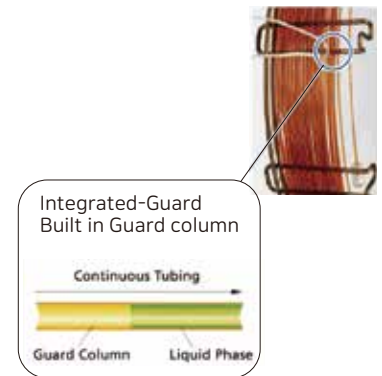
- 높은 온도의 GC분석에 이상적
- Drug, solvent impurity test, pesticide, hydrocarbon, PCB congeners, essential oil, semi-volatiled에 적합

## Packed columns



- 다양함 Support & 고정상 제공
- 분석물질, 재질에 따른 컬럼 추천 가능
- 주문제작 가능

## Integrated - Guard columns

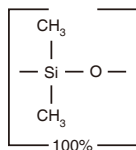


- 가드컬럼과 본 컬럼의 일체형
- 별도의 커넥터 액세서리가 불필요함
- Leak, Dead-volume, 피크변형 없음

## SH GC Capillary Column

**SH-I-1MS****SH-I-1HT, SH-1**

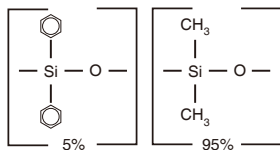
Dimethyl polysiloxane



Similar to: (100%-methyl)-polysiloxane  
 Polarity: nonpolar  
 Uses: solvents, petroleum products, [G1] pharmaceutical samples, waxes [G2] [G38]

**SH-I-5MS, SH-I-5HT,****SH-5, SH-5MS**

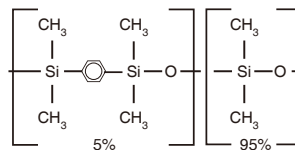
Diphenyl dimethyl polysiloxane



Similar to: (5%-phenyl)-methylpolysiloxane  
 Polarity: slightly polar  
 Uses: flavors, environmental, [G27] aromatic hydrocarbons [G36]

**SH-I-5Siil MS**

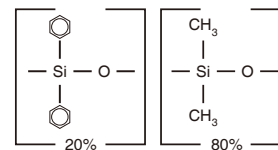
1,4-bis(dimethylsiloxy)phenylene dimethyl polysiloxane



Similar to: (5%-phenyl)-methylpolysiloxane  
 Polarity: slightly polar  
 Uses: flavors, environmental, pesticides, PCBs, aromatic hydrocarbons

**SH-20**

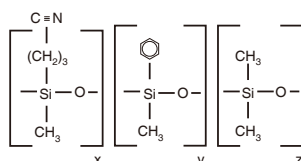
Diphenyl dimethyl polysiloxane



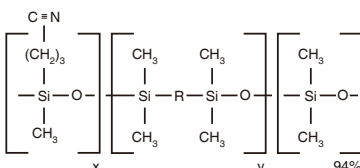
Similar to: (20%-phenyl)-methylpolysiloxane  
 Polarity: slightly polar  
 Uses: volatile compounds, alcohols [G28] [G32]

**SH-1301, SH-624**

Cyanopropylmethyl phenylmethyl polysiloxane



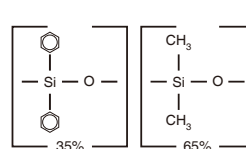
Similar to: (6%-cyanopropylphenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: volatile compounds, insecticides [G43]

**SH-I-624Siil MS**

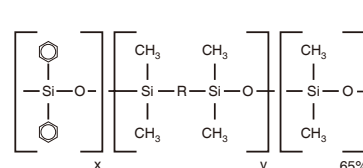
Similar to: (6%-cyanopropylphenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: volatile compounds, insecticides, residue solvents in pharmaceutical products

**SH-35, SH-35 MS**

Diphenyl dimethyl polysiloxane



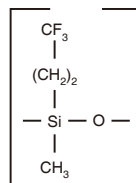
Similar to: (35%-phenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: pesticides, PCBs, amines, [G42] nitrogen-containing herbicides

**SH-I-35Siil MS**

Similar to: (35%-phenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: pesticides, PCBs, amines, nitrogen-containing herbicides

**SH-200, SH-200MS**

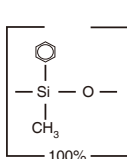
Trifluoropropylmethyl polysiloxane



Similar to: (trifluoropropyl)-methylpolysiloxane  
 Polarity: selective for lone pair electrons  
 Uses: environmental, solvents, Freon® gases, [G6] drugs, ketones, alcohols

**SH-50**

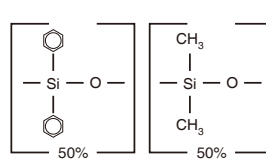
Phenyl methyl polysiloxane



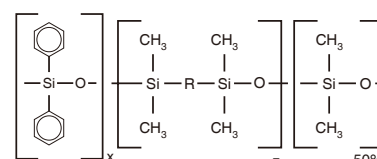
Similar to: (50%-phenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: FAMES, carbohydrates [G3]

**SH-I-17**

Diphenyl dimethyl polysiloxane



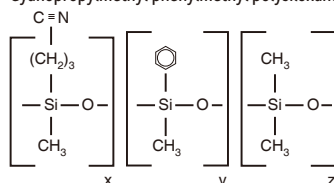
Similar to: (50%-phenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: triglycerides, phthalate esters, steroids, phenols [G3]

**SH-I-17Siil MS**

Similar to: (50%-phenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: triglycerides, phthalate esters, steroids, phenols [G3]

**SH-1701**

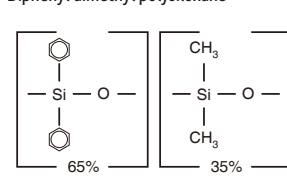
Cyanopropylmethyl phenylmethyl polysiloxane



Similar to: (14%-cyanopropylphenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: pesticides, PCBs, alcohols, oxygenates [G46]

**SH-65, SH-65TG**

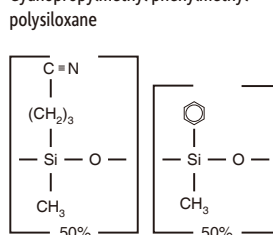
Diphenyl dimethyl polysiloxane



Similar to: (65%-phenyl)-methylpolysiloxane  
 Polarity: intermediately polar  
 Uses: triglycerides, rosin acids, free fatty acids [G17]

**SH-225**

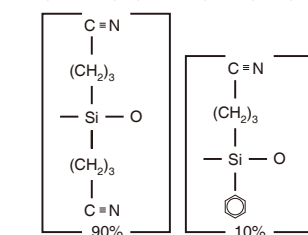
Cyanopropylmethyl phenylmethyl polysiloxane



Similar to: (50%-cyanopropylmethyl)-methylphenylpolysiloxane  
 Polarity: polar  
 Uses: FAMES, carbohydrates [G7] [G19]

**SH-2330**

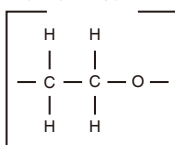
Biscyanopropyl cyanopropylphenyl polysiloxane



Similar to: (95%-cyanopropyl)-phenyl polysiloxane  
 Polarity: polar  
 Uses: cis/trans FAMES, dioxin isomers, rosin acids [G8] [G48]

**SH-PolarWax, SH-Wax, SH-PolarWax MS**

Polyethylene glycol



Polarity: polar  
 Uses: FAMES, flavors, acids, amines, solvents, xylene isomers [G14] [G15] [G16] [G20] [G39]



\* Metal capillary 컬럼에도 적용됩니다.



SH GC 컬럼 가이드


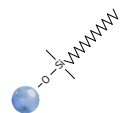

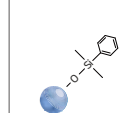
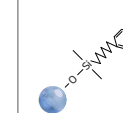
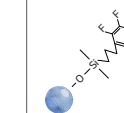
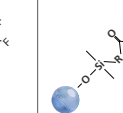
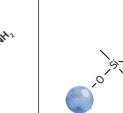
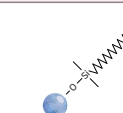

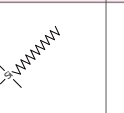
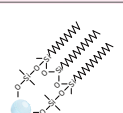


# LC Column

컬럼 타입	컬럼 시리즈	특징
UHPLC/HPLC Columns (일부 Preparative Columns)	Shim-pack Arata	염기성 화합물 & peptide의 resolution 과 peak shape 보장
	Shim-pack Scepter	넓은 이동상 범위에서 우수한 안정성과 성능, Analytical에서 Prep 까지 확장
	Shim-pack Velox	Core shell 기술을 통해 LC분리 효율 극대화
	Shim-pack G	범용적으로 사용하며 다양한 고정상 제공, Analytical 에서 Prep 까지 확장
	Shim-pack XR	빠른 분석
	Shim-pack VP	엄격한 생산관리로 높은 재현성
	Shim-pack MAqC-ODS	염기성 화합물의 강한 머무름 제공
	Shim-pack FC-ODS	기존의 시스템을 사용하여 분석 시간 단축
	Mastro2	Metal free 컬럼
	Shim-pack PREP	15 µm 입자로 충전된 Prep 컬럼
Microscale Columns	Shim-pack MC PLONAS	SPP 기술로 최상의 성능
	Shim-pack MC	내구성 및 다용도
	Shim-pack MCT	Metal 흡착을 억제한 Trap 컬럼
	Shim-pack MCT L	Gradient delay 를 최소화하기 위한 낮은 부피 Trap 컬럼
SFC Columns	Shim-pack UC	다양한 요구를 충족시키는 다양한 고정상 제공
	Shim-pack PREP	일반적인 분취 목적
Size Exclusion Columns	Shim-pack GPC	Organic SEC(GPC) 컬럼
	Shim-pack Bio Diol	Aqueous SEC(GFC) 컬럼 - peptide, oligonucleotide, 바이오의약품의 aggregate와 fragment 분석
	Shim-pack Diol	Aqueous SEC(GFC) 컬럼
Ion Exchange Columns	Shim-pack Bio IEX	Polymer based IEX 컬럼 - peptide, oligonucleotide, 바이오의약품 분석
	Shim-pack WAX/WCX	Silica based IEX 컬럼
Ion Chromatography Columns	Shim-pack IC	Ion 분석을 위한 컬럼
Hydrophobic Interaction Chromatography Columns	Shim-pack Bio HIC	ADC의 DAR 분석을 위한 HIC컬럼
Dedicated Columns	Shim-pack Amino Series	post-column derivatization amino acid 분석을 위한 Ion exchange column
	Shim-pack Fast-OA Shim-pack SCR Series	빠른 유기산 분석 컬럼 ligand exchange + size exclusion + ion exclusion mode - monosaccharides와 organic acids 분석
	Shim-pack ISC Series	guanidino compounds 분석용 (ISC-05)
Pretreatment Columns	Shim-pack MAYI Series	생물학적 샘플 전처리 컬럼
	Shim-pack SPC Series	컬럼 스위칭 방법을 활용하여 online 샘플 전처리
Mobile Phase Cleaner for UHPLC/HPLC	Ghost Trap DS/DS-HP	유기용매에서도 불순물을 지속적으로 잡는 Trap
	GLC Suction Filter2	HPLC system에서 오염물질 제거

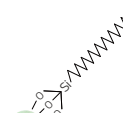


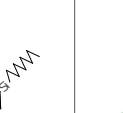

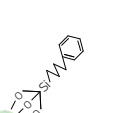
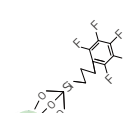


Shim-pack LC컬럼 가이드

## Shim-pack G Series - Fully Porous Silica Particle Based Column Series

	Shim-pack GIST							
	Reversed Phase						HILIC	
	C18	C18-AQ	C8	Phenyl	Phenyl-Hexyl	PEPP	Amide	NH2
Chemistry								
Features	Ultra-high inertness and high stability	Excellent retentivity of highly polar compounds	Ultra-high inertness and high stability	Extremely strong $\pi$ - $\pi$ interactions	Alternative selectivity to C18 columns	Excellent retentivity of highly polar base	First choice HILIC column	Sugar analysis
Particle Size ( $\mu\text{m}$ )	2, 3, 5	1.9, 3, 5	2, 3, 5	2, 3, 5	3, 5	3, 5	1.9, 3, 5	3, 5
Pore Size (nm)	10	10	10	10	10	10	10	10
Surface Area ( $\text{m}^2/\text{g}$ )	350	350	350	350	350	350	350	350
Carbon Loading (%)	14	13	8	10	9	10	15	7
End Cap	Yes	Yes	Yes	No	Yes	Yes	No	No
pH Range	1-10	1-10	1-10	2-7.5	1-10	2-7.5	2-8.5	2-7.5
USP Code	L1	L1	L7	L11	L11	L43	L68	L8
	Shim-pack GISS	Shim-pack GIS					HILIC	
	Reversed Phase	Reversed Phase			Normal Phase/RP	HILIC		
	C18	C18	C18-P	RP-Shield	CN	HILIC		
Chemistry								
Features	High speed analysis with ultra-high inertness and high stability	High retentivity, lower column back pressure, high inertness	High steric selectivity	Embedded with a polar functional group	Suitable in either reversed phase or normal phase mode	Ideal for the separation of highly polar basic compounds		
Particle Size ( $\mu\text{m}$ )	1.9, 3, 5	2, 3, 4, 5, 10	3, 5	5	3, 5	3, 5		
Pore Size (nm)	20	10	10	10	10	10		
Surface Area ( $\text{m}^2$ )	200	450	450	450	450	450		
Carbon Loading (%)	9	15	29	9	14	20		
End Cap	Yes	Yes	No	No	No	No		
pH Range	1-10	2-7.5	2-7.5	2-7.5	2-7.5	2-7.5		
USP Code	L1	L1	L1	L1	L10	L20		

## Shim-pack Scepter™ Series - Fully Porous Hybrid Particle Based Column

	Reversed Phase						HILIC
	C18	HD-C18	C8	C4	Phenyl	PFPP	Diol-HILIC
Chemistry							
Bonded Phase	Octadecyl groups	Octadecyl groups (High Density type)	Octyl group	Butyl groups	Phenylbutyl groups	Pentafluorophenyl propyl groups	Dihydroxypropyl groups
Features	First choice hybrid column for general purpose	Better selectivity for isomers and structural analogs	Fast analysis of isomers	Well suited for mAb analysis	Complementary selectivity to ODS with $\pi$ - $\pi$ interaction	Selectivity for structural isomers and halogenated compounds	Highly chemically stable HILIC column
Particle	Organic Silica Hybrid						
Particle Size ( $\mu\text{m}$ )	1.9, 3, 5						
Pore Size (nm)	12	8	12	30	12		
End Capping	Proprietary					None	
pH Range	1 - 12			1 - 10	1 - 10	1 - 8	2 - 10
100% aqueous condition	Yes	No	No	Yes	Yes	Yes	N/A
USP Code	L1	L1	L7	L26	L11	L43	L20

## Shim-pack Velox™ Series - Maximize LC Separation with Core Shell Technology



	Reversed Phase				HILIC
	SP-C18	C18	Biphenyl	PFPP	
Chemistry					
Features	Sterically protected to resist strongly acidic mobile phase	General purpose core shell column for RP chromatography	Enhanced separation of aromatic compounds	Alternative selectivity to C18 columns	Increased retention of polar analytes
Particle Size (µm)	1.8, 2.7, 5	1.8, 2.7, 5	1.8, 2.7, 5	1.8, 2.7, 5	2.7
Pore size (Å)	90	90	90	90	90
Surface Area (m <sup>2</sup> /g)	1.8 µm	125	125	125	
	2.7 µm	130	130	130	130
	5 µm	100	100	100	
Carbon Load (%)	1.8 µm	7	9	7	
	2.7 µm	7	7	7	N/A
	5 µm	5	5	5	
End-Cap	No	YES	Yes	No	N/A
pH range	1-8	2-8	1.5-8	2-8	2-8
USP Code	L1	L1	L11	L43	L3
Max Pressure (MPa)	1.8 µm	100 *	100 *	100 *	
	2.7 µm	60	60	60	60
	5 µm	40	40	40	

\* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 80 MPa.

 3-10 µm > 3-4.6 mm i.d.  2.7-5 µm 3-4.6 mm i.d.	 1.9-3 µm 2.1-3 mm i.d.  2.7 µm 2.1-3 mm i.d.	 < 2 µm 2.1 mm i.d.  < 2 µm 2.1 mm i.d.
<b>Nexera xs</b> Ultra High Performance Liquid Chromatograph [105MPa]	<b>Nexera x3</b> Ultra High Performance Liquid Chromatograph [130MPa]	It is compatible with a wide range of analysis conditions from conventional HPLC analysis to ultra-high separation analysis.
<b>Nexera XR</b> Ultra High Performance Liquid Chromatograph-like [70MPa]	This UHPLC-like model is the new standard for the Shimadzu LC series.	 Fully porous particles (FPP)  Superficially porous particles (SPP) 
<b>Nexera lite</b> Ultra High Performance Liquid Chromatograph [44MPa]	A conventional HPLC model	

# Vial

## 1.5 mL 2 in 1 Vial Kit



제품번호	226-54110-31(Clear) 226-54111-41(Amber)
제품명	1.5mL Write On Spot Vial With Cap
Vial Material	Clear Glass with label and filling line
Capacity	1.5mL
Vial Outer Diameter	11.6mm
Vial Bore Diameter	9.0mm
Cap Material / Color	Polypropylene / Blue
Septum Material	PTFE / Silicone

## Certified Vial Kit

### 성적서가 포함된 2mL 바이알 키트



제품번호	227-34001-01
제품명	Lab Total Vial Certified Kit
Vial Material	Clear Glass with writing patch
Capacity	2mL
Vial Outer Diameter	12mm
Vial Bore Diameter	9.0mm
Cap Material / Color	Polypropylene / Black
Septum Material	PTFE / Silicone

## Head Space Vial & Cap

제품번호	제품명	장비
Screw Vial & Cap		
226-84510-01	20ml, 18mm, Clear glass, Rounded Bottom Screw Vial, 100/pk	공통
226-84513-01	18mm, Screw Magnetic Cap, Silicone/PTFE, 100/pk	
HS Crimp Vial & Cap		
82101-2022	20ml, Crimp Clear HS Vial, Rounded Bottom, 75.5 x 22.5mm, 100/pk	공통Cap AOC-20 AOC-5000, AOC-6000
226-84525-11	20ml, Aluminum, Crimp Cap, Silicone/PTFE, 100pk	AOC-20
88827-20010	20ml, Crimp Magnetic Cap, Silicone/PTFE, 100pk	AOC-5000 AOC-6000
82001-2022(A)	20ml Crimp Clear HS Vial, Flat Bottom, 75.5 x 22.5mm, 100/pk	Agilent용
226-84525-11	20mm, Aluminum, Crimp Cap, Silicone/PTFE, 100pk	
87101-2022	20ml Crimp Clear HS Vial, Rounded Bottom, 75.5 x 23mm, 100/pk	Tekmar용
226-84525-11	20mm, Aluminum, Crimp Cap, Silicone/PTFE, 100pk	



수동 타입 (20mm) : Crimper 227-35506-02  
Decapper 227-35507-02

## Filter Vial



제품번호	제품명
25891	Filter Vials, 0.2um Nylon w/pre-slit cap, 100pk, Thomson SINGLE StEP Black Cap
25897	Filter Vials, 0.2um PES w/pre-slit cap, 100pk, Thomson SINGLE StEP Grey Cap
25893	Filter Vials, 0.2um PTFE w/pre-slit cap, 100pk, Thomson SINGLE StEP Green Cap
25895	Filter Vials, 0.2um PVDF w/pre-slit cap, 100pk, Thomson SINGLE StEP Red Cap

## Precleaned Volatile Organic Analyte (VOA) Sampling Vials

- Cleaned to U.S. EPA Protocol B
- U.S. EPA Protocol B에 따른 세척



제품번호	Description	Volume	Color	Material	Screw-Thread Size	qty
21798	Precleaned VOA Vials	20mL	Clear	Glass	24 mm/400	72-pk
21799	Precleaned VOA Vials	20mL	Amber	Glass	24 mm/400	72-pk
21796	Precleaned VOA Vials	40mL	Clear	Glass	24 mm/400	72-pk
21797	Precleaned VOA Vials	40mL	Amber	Glass	24 mm/400	72-pk



## GC 효율을 높이는 소모품

	제품번호	제품명
A - Gas Filter	226-50712-00	Shimadzu Carrier Gas Filter kit
	226-50730-00	Shimadzu Gas Filter kit for GC-FID/FPD
B - Flowmeter	22656	Restek ProFLOW 6000 Electronic Flowmeter
C - Leak Detector	28500	Restek Electronic Leak Detector



## 자주 문의하는 Shimadzu 소모품

	제품번호	제품명	
A - Syringe	221-34618	10ul Syringe for AOC-20i	
	221-75175-02	10ul Syringe for AOC-5000 Plus	
B - Liner	569600	Split, w/wool, 5/pk	
	556749	Splitless Liner w/wool, 5/pk	
C - Septa	S201-35584	Rubber Septum, 250°C, 20/pk	
	221-48398-91	HT Septum, 450°C, 20/pk	
	221-75180	Enduro Septum, 350°C, 50/pk	
D - O-ring	S036-11203-84	Viton O-ring, 250°C, 5/pk	
E - Ferrules	S221-32126-05	Graphite Ferrule 0.5, 10/pk	For 0.1 - 0.32 mmID columns
	S221-32126-08	Graphite Ferrule 0.8, 10/pk	For 0.53 mmID columns
	670-15003-03	Graphite Vespel, 10/pk	For 0.1 - 0.25 mmID columns
	670-15003-04	Graphite Vespel, 10/pk	For 0.32 mmID columns
	670-15003-07	Graphite Vespel, 10/pk	For 0.53 mmID columns



제품번호	제품명	구성품
227-35013-01	GCMS Entry Kit	Syringe, Ferrules, Septa, Liners, O-ring, SS nut
227-35012-01	GC-2030 Consumables Kit	Syringe, Ferrules, Septa, Liners, O-ring
227-35003-01	Standard Accessory Kit for GC-2030	Septa, Liners, O-ring, Ferrules



## 타사 장비에 사용되는 GC 소모품

### Liner

	Agilent	Bruker/Varian	PerkinElmer	Thermo
Split	23305   23300	23328	23450   23449	23444   23267
Splitless	23303   23302	23332   23331	23451	23447   23446



### Septa 11mm

제품번호	제품명	장비
27142	Thermolite Septa, 50/pk	Agilent 5890/6890, PerkinElmer all, Thermo TRACE 1300/1310, Bruker 1075/1077 GC 호환
27090	Premium Non-Stick BTO Septa, 50/pk	



## Mobile phase cleaner column - Ghost Trap DS

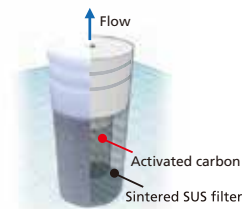
Item	제품번호	제품명	Dimensions	Internal Volume	Pressure Tolerance
Ghost Trap DS	228-59921-91	Cartridge (2pcs)	30 mmL. × 7.6 mmI.D.	Approx. 700 µL	35 MPa
	228-59921-92	Cartridge (2pcs) + Holder			
	228-59921-93	Cartridge (2pcs)	4.0 mmI.D. × 20 mmL.	Approx. 150 µL	
	228-59921-94	Cartridge (2pcs) + Holder			
Ghost Trap DS-HP	228-59931-91	Packed type	2.1 mmI.D. × 30 mmL.	Approx. 60 µL	100 MPa



Ghost peak의 효과적 제거!

## 이동상의 여과를 위한 LC소모품 - Suction filter

제품번호	제품명	Spec
370-02010-01	GLC Suction Filter 2	Connecting tube : 3.0 mm outer diameter suction tube Internal volume : 0.7 mL



# 전처리

## Sampling Bag

- 경량화 및 사용 편의성
- 0.5-100L 다양한 사이즈 제공
- Syringe Point style 5 사용

## Tedlar Bag

- 많은 EPA method 에 적합
- 내구성



Volume	Size	PP Valve & Septum Fitting		SUS Push/Pull Valve & Septum Fitting		SUS Push/Pull Valve Only	
		qty	제품번호	qty	제품번호	qty	제품번호
0.5 L	6" x 6"	10-pk	22049	10-pk	27380	10-pk	27390
1 L	7" x 7"	10-pk	22050	10-pk	27381	10-pk	27391
3 L	9.5" x 10"	10-pk	22051	10-pk	27382	10-pk	27392
5 L	12" x 12.5"	10-pk	22052	10-pk	27383	10-pk	27393
10 L	11.75" x 22"	10-pk	22053	10-pk	27384	5-pk	27394
12 L	13" x 24"	10-pk	22054	10-pk	27385	5-pk	27395
25 L	17.5" x 24"	5-pk	22055	5-pk	27386	5-pk	27396
40 L	24" x 24.25"	5-pk	22056	5-pk	27387	5-pk	27397
80 L	29.25" x 30.5"	5-pk	22057	5-pk	27388	5-pk	27398
100 L	28" x 36"	3-pk	22058	3-pk	27389	3-pk	27399

## Multi-Layer Foil Gas Sampling Bags

- 저분자 화합물(CH<sub>4</sub>, H<sub>2</sub>S, CO, CO<sub>2</sub>)에 적합



Volume	Size	qty	제품번호
1 L	7" x 7"	5-pk	22950
3 L	10" x 10"	5-pk	22951
5 L	12" x 12"	5-pk	22952
10 L	12" x 22"	5-pk	22953
12 L	13" x 24"	5-pk	22966
25 L	18" x 24"	5-pk	22967
40 L	24" x 24.5"	5-pk	22968
PTFE-Faced Silicone Replacement Septum, 4mm dia.			10-pk 22104

## TD tube

- Shimadzu, Markes (ULTRA and UNITY), PerkinElmer 장비 호환
- Tenax, Carbon 등 폭넓은 흡착제 제공



	qty	Unconditioned		Conditioned & Capped	
		SUS	Glass	SUS	Glass
		제품번호	제품번호	제품번호	제품번호
Tenax TA	10-pk	24056	24062	24080	24086
Graphitized Carbon	10-pk	24057	24063	24081	24087
Tenax Carboxen B	10-pk	24058	24064	24082	24088
Carboxen B/Carbosieve SIII	10-pk	24059	24065	24083	24089
Tenax TA/Graphitized Carbon /Carboxen 1000	10-pk	24060	24066	24084	24090
Carboxen C/Carboxen B	10-pk	24061	24067	24085	24091

TD tube sorbent	Applications
Tenax TA	C6/7 to C26
Graphitized Carbon	C5/6 to C14
Tenax GR/ Carboxen B	n-C5/6 to n-C20 (EPA Methods TO-14A/TO-15/TO-17)
Carboxen B/ Carboxen SIII	n-C2/3 to n-C12/14 (EPA Methods TO-14A/TO-15/TO-17)
Carboxen C/Carboxen B / Carboxen SIII	n-C2/3 to n-C16/20 (EPA Methods TO-14A/TO-15/TO-17)

## Passive Air sampler Radiello badges

- Radial 360° 설계로 높은 감도 제공
- Passive Air sampler (Pump 불필요)



### Starter Kits

Adsorbent Cartridge 2개, Barcode label, Triangular base plate, Diffusive body, Vertical adapter, Instruction sheet 포함

제품번호	제품명
For Chemical Desorption	
RAD130S	VOC/BTEX sampler
For Thermal Desorption	
RAD145S	VOC/BTEX sampler
RAD141S	1,3-Butadiene/Isoprene sampler

## Shimadzu SPME Arrows

- Arrow 형태로 표면적 증대시켜 추출 시간 단축
- 향상된 내구성 및 긴 수명
- 인젝터 섀프트도 더 긴 수명 제공

\* 일반 SPME Fiber도 보유

### +Liner for SPME Arrows For SSL injector of GC-2010 / GC-2030

Inner diameter [mm]	제품명 ( pack of 3 pcs. )
1.3	227-35327-03
1.7	227-35328-03



Phase Type	OD (mm)	Phase thickness (µm)	Color	제품번호 (Pack of 1 pc)
1. Polydimethylsiloxane (PDMS)	1.5	100	Red	227-35309-01
2. Carbon Wide Range (WR)/PDMS	1.5	120	Light Blue	227-35306-01
3. Divinylbenzene (Dvb)/PDMS	1.5	120	Violet	227-35308-01
4. DVB/Carbon WR/PDMS	1.5	120	Dark Grey	227-35307-01
5. Polydimethylsiloxane (PDMS)	1.5	120	Black	227-35310-01

# 전처리

## SPE (Solid phase extraction)



- 복잡한 매트릭스에서 시료의 간섭 최소화
- Silica, Polymer-base 고정상 모두 제공

제품번호	제품명
28452	HLB 6ml/500mg 30pk
28458	MAX 6ml/500mg 30pk
28464	MCX 6ml/500mg 30pk
26030	C18 1mL/100mg 100pk
28993	Florisil 1000mg/6ml pk 30
25845	CarboPrep Plus 3mL 95mg 30pk
26032	EPA Method 521 & 522 6mL/2g Activated Charcoal 30pk

## SLE (Supported liquid extraction)



- SPE 및 액체 추출(LLE)보다 빠르고 쉬움
- 3 step : Load, 5분 Wait, Elute!
- 빠른 농축 단계를 통해 높은 감도

제품번호	제품명
28302	Resprep SLE 200mg/3ml 50pk
28303	Resprep SLE 400mg/3ml 50pk
28304	Resprep SLE 96-well plate 200mg
28305	Resprep SLE 96-well plate 400mg

## Vacuum Manifold



- 각 SPE 포트의 개별 밸브를 통해 정밀한 유량 제어 가능
- 모든 표준 male luer SPE cartridge와 호환

제품번호	제품명
28298-VM	Resprep QR-12 Vacuum Manifold
28299-VM	Resprep QR-24 Vacuum Manifold

## QuEChERS



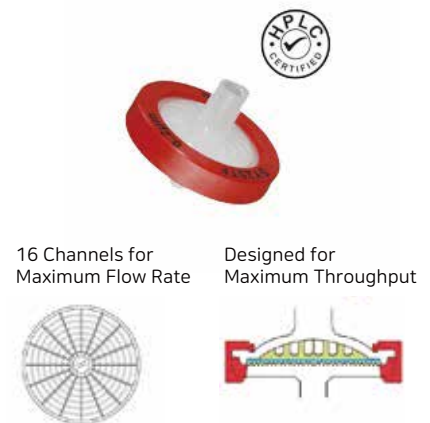
- 식품 내 잔류농약의 효과적인 전처리 소모품
- Extraction & Clean up kit : Ready-to use 제품으로 제공
- Original unbuffered, AOAC(2007.01), European (EN 15662)법에 따른 다양한 제품


제품번호	제품명
25847	QuEChERS extraction, Unbuffered Original Method 4g MgSO <sub>4</sub> , 1g NaCl packets only, 50pk
26226	QuEChERS Q373 15mL Centrifuge Tube, 900mg MgSO <sub>4</sub> , 150mg PSA, 150mg C18, 50pk
26216	QuEChERS Q211 2mL Micro-Centrifuge Tube, 150mg MgSO <sub>4</sub> , 25mg PSA, 25mg C18, 100pk
26215	QuEChERS Q210 Micro-Centrifuge Tube 2mL 150mg, MgSO <sub>4</sub> , 25mg PSA, 100pk

## Syringe Filter

- 효과적인 여과를 위한 제품
- 16채널 특수 설계로 뛰어난 샘플 처리량
- 다양한 재질 및 스펙 제공(Nylon, PTFE, PP, PES, PVDF)
- HPLC certified

제품번호	제품명
SP-NY-25-02	Nylon Syringe Filter, 25mm, 0.2um (100/PK) / SYNN0601MNXX104
SP-NY-25-04	Nylon Syringe Filter, 25mm, 0.45um (100/PK) / SYNN0602MNXX104
SP-PT-13-02	PTFE Syringe Filter, 13mm, 0.2um (100/PK) / SYTF0301MNXX104
SP-PT-13-04	PTFE Syringe Filter, 13mm, 0.45um (100/PK) / SYTF0302MNXX104
SP-PT-25-02	PTFE Syringe Filter, 25mm, 0.2um (100/PK) / SYTF0601MNXX104
SP-PT-25-04	PTFE Syringe Filter, 25mm, 0.45um (100/PK) / SYTF0602MNXX104
SP-VG-25-04	PVDF Syringe Filter, 25mm, 0.45um, Pre-filter (100/PK) / SYVG0602MNXX104





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[www.spechrom.com](http://www.spechrom.com)

 **SHIMADZU** | Shimadzu Scientific Korea Corp.

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서울사무소 Tel. 02-540-5061 Fax. 02-3442-6737 대구사무소 Tel. 053-746-5541 Fax. 053-746-5560 여수사무소 Tel. 061-921-5542 Fax. 061-921-5543 전주사무소 Tel. 063-273-5540 Fax. 063-273-5547  
기술연구소 Tel. 042-864-1161 Fax. 042-864-1164 천안사무소 Tel. 041-910-5670 Fax. 041-910-5672 울산사무소 Tel. 052-249-5541 Fax. 052-249-2163