

Laboratory Product Catalogue



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Sartorius Lab Products

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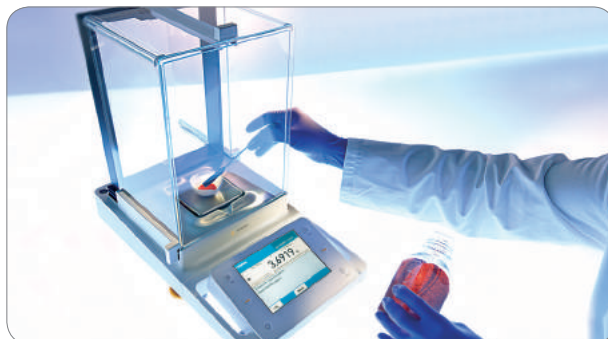
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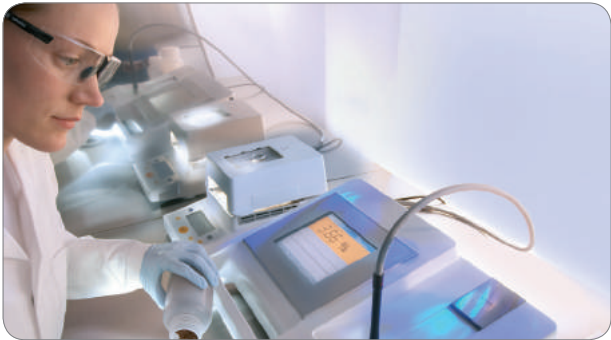
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Picus Electronic Pipette

Revolutionize your pipetting

- 세계 최초 초소형 초경량 전동 Pipettes
- 더 정확하고 정밀한 pipetting을 위한 차세대 신기술 강화된 DC-Motor, 광학센서, 전동 브레이크 시스템 적용
- 프로그램 조작이 편리한 user interface
- 인체공학적 디자인으로 안정된 그림과 편안한 작업 환경
- 회로보호기능이 있는 Li-Polymer 배터리를 사용하여 1시간의 빠른 충전과 오랜 수명 보장
- 넓은 volume coverage와 모든 application에 편리하게 응용가능한 다양한 프로그램과 부가 기능



Ordering Information

Order No. Picus NxT/ Picus	Channels	Volume Range (µl)	Increment (µl)	Test Volume (µl)	Inacc. (%)	Impr. (%)	Safe-Cone Standard	Filters Plus	Optifit Tips (µl)	SafetySpace™ Filter Tips (µl)
LH- 745021 735021	1	● 0.2-10	0.01	10 5 1	0.90 1.00 2.50	0.40 0.70 1.50	-	-	10	10
LH- 745041 735041	1	● 5-120	0.10	120 60 12	0.40 0.60 2.00	0.15 0.20 1.00	721008	721018	200 350	120
LH- 745061 735061	1	● 10-300	0.20	300 150 30	0.40 0.60 1.50	0.15 0.20 0.80	721007	721017	350	300
LH- 745081 735081	1	● 50-1000	1.00	1000 500 100	0.40 0.60 1.50	0.15 0.20 0.50	721006	721016	1000	1000
LH- 745101 735101	1	● 100-5000	5.00	5000 2500 500	0.50 0.80 1.00	0.15 0.20 0.40	721005	721015	5000	-
LH- 745111 735111	1	● 500-10000	10.00	10000 5000 1000	0.60 1.20 3.00	0.20 0.30 0.60	721005	721015	10000	-
LH- 745321 735321	8	● 0.2-10	0.01	10 5 1	0.90 1.50 4.00	0.50 0.80 3.00	-	-	10	10
LH-745341 735341	8	● 5-120	0.10	120 60 12	0.50 0.70 2.00	0.20 0.30 1.50	721008	721018	200 350	120
LH-745361 735361	8	● 10-300	0.20	300 150 30	0.50 0.70 2.00	0.20 0.30 1.00	721007	721017	350	300
LH-745391 735391	8	● 50-1200	1.00	1200 600 120	0.50 1.00 2.50	0.20 0.30 1.00	721006	721016	1200	1200
LH-745421 735421	12	● 0.2-10	0.01	10 5 1	0.90 1.50 4.00	0.50 0.80 3.00	-	-	10	10
LH-745441 735441	12	● 5-120	0.10	120 60 12	0.50 0.70 2.00	0.20 0.30 1.50	721008	721018	200 350	120
LH-745461 735461	12	● 10-300	0.20	300 150 30	0.50 0.70 2.00	0.20 0.30 1.00	721007	721017	350	300
LH-745491 735491	12	● 50-1200	1.00	1200 600 120	0.50 1.00 2.50	0.20 0.30 1.00	721006	721016	1200	1200

* All pipettes include universal AC-adaptor (EU, UK, US/JPN, AUS and CHN plugs)

Pipetting modes

Main mode	Additional functions						
	Picus NxT					Repeated Blow-out	Fast Dispensing
	Tracker	Mixing	Picus Counter	Excess Volume Adjustment	Auto Dispensing		
Pipetting	•	•	•			•	
Reverse Pipetting	•		•	•			
Manual Pipetting						•	
Multi Dispensing	•			•	•		
Diluting		•				•	
Sequential Dispensing				•			
Multi Aspiration						•	
Titrate							•
Protocols		•		•	•	•	•

■ eLINE® Electronic Pipette

Proven performance and ergonomics

- 특허받은 DC-Motor 기술 적용으로 입증된 accuracy와 precision
- 사용자의 경험에 따른 오차없이 실험이 가능한 전동 pipettes
- 특허받은 전동 tip ejection 기능
- 미세 볼륨 dispensing 시 vessel wall의 접촉 없이도 잔량이 없는 Super-pipetting 기능 (eLINE 0.1-5 µl model)
- Multi dispensing 시 수동 pipettes에 비해 2배 이상 빠른 업무 항상 보장
- Error control 기능을 내재하여 신뢰할 수 있는 pipetting 성과 보장
- 모든 application에 응용가능한 다양한 프로그램 적용



Ordering Information

Order No.	Channels	Volume Range (µl)	Increment (µl)	Test Volume (µl)	Inacc. (%)	Impr. (%)	Safe-Cone Filters Standard	Plus	Optifit Tips (µl)	SafetySpace™ Filter Tips (µl)
73001x	1	 0.1-5	0.05	5	1.20	0.70	-	-	10	10
				2.5	1.70	1.20				
				0.5	9.50	8.00				
73002x	1	 0.2-10	0.05	10	0.90	0.40	-	-	10	10
				5	1.00	0.70				
				1	3.50	2.30				
73004x	1	 5-120	0.50	120	0.40	0.15	721008	721018	200	120
				60	0.60	0.20			350	
				12	2.00	1.00				
73006x	1	 10-300	1.00	300	0.40	0.15	721007	721017	350	300
				150	0.60	0.20				
				30	1.50	0.80				
73008x	1	 50-1000	5.00	1000	0.40	0.15	721006	721016	1000	1000
				500	0.60	0.20				
				100	1.50	0.50				
73010x*	1	 100-5000	10.0	5000	0.50	0.15	721006	721016	5000	-
				2500	0.80	0.20				
				500	1.00	0.40				
73032x	8	 0.2-10	0.05	10	0.90	0.50	-	-	10	10
				5	1.50	0.80				
				1	4.00	3.00				
73034x	8	 5-120	0.50	120	0.80	0.20	721008	721018	200	120
				60	0.70	0.30			350	
				12	3.00	1.50				
73036x	8	 10-300	1.00	300	0.50	0.20	721007	721017	350	300
				150	0.70	0.30				
				30	2.00	1.00				
73039x	8	 50-1200	5.00	1200	0.50	0.20	721006	721016	1200	1200
				600	1.00	0.30				
				120	2.50	1.00				
73042x	12	 0.2-10	0.05	10	0.90	0.50	-	-	10	10
				5	1.50	0.80				
				1	4.00	3.00				
73044x	12	 5-120	0.50	120	0.80	0.20	721008	721018	200	300
				60	0.70	0.30			350	
				12	3.00	1.50				
73046x	12	 10-300	1.00	300	0.50	0.20	721007	721017	350	300
				150	0.70	0.30				
				30	2.00	1.00				
73049x	12	 50-1200	5.00	1200	0.50	0.20	721006	721016	1200	1200
				600	1.00	0.30				
				120	2.50	1.00				

x: 0=without AC-adaptor, 1=with AC-adaptor (EU, UK, US/JPN and CHN plugs)

* NOTE: Min. volume in P-mode is 500 µl. 100 µl is possible in d-mode

Tacta® Mechanical Pipette

Perfectly Balanced

- 인체공학적 디자인이 선사하는 편안한 그립감
- 가벼운 본체와 부드러운 피펫팅으로 인체에 미치는 영향을 최소화
- Optilock- 싸토리우스만의 볼륨 조절 기능으로 정확한 볼륨 조절과 Locking 기능 제공
- Optiject- 신개념 팁분리 기술로 가볍고 부드러운 팁 분리
- 교정 기능으로 다양한 액체 타입과 작업 상황에 맞게 피펫보정
- 3개 부품 분해로 간편한 Cleaning
- 장시간 피펫팅에도 정확한 Data 결과 보장



Ordering Information

Order No.	Channels	Volume Range [μl]	Color Coding	Increment [μl]	Test Volume [μl]	Systematic Error* [%]	Random Error* [%]
LH-729010	1	0.1-3	●	0.002	3	1.30	0.80
					1.5	2.40	1.60
					0.3	10.00	6.00
LH-729020	1	0.5-10	●	0.01	10	1.00	0.60
					5	1.50	1.00
					1	2.50	1.50
LH-729030	1	2-20	●	0.02	20	0.90	0.40
					10	1.20	1.00
					2	3.00	2.00
LH-729050	1	10-100	●	0.10	100	0.80	0.15
					50	1.00	0.40
					10	2.00	1.00
LH-729060	1	20-200	●	0.20	200	0.60	0.15
					100	0.80	0.30
					20	2.30	0.90
LH-729070	1	100-1000	●	1.00	1000	0.70	0.20
					500	0.70	0.20
					100	2.00	0.50
LH-729080	1	500-5000	●	10.0	5000	0.50	0.20
					2500	0.60	0.30
					500	2.00	0.60
LH-729090	1	1000-10000	●	20.0	10000	0.60	0.20
					5000	1.20	0.30
					1000	3.00	0.60
LH-729120	8	0.5-10	●	0.01	10	1.50	1.00
					5	2.50	2.50
					1	4.00	4.00
LH-729130	8	5-100	●	0.10	100	0.70	0.25
					50	1.00	0.70
					10	3.00	1.50
LH-729140	8	30-300	●	0.20	300	0.60	0.25
					150	1.00	0.50
					30	2.00	1.00
LH-729220	12	0.5-10	●	0.01	10	1.50	1.00
					5	2.50	2.50
					1	4.00	4.00
LH-729230	12	5-100	●	0.20	100	0.70	0.25
					50	1.00	0.70
					10	3.00	1.50
LH-729240	12	30-300	●	0.20	300	0.60	0.25
					150	1.00	0.50
					30	2.00	1.00

Pipette Stands and Accessories

Order No.	Description
725600	Carousel Stand for 6 pipettes
725610	Pipette Holder for one pipette
725620	Linear Stand
730981	Charging Stand for one pipette
730991	Charging Carousel for 4 pipettes
726001	Colour coding caps, 5 pcs
726203	Calibration tool / Tube opener



Charging Stand



Charging Carousel



Linear Stand

Charging stands include universal AC-adaptor (EU, UK, US | JPN and CHN plugs)

■ mLINE® Mechanical Pipette

Effortless accuracy

- 정확하고 정밀한 Pipetting 성과를 보장하는 진보된 수동 Pipettes
- 가벼운 pipetting과 tip ejection을 실현하는 뛰어난 인체공학적 디자인과 기능
- 장시간 반복적인 작업에도 우수한 accuracy와 precision을 보장
- 특히, Multi-channel pipettes에서도 완벽한 tip sealing을 보장하는 Optiload 기능
- 전체 autoclave와 특화된 Safe-cone filter 사용으로 pipettes의 안전한 사용과 오염 방지
- Volume lock 기능으로 pipetting 시에 volume 변경 방지
- Autoclave 시 3단계 간단분리를 통한 손쉬운 유지관리



Ordering Information

Order No.	Channels	Volume Range (µl)	Increment (µl)	Test Volume (µl)	Inacc. (%)	Impr. (%)	Safe-Cone Filters Standard	Plus	Optifit Tips (µl)	SafetySpace™ Filter Tips (µl)
725010	1	● 0.1-3	0.002	3 1.5 0.3	1.30 2.40 10.00	0.80 1.60 6.00	-	-	10	10
725020	1	● 0.5-10	0.01	10 5 1	1.00 1.50 2.50	0.60 1.00 1.50	-	-	10	10
725030	1	● 2-20	0.02	20 10 2	0.90 1.20 3.00	0.40 1.00 2.00	721014	-	200	20
725050	1	● 10-100	0.10	100 50 10	0.80 1.00 2.00	0.15 0.40 1.00	721008	721018	200 350	120
725060	1	● 20-200	0.20	200 100 20	0.60 0.80 2.00	0.15 0.30 0.80	721007	721017	200 350	200 300
725070	1	● 100-1000	1.00	1000 500 100	0.60 0.60 1.00	0.20 0.20 0.40	721006	721016	1000	1000
725080	1	● 500-5000	10.0	5000 2500 500	0.50 0.60 2.00	0.20 0.30 0.60	721005	721015	5000	-
725090	1	● 1-10 ml	20.0	10000 5000 1000	0.60 1.20 3.00	0.20 0.30 0.60	721005	721015	10 000	-
725120	8	● 0.5-10	0.01	10 5 1	1.50 2.50 4.00	1.00 2.50 4.00	-	-	10	10
725130	8	● 5-100	0.10	100 50 10	0.70 1.00 3.00	0.25 0.70 1.50	721008	721018	200 350	120
725140	8	● 30-300	0.20	300 150 30	0.60 1.00 2.00	0.25 0.50 1.00	721007	721017	350	300
725220	12	● 0.5-10	0.01	10 5 1	1.50 2.50 4.00	1.00 2.50 4.00	-	-	10	10
725230	12	● 5-100	0.10	100 50 10	0.70 1.00 3.00	0.25 0.70 1.50	721008	721018	200 350	120
725240	12	● 30-300	0.20	300 150 30	0.60 1.00 2.00	0.25 0.50 1.00	721007	721017	350	300

mLINE Multi Pack

Order No.	Description
LH-725661	mLINE® Pipette 3-pack 10: 0.5-10 µl, 10-100 µl and 100-1000 µl - Linear Stand Matching Optifit Tip Single Tray rack (96 tips)
LH-725662	mLINE® Pipette 3-pack 20: 2-20 µl, 20-200 µl and 100-1000 µl - Linear Stand Matching Optifit Tip Single Tray rack (96 tips)
LH-725663	mLINE® Pipette 4-pack: 0.5-10 µl, 10-100 µl, 20-200 µl and 100-1000 µl - Linear Stand Matching Optifit Tip Single Tray rack (96 tips)
LH-725664	mLINE® Pipette 5-pack: 2-20 µl, 10-100 µl, 20-200 µl, 100-1000 µl and 500-5000 µl - Linear Stand Matching Optifit Tip Single Tray rack (96 tips)
LH-725665	mLINE® Pipette 3+1 -pack: 0.5-10 µl, 20-200 µl, 100-1000 µl and 8- 8-channel 30-30 - Linear Stand Matching Optifit Tip Single Tray rack (96 tips)



mLINE® Pipette 5-pack

■ Maxi-Volume Liquid Handling



□ Midi Plus™

Order No.	Description	Qty/Unit
710931	Midi Plus Pipetting Controller with Universal AC-adaptor ¹⁾	1
712912	Replacement filter, 0.45 µm, autoclavable	5
712913	Replacement filter, sterile, 0.45 µm	1
711015 ²⁾	Adapter set for 5 ml tip, autoclavable	1
711016 ²⁾	Adapter set for 10 ml tip, autoclavable	1
780300	Optifit Tip 5 ml	100
780310	Optifit Tip 10 ml	100

1) Universal AC-adaptor (incl. Euro, US/Jpn, UK and China plugs)

2) Adapter set including the nose cone and the silicon adapter



□ Biotrate digital burettes 0-30 ml and 0-50 ml

Order No.	Description	Increment	Inacc. (%)	Impr. (%)
723054	Biotrate 0-30 ml (with 33, 38 and 45 mm adaptors)	0.01 ml	0.2	0.1
723055	Biotrate 0-50 ml (with 33, 38 and 45 mm adaptors)	0.01 ml	0.2	0.1
721998	Expandable delivery jet			



□ Proline® Prospenser

Order No.	Description	Increment	Max Volume	Inacc. (%)	Impr. (%)
723045	Proline Prospenser 0.5-5 ml (with 25, 28, 32, 38 and 40 mm adaptors)	0.1 ml	5 ml	0.5	0.1
723046	Proline Prospenser 1-10 ml (with 25, 28, 32, 38 and 40 mm adaptors)	0.2 ml	10 ml	0.5	0.1
723047	Proline Prospenser 2.5-25 ml (with 32, 38 and 40 mm adaptors)	0.5 ml	25 ml	0.5	0.1
723048	Proline Prospenser 5-50 ml (with 32, 38 and 40 mm adaptors)	1.0 ml	50 ml	0.5	0.1
721633	Flexible tube extension for 5 and 10 ml Proline Prospensers				
721634	Flexible tube extension for 25 and 50 ml Proline Prospensers				



□ Prospenser

Order No.	Description	Increment	Max Volume	Inacc. (%)	Impr. (%)
723049	Prospenser 0.01-2.5 ml (with 38, 40 and 45 mm adaptors)	0.05 ml	2.5 ml	0.3	0.1
723050	Prospenser 0.1-5 ml (with 38, 40 and 45 mm adaptors)	0.1 ml	5 ml	0.3	0.1
723051	Prospenser 0.2-10 ml (with 38, 40 and 45 mm adaptors)	0.2 ml	10 ml	0.3	0.1
723052	Prospenser 1-30 ml (with 38, 40 and 45 mm adaptors)	1.0 ml	30 ml	0.3	0.1
723053	Prospenser 1-50 ml (with 38, 40 and 45mm adaptors)	1.0 ml	50 ml	0.3	0.1
721998	Dispense tube extension (see picture)				

■ Optifit 표준 팁



□ Optifit Tips

Sartorius 품질 표준에 따라 제조된 표준 비여과식 팁

- Sartorius Picus® NxT, Picus®, eLINE®, mLINE®, Proline® Plus, Proline® 피펫에 완벽 결합
- 10 µl~10 ml의 다양한 팁 용량
- 다양한 패키지 및 순도 옵션 선택 가능
- DNase, RNase 및 endotoxin free
- 전자 빔 사전 멸균 패키지 옵션 제공
- 완벽한 이력 추적 가능
- 해당 Sartorius 피펫을 찾을 수 있는 컬러 코딩 트레이
- 121°C에서 20분 동안 전체 고압멸균 가능



□ Low Retention Tips

최대의 샘플 복원력을 보장하는 저잔류 팁

- 팁 내부의 표면이 매우 균일하고 표면 내구성과 소수성이 뛰어남
- 시료를 손상시킬 수 있는 여과물 없음
- 피펫팅 재현성이 항상
- 세제가 함유된 액체 또는 표면 장력이 낮은 액체를 처리할 때 시료 회수 능력을 극대화
 - PCR, real-time PCR
 - 복제, 시퀀싱 및 기타 DNA 및 RNA 기법
 - SDS-PAGE 및 기타 단백질 분석 방법 - 단백질 정제 기법

□ Packing Type

- Single Tray Rack
- Refill Tower / Refill Pack
- FlexiBulk Tip
- Bulk in Box



Single Tray Rack



Refill Tower / Refill Pack



FlexiBulk Tip



Bulk in Box

Biohit Optifit Tips

Volume Range		Length	Packaging	Low Retention	Purity Level	Qty/unit	Order No.
● 0.1-10 µl		31.5 mm	Single Tray		•	10x96	790010
			Single Tray	•	•	10x96	LH-L 790010
			Single Tray		• •	10x96	790011
			Refill Tower			10x96	790012
			Refill Tower	•		10x96	LH-L 790012
			Refill Pack		• •	20x96	790013
			Bulk in Box			1000	790014
● 0.1-10 µl	Extended 	46 mm	Single Tray		•	10x96	783210
			Single Tray		• •	10x96	783211
● 0.5-200 µl		51 mm	Single Tray		•	10x96	790200
			Single Tray	•		10x96	LH-L 790200
			Single Tray		• •	10x96	790201
			Refill Tower			10x96	790202
			Refill Tower	•		10x96	LH-L 790202
			Refill Pack		• •	15x96	790203
			FlexiBulk		•	10x96	LH-B 790204
● 5-350 µl		54 mm	Single Tray		•	10x96	790350
			Single Tray	•		10x96	LH-L 790350
			Single Tray		•	10x96	790351
			Refill Tower		• •	10x96	790352
			Refill Tower	•		10x96	LH-L 790352
			Refill Pack		• •	15x96	790353
			FlexiBulk		•	960	LH-B 790354
● 10-1000 µl		71.5 mm	Single Tray		•	10x96	791000
			Single Tray	•	•	10x96	LH-L 791000
			Single Tray		• •	10x96	791001
			Refill Pack		•	10x96	791002
			Refill Pack		• •	10x96	791003
			FlexiBulk		•	480	LH-B 791004
● 10-1000 µl	Wide bore tip 	68.5 mm	Single Tray		•	10x96	791020
			Single Tray		• •	10x96	791021
			FlexiBulk		•	480	LH-B 791024
● 50-1200 µl		71.5 mm	Single Tray		•	10x96	791200
			Single Tray	•	•	10x96	LH-L 791200
			Single Tray		• •	10x96	791201
			Refill Pack		•	10x96	791202
			Refill Pack		• •	10x96	791203
			FlexiBulk		•	480	LH-B 791204
● 50-1200 µl	Extended 	90 mm	Single Tray		•	10x96	791210
			Single Tray	•	•	10x96	LH-L 791210
			Single Tray		• •	10x96	791211
			Refill Pack		•	10x96	791212
			Refill Pack		• •	10x96	791213

Volume Range	Length	Packaging	Low Retention	Purity Level	Qty/unit	Order No.
● 100-5000 µl	150 mm	Single Tray		•	50	780304
		Single Tray		• •	50	780305
		Bulk in Box			100	780300
		Bulk in Carton			1000	780308
● 1-10 ml	161 mm	Bulk in Box			250	780315



Extra long tip for MidiPlus



Note: The ordering information for 10 ml tip for MidiPlus can be found on page 69. NOTE! Tip compatibility with pipettes are shown in the Tip Selection Guides at Electronic Pipettes, page 25, and Mechanical Pipettes, pages 42 - 43.

Safety Space™ Filter Tips

Volume Range	Length	Packaging	Low Retention	Purity Level	Qty/unit	Order No.
● 0.1-10 µl	32 mm	Single Tray		•	10x96	790011F
		Single Tray	•	• •		LH-LF 790011
● 0.5-20 µl	51 mm	Single Tray		•	10x96	790021F
		Single Tray	•	• •		LH-LF 790021
● 2-120 µl	51 mm	Single Tray		•	10x96	790101F
		Single Tray	•	• •		LH-LF 790101
● 5-200 µl	52.5 mm	Single Tray		•	10x96	790201F
		Single Tray	•	• •		LH-LF 790201
● 5-300 µl	52.5 mm	Single Tray		•	10x96	790301F
		Single Tray	•	• •		LH-LF 790301
● 50-1000 µl	78 mm	Single Tray		•	10x96	791001F
		Single Tray	•	• •		LH-LF 791001
● 50-1200 µl	90 mm	Single Tray		•	10x96	791211F
		Single Tray	•	• •		LH-LF 791211

For your guidance the tips are illustrated in the actual size.
Filter tips are not recommended to be used simultaneously with Safe-Cone Filters

Empty Tip Boxes for Refill System (tips and trays are not included)

Description	Tip type (non-filtered tips)	Qty/Unit	Order No.
Empty Tip Box for Refill System	10, 200, 350 µl	10	790910
Empty Tip Box for Refill System	1000, 1200 µl	10	790920

Minisart® Syringe Filter Selection Guide

1

Sample Composition

Aqueous

All Aqueous Solutions
✓ Buffers, Protein Analysis

SFCA
Surfactant-Free
Cellulose Acetate

All Aqueous Solutions
✓ Tissue Culture Media

PES
Polyethersulfone

Hydrophilic
✓ Aqueous/Solvent
Mixtures/Solvents

RC
Regenerated
Cellulose

Solvents

Hydrophilic
✓ Solvent Mixtures/
Solvents

NY
Polyamide, Nylon

Hydrophobic
✓ Solvents/Gases/
Acids/Bases

PTFE
Polytetra
fluoroethylene

2

Sample Volumes

Claristep for up to 0.6 ml



0.06-0.6 ml

Syringeless

4 mm for up to 1 ml



0.1-1 ml

15 mm for up to 15 ml



0.5-15 ml

25-28 mm for up to 100 ml



5-100 ml

3

Pore Sizes

Sterilization

0.1 µm

Small Bacteria
Mycoplasma
Colloids >0.1

0.2 µm

UHPLC, etc.
(Columns
< 3µm
Particles)
Bacteria

0.45 µm

HPLC, etc.
(Columns
> 3µm
Particles)
Particles

0.65 µm

Particles
Yeast Cells

0.8 µm

Particles
Yeast Cells

1.2 µm

Particles
Yeast Cells
Platelets

5 µm

Large
Particles
Rubber Grit
Cells

Prefiltration

GF (Glass Fibre)
Glass Prefilter
Glass+Membrane
Highly Particle-
laden Samples

Applications

Type of Filtration	1st Choice	Rec. Alternatives
HPLC UHPLC LCMS IC GC - Sample Preparation	RC	PTFE / NY
Undiluted Organic Solvents	RC / PTFE	NY
Protein Analysis Samples with Biomolecules Buffers	SFCA	RC / PES
Tissue Culture Media	PES	SFCA / RC
Highly Particle-laden Samples Organic Solvents	GF / NY	-
Highly Particle-laden Samples Aqueous Solutions	GF / SFCA	GF / NY

pH 1-14: PTFE/GF pH 3-14: RC/NY/PTFE/GF pH 3-12: RC/PES/NY/PTFE/GF pH 4-8: SFCA/RC/PES/NY/PTFE/GF*

*Compatibility tested with a contact time of 24 hours at 20°C

Minisart® Syringe Filters

Sample Preparation Chromatography



Minisart® RC 4



Minisart® RC 15



Minisart® RC 25

Minisart® RC (Regenerated Cellulose)

Order No.	Diameter	Membrane	Pore Size	Connector Outlet	Color/ Printing	Sterile*	Qty/Pk
17764 - ACK	25 mm	RC	0.2 µm	Male Luer Slip	White, Printed	Yes	50
17764 - K	25 mm	RC	0.2 µm	Male Luer Slip	White, Printed	No	50
17764 - Q	25 mm	RC	0.2 µm	Male Luer Slip	White, Printed	No	500
17765 - K	25 mm	RC	0.45 µm	Male Luer Slip	White, Printed	No	50
17765 - Q	25 mm	RC	0.45 µm	Male Luer Slip	White, Printed	No	500
17761 - ACK	15 mm	RC	0.2 µm	Male Luer Slip	White, Printed	Yes	50
17761 - K	15 mm	RC	0.2 µm	Male Luer Slip	White, Printed	No	50
17761 - Q	15 mm	RC	0.2 µm	Male Luer Slip	White, Printed	No	500
17762 - K	15 mm	RC	0.45 µm	Male Luer Slip	White, Printed	No	50
17762 - Q	15 mm	RC	0.45 µm	Male Luer Slip	White, Printed	No	500
17821 - K	4 mm	RC	0.2 µm	Male Luer Slip	Blue Tray	No	50
17821 - Q	4 mm	RC	0.2 µm	Male Luer Slip	Blue Tray	No	500
17822 - K	4 mm	RC	0.45 µm	Male Luer Slip	Yellow Tray	No	50
17822 - Q	4 mm	RC	0.45 µm	Male Luer Slip	Yellow Tray	No	500

Minisart® SRP (Hydrophobic PTFE)

Order No.	Diameter	Membrane	Pore Size	Connector Outlet	Color/ Printing	Sterile*	Qty/Pk
17575 - ACK	25 mm	PTFE	0.2 µm	Male Luer Slip	White, Printed	Yes	50
17575 - K	25 mm	PTFE	0.2 µm	Male Luer Slip	White, Printed	No	50
17575 - Q	25 mm	PTFE	0.2 µm	Male Luer Slip	White, Printed	No	500
17576 - K	25 mm	PTFE	0.45 µm	Male Luer Slip	White, Printed	No	50
17576 - Q	25 mm	PTFE	0.45 µm	Male Lue Slip	White, Printed	No	500
17558 - K	15 mm	PTFE	0.2 µm	Male Spike	White, Printed	No	50
17558 - Q	15 mm	PTFE	0.2 µm	Male Spike	White, Printed	No	500
17573 - ACK	15 mm	PTFE	0.2 µm	Male Luer Slip	White, Printed	Yes	50
17573 - K	15 mm	PTFE	0.2 µm	Male Luer Slip	White, Printed	No	50
17573 - Q	15 mm	PTFE	0.2 µm	Male Luer Slip	White, Printed	No	500
17559 - K	15 mm	PTFE	0.45 µm	Male Spike	White, Printed	No	50
17559 - Q	15 mm	PTFE	0.45 µm	Male Spike	White, Printed	No	500
17574 - K	15 mm	PTFE	0.45 µm	Male Luer Slip	White, Printed	No	50
17574 - Q	15 mm	PTFE	0.45 µm	Male Luer Slip	White, Printed	No	500
17844 - Q	4 mm	PTFE	0.2 µm	Male Luer Slip	Blue Tray	No	500
17820 - K	4 mm	PTFE	0.45 µm	Male Luer Slip	Yellow Tray	No	50
17820 - Q	4 mm	PTFE	0.45 µm	Male Luer Slip	Yellow Tray	No	500

Minisart® NY (Nylon) & NY25 Plus (Glass Fiber 1.2 µm + Nylon)

Order No.	Diameter	Membrane	Pore Size	Connector Outlet	Color/ Printing	Sterile*	Qty/Pk
17845 - ACK	25 mm	Nylon	0.2 µm	Male Luer Slip	White, Printed	Yes	50
17845 - Q	25 mm	Nylon	0.2 µm	Male Luer Slip	White, Printed	No	500
17846 - ACK	25 mm	Nylon	0.45 µm	Male Luer Slip	White, Printed	Yes	50
17846 - Q	25 mm	Nylon	0.45 µm	Male Luer Slip	White, Printed	No	500
1776B - K	15 mm	Nylon	0.2 µm	Male Luer Slip	White, Printed	No	50
1776B - Q	15 mm	Nylon	0.2 µm	Male Luer Slip	White, Printed	No	500
1776C - K	15 mm	Nylon	0.45 µm	Male Luer Slip	White, Printed	No	50
1776C - Q	15 mm	Nylon	0.45 µm	Male Luer Slip	White, Printed	No	500
1784B - K	25 mm	Nylon+GF	0.2 µm	Male Luer Slip	White, Printed	No	50
1784B - Q	25 mm	Nylon+GF	0.2 µm	Male Luer Slip	White, Printed	No	500
1784C - K	25 mm	Nylon+GF	0.45 µm	Male Luer Slip	White, Printed	No	50
1784C - Q	25 mm	Nylon+GF	0.45 µm	Male Luer Slip	White, Printed	No	500

■ Minisart® Syringe Filters

Preparation of Aqueous Liquids



Male Luer Lock



Male Luer Slip

*Sterilized Minisarts are individually packaged. If not stated otherwise, Minisarts are sterilized by ethylene oxide.
 #-Mark indicates sterilization by gamma irradiation.
 Minisarts NOT presterilized: PES, SFCA, GF+SFCA and GF can be sterilized by ethylene oxide or gamma irradiation.

□ Minisart® High Flow (PES - Polyethersulfone)

Order No.	Diameter	Membrane	Pore Size	Connector Outlet	Color	Sterile*	Qty/Pk
16553 - K	28 mm	PES	0.1 µm	Male Luer Lock	Dark Red	Yes	50
16532 - K	28 mm	PES	0.2 µm	Male Luer Lock	Royal Blue	Yes	50
16541 - K	28 mm	PES	0.2 µm	Male Luer Slip	Royal Blue	Yes	50
16532 - Q	28 mm	PES	0.2 µm	Male Luer Lock	Royal Blue	No	500
16541 - Q	28 mm	PES	0.2 µm	Male Luer Slip	Royal Blue	No	500
16537 - K	28 mm	PES	0.45 µm	Male Luer Lock	Amber	Yes	50
16537 - Q	28 mm	PES	0.45 µm	Male Luer Lock	Amber	No	500
16533 - K	28 mm	PES	0.45 µm	Male Luer Slip	Amber	Yes	50
16533 - Q	28 mm	PES	0.45 µm	Male Luer Slip	Amber	No	500

□ Minisart® NML (SFCA - Surfactant-free Cellulose Acetate)

Order No.	Diameter	Membrane	Pore Size	Connector Outlet	Color	Sterile*	Qty/Pk
16534 - K	28 mm	SFCA	0.2 µm	Male Luer Lock	Blue	Yes	50
16534 - Q	28 mm	SFCA	0.2 µm	Male Luer Lock	Blue	No	500
17597 - K	28 mm	SFCA	0.2 µm	Male Luer Slip	Blue	Yes	50
17597 - Q	28 mm	SFCA	0.2 µm	Male Luer Slip	Blue	No	500
16555 - K	28 mm	SFCA	0.45 µm	Male Luer Lock	Yellow	Yes	50
16555 - Q	28 mm	SFCA	0.45 µm	Male Luer Lock	Yellow	No	500
17598 - K	28 mm	SFCA	0.45 µm	Male Luer Slip	Yellow	Yes	50
17598 - Q	28 mm	SFCA	0.45 µm	Male Luer Slip	Yellow	No	500
16569 - K	28 mm	SFCA	0.65 µm	Male Luer Slip	Pink	Yes	50
16592 - K	28 mm	SFCA	0.8 µm	Male Luer Lock	Green	Yes	50
16592 - Q	28 mm	SFCA	0.8 µm	Male Luer Lock	Green	No	500
17593 - K	28 mm	SFCA	1.2 µm	Male Luer Lock	Red	Yes	50
17593 - Q	28 mm	SFCA	1.2 µm	Male Luer Lock	Red	No	500
17594 - K	28 mm	SFCA	5 µm	Male Luer Lock	Brown	Yes	50
17594 - Q	28 mm	SFCA	5 µm	Male Luer Lock	Brown	No	500

□ Minisart® NML Plus (Glass Fiber 1.2 µm + SFCA)

Order No.	Diameter	Membrane	Pore Size	Connector Outlet	Color	Sterile*	Qty/Pk
17823 - K	28 mm	GF+SFCA	0.2 µm	Male Luer Lock	Blue	Yes	50
17823 - Q	28 mm	GF+SFCA	0.2 µm	Male Luer Lock	Blue	No	500
17829 - K	28 mm	GF+SFCA	0.45 µm	Male Luer Lock	Yellow	Yes	50
17829 - Q	28 mm	GF+SFCA	0.45 µm	Male Luer Lock	Yellow	No	500
17825 - Q	28 mm	GF+SFCA	1.2 µm	Male Luer Lock	Red	No	500
17824 - K	28 mm	GF	1.2 µm	Male Luer Lock	White	No	50
17824 - Q	28 mm	GF	1.2 µm	Male Luer Lock	White	No	500
17856 - Q	28 mm	GF	1.2 µm	Male Luer Slip	White	No	500



Claristep® System

□ Claristep® RC (Regenerated Cellulose)

Order No.	Description	Qty/pk
17C-M8	Claristep® Station Complete	1
17C-S1	Claristep® Single Tray	1

Order No.	Diameter	Membrane	Pore Size	Housing	Sterile	Qty/pk
17C07FT-96	9.7 mm	RC	0.2 µm	PP	NO	96
17C07FT-480	9.7 mm	RC	0.2 µm	PP	NO	480
17C06FT-96	9.7 mm	RC	0.45 µm	PP	NO	96
17C06FT-480	9.7 mm	RC	0.45 µm	PP	NO	480

■ Sartolab® RF|BT

Vacuum Filtration units



Sartolab® RF



Sartolab® BT

- Sartolab RF와 Sartolab BT는 Cell Culture시, 최대의 효율 보장
- 빠른 유량과 적은 Binding을 유도하는 PES membrane 장착
- Tube Adapter와 Lid 포함(Sartolab RF 구매 시, Receive flask 포함)
- 여러 종류의 Volum Size를 가짐

□ Ordering Information for Sartolab® RF Vacuum Filtration Units

Order No.	Description
180C1-E	150 ml, with receiver, 18 cm ² filter area, 0.22 µm PES membrane, Case with 12 units
180C7-E	250 ml, with receiver, 24 cm ² filter area, 0.22 µm PES membrane, Case with 12 units
180C2-E	500 ml, with receiver, 63 cm ² filter area, 0.22 µm PES membrane, Case with 12 units
180C3-E	1000 ml, with receiver, 79 cm ² filter area, 0.22 µm PES membrane, Case with 12 units
180C8-E	1000 ml, with receiver, 79 cm ² filter area, 0.1 µm PES membrane, Case with 12 units

□ Ordering Information for Sartolab® BT Vacuum Filtration Units

Order No.	Description
180C4-k	150 ml, 18 cm ² filter area, 0.22 µm PES membrane, Case with 48 units
180C5-E	500 ml, 63 cm ² filter area, 0.22 µm PES membrane, Case with 12 units
180C6-E	1000 ml, 79 cm ² filter area, 0.22 µm PES membrane, Case with 12 units

■ Sartolab® 150V

Vacuum Filtration units

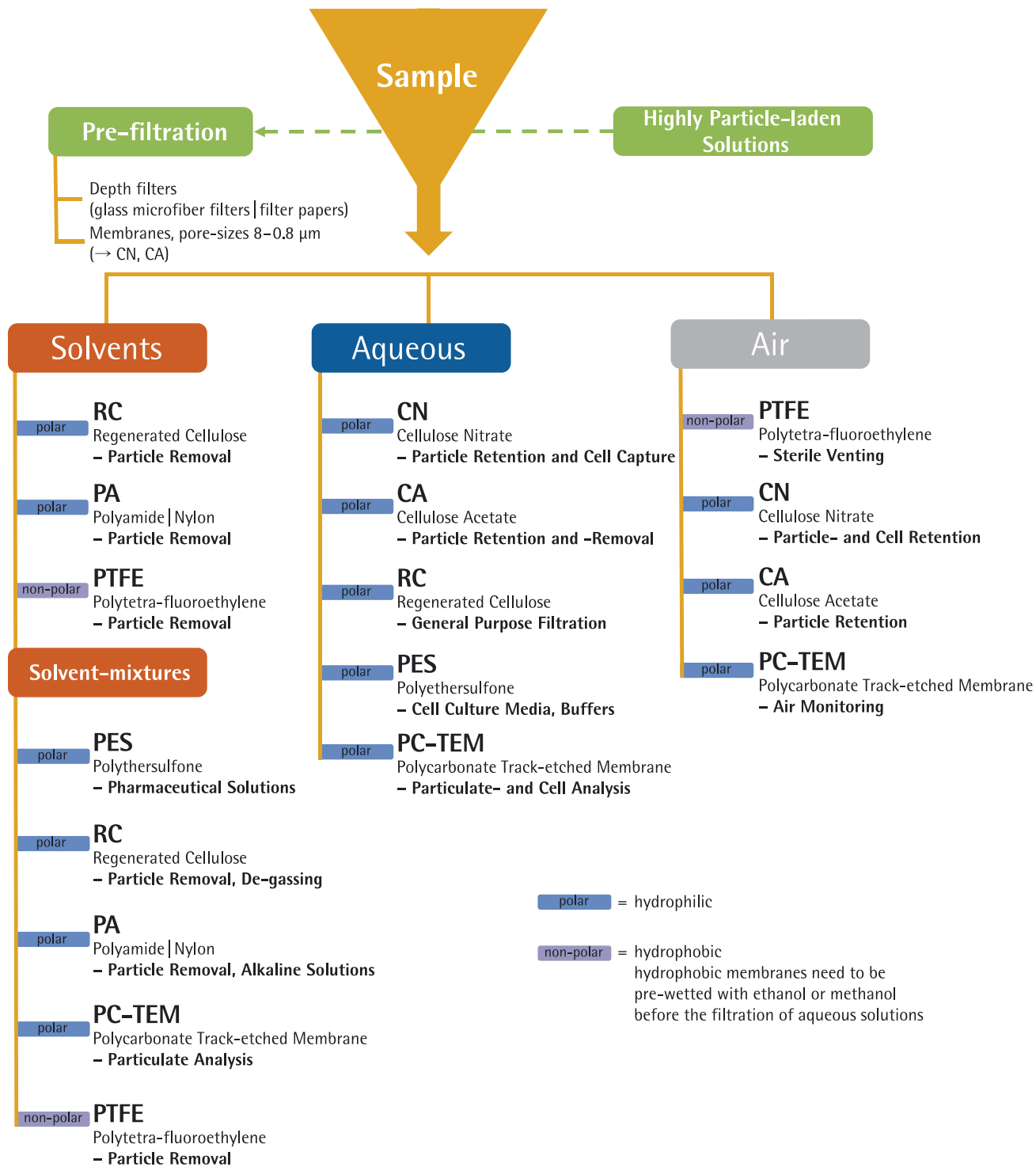


- Sartolab 150V는 1L 이상 Filtration 가능
- 공기 중 오염물질 방지위한 Drain Valve에 0.2 µm PTFE filter 장착
- Receiver flask교체할 때, on/off 가능한 Drain Valve

□ Ordering Information

Order No.	Description
18080-M	Sterile vacuum filtration unit, pack of 3

Membrane Filter



Cellulose Nitrate

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
11301-13-N	Cellulose Nitrate	13 mm	8 µm	100
11301-25-N	Cellulose Nitrate	25 mm	8 µm	100
11301-37-N	Cellulose Nitrate	37 mm	8 µm	100
11301-47-N	Cellulose Nitrate	47 mm	8 µm	100
11301-50-N	Cellulose Nitrate	50 mm	8 µm	100
11301-70-G	Cellulose Nitrate	70 mm	8 µm	25
11301-100-N	Cellulose Nitrate	100 mm	8 µm	100
11302-13-N	Cellulose Nitrate	13 mm	3 µm	100
11302-25-N	Cellulose Nitrate	25 mm	3 µm	100
11302-47-N	Cellulose Nitrate	47 mm	3 µm	100
11302-50-N	Cellulose Nitrate	50 mm	3 µm	100
11302-68-G	Cellulose Nitrate	68 mm	3 µm	25
11302-90-G	Cellulose Nitrate	90 mm	3 µm	25
11302-100-G	Cellulose Nitrate	100 mm	3 µm	25
11303-13-N	Cellulose Nitrate	13 mm	1.2 µm	100
11303-25-N	Cellulose Nitrate	25 mm	1.2 µm	100
11303-47-N	Cellulose Nitrate	47 mm	1.2 µm	100
11303-50-N	Cellulose Nitrate	50 mm	1.2 µm	100
11303-90-G	Cellulose Nitrate	90 mm	1.2 µm	25
11303-100-G	Cellulose Nitrate	100 mm	1.2 µm	25
11304-13-N	Cellulose Nitrate	13 mm	0.8 µm	100
11304-20-N	Cellulose Nitrate	20 mm	0.8 µm	100
11304-25-N	Cellulose Nitrate	25 mm	0.8 µm	100
11304-30-N	Cellulose Nitrate	30 mm	0.8 µm	100
11304-37-N	Cellulose Nitrate	37 mm	0.8 µm	100
11304-47-N	Cellulose Nitrate	47 mm	0.8 µm	100
11304-50-N	Cellulose Nitrate	50 mm	0.8 µm	100
11304-90-G	Cellulose Nitrate	90 mm	0.8 µm	25
11304-100-G	Cellulose Nitrate	100 mm	0.8 µm	25
11305-13-N	Cellulose Nitrate	13 mm	0.65 µm	100
11305-25-N	Cellulose Nitrate	25 mm	0.65 µm	100
11305-47-N	Cellulose Nitrate	47 mm	0.65 µm	100
11305-50-N	Cellulose Nitrate	50 mm	0.65 µm	100
11305-100-N	Cellulose Nitrate	100 mm	0.65 µm	100
11306-13-N	Cellulose Nitrate	13 mm	0.45 µm	100
11306-20-N	Cellulose Nitrate	20 mm	0.45 µm	100
11306-25-N	Cellulose Nitrate	25 mm	0.45 µm	100
11306-30-N	Cellulose Nitrate	30 mm	0.45 µm	100
11306-37-N	Cellulose Nitrate	37 mm	0.45 µm	100
11306-47-N	Cellulose Nitrate	47 mm	0.45 µm	100
11306-50-N	Cellulose Nitrate	50 mm	0.45 µm	100
11306-55-N	Cellulose Nitrate	55 mm	0.45 µm	100
11306-85-N	Cellulose Nitrate	85 mm	0.45 µm	100
11306-90-N	Cellulose Nitrate	90 mm	0.45 µm	100
11306-100-N	Cellulose Nitrate	100 mm	0.45 µm	100
11306-110-N	Cellulose Nitrate	110 mm	0.45 µm	100
11327-25-N	Cellulose Nitrate	25 mm	0.2 µm	100
11342-13-N	Cellulose Nitrate	13 mm	5 µm	100
11342-25-N	Cellulose Nitrate	25 mm	5 µm	100
11342-47-N	Cellulose Nitrate	47 mm	5 µm	100
11342-50-N	Cellulose Nitrate	50 mm	5 µm	100
11342-90-G	Cellulose Nitrate	90 mm	5 µm	25
11342-100-G	Cellulose Nitrate	100 mm	5 µm	25

Cellulose Acetate

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
11104-13-N	Cellulose Acetate	13 mm	0.8 µm	100
11104-25-N	Cellulose Acetate	25 mm	0.8 µm	100
11104-47-N	Cellulose Acetate	47 mm	0.8 µm	100
11104-50-N	Cellulose Acetate	50 mm	0.8 µm	100
11105-25-N	Cellulose Acetate	25 mm	0.65 µm	100
11105-47-N	Cellulose Acetate	47 mm	0.65 µm	100
11105-50-N	Cellulose Acetate	50 mm	0.65 µm	100
11106-13-N	Cellulose Acetate	13 mm	0.45 µm	100
11106-25-N	Cellulose Acetate	25 mm	0.45 µm	100
11106-30-N	Cellulose Acetate	30 mm	0.45 µm	100
11106-37-N	Cellulose Acetate	37 mm	0.45 µm	100
11106-47-N	Cellulose Acetate	47 mm	0.45 µm	100
11106-50-N	Cellulose Acetate	50 mm	0.45 µm	100
11106-85-N	Cellulose Acetate	85 mm	0.45 µm	100
11106-90-G	Cellulose Acetate	90 mm	0.45 µm	25
11106-100-N	Cellulose Acetate	100 mm	0.45 µm	100
11106-110-N	Cellulose Acetate	110 mm	0.45 µm	100
11107-13-N	Cellulose Acetate	13 mm	0.2 µm	100
11107-25-N	Cellulose Acetate	25 mm	0.2 µm	100
11107-30-N	Cellulose Acetate	30 mm	0.2 µm	100
11107-47-N	Cellulose Acetate	47 mm	0.2 µm	100
11107-50-N	Cellulose Acetate	50 mm	0.2 µm	100
11107-90-G	Cellulose Acetate	90 mm	0.2 µm	25
11107-100-N	Cellulose Acetate	100 mm	0.2 µm	100
12303-25-N	Cellulose Acetate	25 mm	1.2 µm	100
12303-47-N	Cellulose Acetate	47 mm	1.2 µm	100
12303-50-N	Cellulose Acetate	50 mm	1.2 µm	100
12303-100-G	Cellulose Acetate	100 mm	1.2 µm	25
12342-25-N	Cellulose Acetate	25 mm	5 µm	100
12342-47-N	Cellulose Acetate	47 mm	5 µm	100

Regenerated Cellulose

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
18406-13-N	Regenerated Cellulose	13 mm	0.45 µm	100
18406-25-N	Regenerated Cellulose	25 mm	0.45 µm	100
18406-47-N	Regenerated Cellulose	47 mm	0.45 µm	100
18406-50-N	Regenerated Cellulose	50 mm	0.45 µm	100
18406-90-G	Regenerated Cellulose	90 mm	0.45 µm	25
18407-13-N	Regenerated Cellulose	13 mm	0.2 µm	100
18407-25-N	Regenerated Cellulose	25 mm	0.2 µm	100
18407-47-N	Regenerated Cellulose	47 mm	0.2 µm	100
18407-50-N	Regenerated Cellulose	50 mm	0.2 µm	100
18407-90-G	Regenerated Cellulose	90 mm	0.2 µm	25

Polyethersulfone

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
15406-25-N	Polyethersulfone	25 mm	0.45 µm	100
15406-47-N	Polyethersulfone	47 mm	0.45 µm	100
15406-50-MIN	Polyethersulfone	50 mm	0.45 µm	100
15407-25-MIN	Polyethersulfone	25 mm	0.2 µm	100
15407-47-MIN	Polyethersulfone	47 mm	0.2 µm	100

15407-50-MIN	Polyethersulfone	50 mm	0.2 µm	100
15407-90-MIK	Polyethersulfone	90 mm	0.2 µm	50
15458-25-N	Polyethersulfone	25 mm	0.1 µm	100
15458-47-N	Polyethersulfone	47 mm	0.1 µm	100
15458-50-N	Polyethersulfone	50 mm	0.1 µm	100

□ Polyamide

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
25006-13-N	Polyamide	13 mm	0.45 µm	100
25006-25-N	Polyamide	25 mm	0.45 µm	100
25006-47-N	Polyamide	47 mm	0.45 µm	100
25006-50-N	Polyamide	50 mm	0.45 µm	100
25006-90-G	Polyamide	90 mm	0.45 µm	25
25007-13-N	Polyamide	13 mm	0.2 µm	100
25007-25-N	Polyamide	25 mm	0.2 µm	100
25007-47-N	Polyamide	47 mm	0.2 µm	100
25007-50-N	Polyamide	50 mm	0.2 µm	100
25007-90-G	Polyamide	90 mm	0.2 µm	25

□ Hydrophobic PTFE

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
11803-13-N	Hydrophobic PTFE	13 mm	1.2 µm	100
11803-25-N	Hydrophobic PTFE	25 mm	1.2 µm	100
11803-47-N	Hydrophobic PTFE	47 mm	1.2 µm	100
11803-50-N	Hydrophobic PTFE	50 mm	1.2 µm	100
11803-90-G	Hydrophobic PTFE	90 mm	1.2 µm	25
11803-100-G	Hydrophobic PTFE	100 mm	1.2 µm	25
11806-13-N	Hydrophobic PTFE	13 mm	0.45 µm	100
11806-25-N	Hydrophobic PTFE	25 mm	0.45 µm	100
11806-37-N	Hydrophobic PTFE	37 mm	0.45 µm	100
11806-47-N	Hydrophobic PTFE	47 mm	0.45 µm	100
11806-50-N	Hydrophobic PTFE	50 mm	0.45 µm	100
11806-90-G	Hydrophobic PTFE	90 mm	0.45 µm	25
11806-100-G	Hydrophobic PTFE	100 mm	0.45 µm	25
11807-13-N	Hydrophobic PTFE	13 mm	0.2 µm	100
11807-25-N	Hydrophobic PTFE	25 mm	0.2 µm	100
11807-47-N	Hydrophobic PTFE	47 mm	0.2 µm	100
11807-50-N	Hydrophobic PTFE	50 mm	0.2 µm	100
11807-90-G	Hydrophobic PTFE	90 mm	0.2 µm	25
11807-100-G	Hydrophobic PTFE	100 mm	0.2 µm	25
11842-25-N	Hydrophobic PTFE	25 mm	5 µm	100
11842-42-N	Hydrophobic PTFE	42 mm	5 µm	100
11842-47-N	Hydrophobic PTFE	47 mm	5 µm	100
11842-50-N	Hydrophobic PTFE	50 mm	5 µm	100
11842-100-G	Hydrophobic PTFE	100 mm	5 µm	25

□ Polycarbonate Track-Etched

Order No.	Membrane	Diameter	Pore Size	Qty/Pk
23006-25-N	Polycarbonate Track-Etched	25 mm	0.4 µm	100
23006-47-N	Polycarbonate Track-Etched	47 mm	0.4 µm	100
23007-25-N	Polycarbonate Track-Etched	25 mm	0.2 µm	100
23007-47-N	Polycarbonate Track-Etched	47 mm	0.2 µm	100
23007-50-N	Polycarbonate Track-Etched	50 mm	0.2 µm	100

Vivaspin®

단백질 농축 및 탈염용 필터



원심력을 이용하여 원하는 단백질을 농축 및 탈염할 때 사용

- 넓은 범위의 MWC0와 시료량에 적용 가능함
- 빠른 속도 및 높은 회수율
- 다양한 생물학적 샘플(항생제, 효소, 핵산 등)의 농축에 적용 가능함
- 버퍼 교환 및 탈염에 사용 가능함
- 오염 물질 제거에 이용

Technical Specifications

	Vivaspin 500	Vivaspin 2	Vivaspin Turbo 4	Vivaspin 6	Vivaspin 15R	Vivaspin Turbo15	Vivaspin20
Membrane area	0.5 cm ²	1.2 cm ²	2.0 cm ²	2.5 cm ²	3.9 cm ²	7.2 cm ²	6.0 cm ²
Membrane	PES	PES, CTA, HY	PES	PES	HY	PES	PES
Sample vol.	0.1 - 0.5 ml	0.4 - 2 ml	1 - 4 ml	2 - 6 ml	2 - 15 ml	4 - 15 ml	5 - 20 ml
Hold Up vol.	< 5 µl	< 10 µl	< 10 µl	< 10 µl	< 20 µl	< 10 µl	< 20 µl
Dead Stop vol.	5 µl	8 µl	20 µl	30 µl	30 µl	60 / 100 µl	50 µl
Body	PC	PC	PC	PC	PC	SBC	PC
Filtrate Vessel	PP	PC	PP	PC	PP	PP	PC
Concentrator Cap	PC	PC	PC	PP	PC	PP	PP

Ordering Information

MWCO	Vivaspin 500	Vivaspin 2	Vivaspin Turbo 4	Vivaspin 6	Vivaspin 15R	Vivaspin Turbo15	Vivaspin 20
	PES	PES	PES	PES	HY	PES	PES
2,000	-	-	-	-	VS15RH91	-	-
3,000	VS0191	VS0291	VS04T91	VS0691	-	VS15T91	VS2091
5,000	VS0111	VS0211	VS04T11	VS0611	VS15RH11	VS15T11	VS2011
10,000	VS0101	VS0201	VS04T01	VS0601	VS15RH01	VS15T01	VS2001
30,000	VS0121	VS0221	VS04T21	VS0621	VS15RH21	VS15T21	VS2021
50,000	VS0131	VS0231	VS04T31	VS0631	-	VS15T31	VS2031
100,000	VS0141	VS0241	VS04T41	VS0641	-	VS15T41	VS2041
300,000	VS0151	VS0251	-	VS0651	-	VS15T51	VS2051
1,000,000	VS0161	VS0261	-	VS0661	-	VS15T61	VS2061
0.2 µm	VS0171	VS0271	-	VS0671	-	-	VS2071
Starter Pack	VS01S1	VS02S1	-	VS06S1	-	-	VS20S1
Pack Size	25	25	25	25	12	12	12

PES: Polyethersulfone / CTA : Cellulose Triacetate / HY: hydrosart / PC: Polycarbonate / PP: Polypropylene

Vivacell

단백질 농축 및 탈염용 필터



Vivacell 70 - Centrifugation | Pressure



Vivacell 100 - Centrifugation | Pressure



Vivacell 250 - Pressure

연구 및 실험실에서 원심분리, Pressure, Gas 등으로 원하는 단백질을 농축 및 탈염할 때 사용

- 신속하고 경제적인 (Vivacell 250의 경우, 신속하게 Membrane 교체가 가능)
- 별도의 Connection Tube나 원심분리기 등의 장비 없이 농축 가능함
- 원심 분리기를 이용할 때, 250 ml Bottle용 Rotor에 끼워 간편하게 농축 가능
- 세로로 장착된 Membrane으로 Dead Volume 적음

Technical Specifications

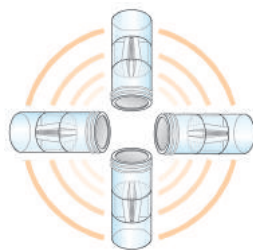
	Vivacell 70	Vivacell 100	Vivacell 250
Membrane area	20 cm ²	23.5 cm ²	40 cm ²
Membrane	PES	PES	PES
Sample Volume	10 - 70 ml	20 - 100 ml	50 - 250 ml
Hold Up Volume	< 200 µl	< 250 µl	< 200 µl
Dead Stop Volume	150 µl	350 µl	600 µl
Maximum Speed	1,000g	2,000g	-
Maximum Pressure	5 bar	5 bar	4 bar
Body / Filtrate Vessel	PC	PC	PC

Ordering Information

	MWCO	Vivacell 70		Vivacell 100		Vivacell 250
PES	5,000	VS6011	VS6012*	VC1011	VC1012	VC2511
	10,000	VS6001	VS6002*	VC1001	VC1002	VC2501
	30,000	VS6021	VS6022*	VC1021	VC1022	VC2521
	50,000	VS6031	VS6032*	VC1031	VC1032	VC2531
	100,000	VS6041	VS6042*	VC1041	VC1042	VC2541
	300,000	-	-	VC1051	VC1052	-
	1,000,000	-	-	VC1061	VC1062	-
	0.2 µm	VS6071	VS6072*	VC1071	VC1072	VC2571
	Pack Size	2	10	2	10	5

PES: Polyethersulfone

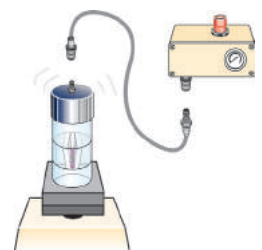
* 농축 필터만 포함되어 있음



Centrifuge



Pressure



Pressure-Shake

Vivaflow 50 / 200 / 50R

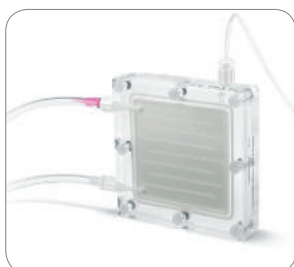
단백질 농축 및 탈염용 필터



Vivaflow 50



Vivaflow 200



Vivaflow 50R

Cross Flow를 이용하여 연구목적이나 Pilot Scale에서 원하는 단백질을 농축 및 탈염 하는데 사용

Vivaflow 50

- 100 ml ~ 5 l
- 쉬운 Scale Up (Interlocking Modules)
- 경제적인
- Hold Up Volume이 적음

Vivaflow 50R

- 0.1 l ~ 1 l
- 재 사용 가능
- 바이러스 및 항체과 같은 고가샘플농축에 적합

Vivaflow 200

- 0.5 ~ 5 l
- 사용하기 간편한 압력 게이지와 Flow Restrictor
- 95% 이상의 회수율 (적은 Hold Up Volume과 Recirculation Volume)
- 세척 간편함 (0.1M NaOH)

Technical Specifications

	Vivaflow 50	Vivaflow 50R	Vivaflow 200
Materials of construction			
Main housing	Polycarbonate	Acrylic	Acrylic
Flow channel	TPX (PMP)	Acrylic	Acrylic
Membrane support	TPX (PMP)	Polypropylene	Polypropylene
Membrane seals and O rings	Silicone	Silicone	Silicone
Pressure indicator	Polypropylene, SS** spring	Polypropylene, SS** spring	Polypropylene, SS** spring
Flow restrictor	Polypropylene	Polypropylene	Polypropylene
Fittings	Nylon	Nylon	Nylon
Tubing	PVC (medical grade)	PVC (medical grade)	PVC (medical grade)
Dimensions			
Overall L H W	107 84 25 mm	100 100 24 mm	126 138 38 mm
Channel W H	15 mm 0.3 mm	7.5 0.4 mm	10 mm 0.4 mm
Active membrane area	50 cm ²	50 cm ²	200 cm ²
Unrecoverable concentrate	1.5 ml	1.7 ml	5.3 ml
Min. recirculation volume	< 10 ml	10 ml	< 20 ml
Non-recoverable hold-up	< 0.5 ml	< 0.5 ml	< 1 ml

Ordering Information

Membrane	MWCO	Vivaflow 50	Vivaflow 50R	Vivaflow 200
PES	3,000	VF05P9	-	VF20P9
	5,000	VF05P1	-	VF20P1
	10,000	VF05P0	-	VF20P0
	30,000	VF05P2	-	VF20P2
	50,000	VF05P3	-	VF20P3
	100,000	VF05P4	-	VF20P4
	0.2 µm	VF05P7	-	VF20P7
RC	10,000	VF05C0	-	VF20C0
	100,000	VF05C4	-	VF20C4
Hydrosart	2,000	-	-	VF20H9
	5,000	-	VF05H1	VF20H1
	10,000	-	VF05H0	VF20H0
	30,000	-	VF05H2	VF20H2
	100,000	-	VF05H4	

PES: Polyethersulfone RC: Regenerated Cellulose

Vivapure®

Ion Exchange Protein Purification



Vivapure Mini-400|500 µl
Binding capacity: 1~4 mg



Vivapure Maxi-19|20 ml
Binding capacity: 15~80 mg

샘플 내의 Endotoxin 및 Detergent 등의 Contaminant를 제거, 단백질의 분리 정제에 사용

- Membrane Chromatography
- 신속하고 간편한 단백질의 분리 정제
- 기존 컬럼에 비해 경제적인
- 멤브레인 다양성 : Functional Group(S/Q/D)
- High Binding Capacity : 20 µg ~ 230 mg

Ordering Information

Vivapure® Mini Ion Exchange Spin Columns (up to 0.5 ml)		Spin Columns
VS-IX01SQ16	Vivapure® Mini S&Q H starter kit	16
VS-IX01DH24	Vivapure® D Mini H	24
VS-IX01QH24	Vivapure® Q Mini H	24
VS-IX01SH24	Vivapure® S Mini H	24

Vivapure® Maxi Ion Exchange Spin Columns (up to 20 ml)		Spin Columns
VS-IX20DH08	Vivapure® D Maxi H	8
VS-IX20QH08	Vivapure® Q Maxi H	8
VS-IX20SH08	Vivapure® S Maxi H	8

Vivacon® 2

DNA Concentration



회석되어 있는 DNA 샘플을 농축하는데 사용

- 5 kDa에서 100 kDa까지의 DNA 샘플을 농축할 수 있는 제품
- Membrane Type : Hydrosart® (Regenerated Cellulose)
- 농축 후 Re-Spin 방식으로 90%이상의 높은 회수율
- 샘플 처리량 : ~ 2 ml
- 일반 15 ml Spin Tube에 사용하는 Centrifuge Rotor사용 가능

Ordering Information

MWCO	Order No.	Pack size
2,000	VN02H91	25
	VN02H92	100
10,000	VN02H01	25
	VN02H02	100
30,000	VN02H21	25
	VN02H22	100
50,000	VN02H31	25
	VN02H32	100
100,000	VN02H41	25
	VN02H42	100

Vivapure® AdenoPACK™ 20 / 100 / 500

Adenovirus Purification and Concentration



Vivapure® AdenoPACK 20



Vivapure® AdenoPACK 100



Vivapure® AdenoPACK 500

Adenovirus를 정제, 농축하는데 사용

- 신속하고 편리한 Adenovirus의 분리 정제
- 실험에 필요한 모든 구성품을 포함한 완벽한 kit제공
- Low Endotoxin Levels
- 정량적 Yield 제공

Technical Specifications

Product	AdenoPACK 20	AdenoPACK 100	AdenoPACK 500
Sample Size	20 ml cell culture	20–200 ml of cell culture	500 ml of cell culture
Number of Purifications	6 x 20 ml	2 x 20–60 ml 1 x 200 ml	1 x 500 ml
Virus Particle (VP) per ml	Typically up to 1×10^{11} – 10^{12}	Typically up to 1×10^{13}	Typically up to 3×10^{13}
VP/IU	50–100	20–50	20–50
Processing time	Typically 1 hour	Typically 2 hours	Typically 2 hours
Endotoxin level	<0.025 EU/ml	<0.025 EU/ml	<0.025 EU/ml

Ordering Information

Vivapure® AdenoPACK 20

VS-AVPQ020	Vivapure® AdenoPACK 20
VS-AVPQ022	Vivapure® AdenoPACK 20 RT*

* AdenoPACK 20 RT does not contain Benzonase®

Vivapure® AdenoPACK 100

VS-AVPQ101	Vivapure® AdenoPACK 100
VS-AVPQ102	Vivapure® AdenoPACK 100 RT*

AdenoPACK 100 Accessories

VS-AVPA001	Pump tubing set for Vivapure AdenoPACK 100
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* AdenoPACK 100 RT does not contain Benzonase®

Vivapure® AdenoPACK 500

VS-AVPQ501	Vivapure® AdenoPACK 500
VS-AVPQ502	Vivapure® AdenoPACK 500 RT*

* AdenoPACK 500 RT does not contain Benzonase®

■ MD8 Airscan®

Air Sampler for Critical Applications



제품 용도

- Class, A, B의 Clean Zone, Isolator 및 Blow-fill seal machine을 위한 Air sampler
- 시간당 8 m³/h의 빠른 공기 flow rate으로 isokinetic (등속성)sampling 가능
- Gelatine filter unit을 사용하여 부유균 정량 분석 가능
- 샘플링 후 gelatin filter unit은 배지에 직접 올려 배양

관련 제품

- Gelatin Membrane filter
- Cellulose nitrate membrane filters (80 mm)

제품 특징

- Gelatine filter unit으로 박테리아는 물론 공기 중 바이러스까지 포집 가능
- 공기의 flow rate와 샘플 removal speed 조절 용이
- Calibration장비를 이용하여 현장 calibration 가능
- 고온 및 고습도 환경에서의 작업 시 Cellulose nitrate filter 사용 권고

□ Technical Specifications

Airscan® MD8

Air flow rate	2.0 m³/h–8 m³/h adjustable in 100-liter steps
Timer	1–99 minutes, adjustable in 1-minute steps
Max. deviation	± 5% in a temperature range of 15 °–35 °C
Noise level	For gelatine membrane filters, max. 62 dB (A)
Weight [kg]	Approx. 6.5
Dimensions L x W x H [mm]	375 x 242 x 228
Correction of the air flow	When the entered air flow rate cannot be attained, rate setting the display shows the max. attainable flow rate for a corresponding new setting below this value.
Inclusive filter holder	17655 (Gelatine disc filters)

□ Ordering Information

Order No.	Description
16746	MD8 Airscan® air sampler, 230 V, 50 Hz

Each version can be switched from 50 to 60 Hz and back.

Airport MD8

Battery-powered Portable Air Sampler



제품 용도

- 제약, 생물산업, 식품 및 음료 산업, 병원의 환경 관리 및 작업현장의 안전성 확보를 위한 휴대용 부유균 측정기

관련 제품

- BACTair™ Plate (Tryptic Soy Agar, Sabouraud Agar)
- Gelatine Membrane Filter

제품 특징

- 공기 중 미생물 포집을 위한 휴대 가능 배터리 충전식 장비
- Volume flow 및 샘플 volume 조절 용이
- 간편하고 용이한 사용 및 세척
- 최종 사용 후 parameter 자동 저장 및 자동 전원 shut-off 기능
- Calibration장비를 이용하여 현장 calibration 가능

Technical Specifications

Airport MD8

Volume flow regulation	By an integrated impeller wheel
Volume flow adjustable	30 l/min., 40 l/min., 50 l/min. and 125 l/min
Fixed given sample volumes	25, 50, 100, 250, 500, 750 and 1000 liters. In addition, the sample volume can be chosen manually in 5-liter steps
Operational life with one battery charge	Approx. 4.5 hours for 50 l/min
Noise level	For gelatine membrane filters 48 dB (A)
Weight [kg]	Approx. 2.5
Dimensions L x W x H [mm]	300 x 135 x 165
Inclusive adapter	17801 (for disposable gelatine filter units) 17803 (for BACTair™ Plates)

Power Supply

Battery	NiMH 16.8 Volt/3800 mAh
Battery charger input	100-240 V/47-63 Hz/600 mA
Battery charger output	24 V/1000 mA
Charging time	Approx. 4.5 hours for empty battery

Ordering Information

Order No.	Description
16757	AirPort MD8, complete with two adapters (17801 and 17803) and battery charger (69898525)

BACTair™

Culture Media Plates Agar



제품 용도

- Airport MD8에 장착하여 사용하는 Agar Plate형 소모품
- Tryptic Soy Agar 와 Sabouraud 두 가지 종류로 공급 (요청에 따라 다른 종류의 배지 공급 가능)

제품 특징

- 사전 충전 되어 개별 무균 포장
- 400개의 구멍이 있는 통합 형 (sieve)
- 8분 내 1 m³/h 가량 샘플 가능

Technical Specifications

BACTair™

Material	Polystyrene
Dimensions [mm]	116 x 24
Number of impaction holes	400 holes, Ø 0.47 mm each
High retention of particles	> 0.65 µm
Sterilization	Gamma irradiation



Ordering Information

Order No.	Determination of	Medium Type
14320-110-ACD	Total Count	Tryptic Soy Agar (TSA)
14321-110-ACD	Yeasts and molds	Sabouraud Agar (acc. USP)

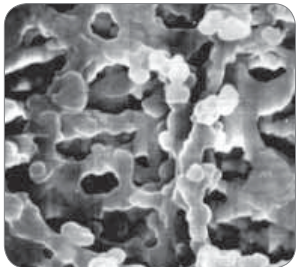
110mm, individually, Sterile Packaged, 10units

Accessories

17803	Adapter for BACTair™ on the AirPort MD8 air sampler
1ZPX-D0002	Covers for BACTair™ Culture Media Plates, 10 x 2 units individually, sterile packaged
14301-110-K	BACTair™ Plates, sterile, without media, 50 units

Gelatine Membrane Filter

Microbiological Air Monitoring by the Impaction Method



제품 용도

- MD8 Airscan 또는 Airport MD8에 장착하여 사용
- 공기 중 미생물 및 바이러스를 포집

제품 특징

- BACTair™와는 달리 바이러스 포집 가능
- 개별 멸균 포장된 Membrane
- 높은 Retention rate (Bacillus subtilis의 경우 99.9995%, T3의 경우 99.94%까지 포집)
- 물에 완전히 용해되어 포집된 미생물 수와 관계없이 배지위에 필터를 직접 얹은 후 배양 가능



Technical Specifications

Gelatine Membrane Filters

Gelatine filters	Water soluble, pore size 3 µm, 80 mm diameter, thickness approx. 250 µm
Thermal resistance	Max. 60 °C
Air flow rate	Approx. 2.7 l/min./cm² at p = 0.05 bar
Retention rates	1. Bac. subtilis niger spores 99.9995% at 0.25 m/s inlet velocity. 2. Coli phages: phage T1, 99.9% at 0.3 m/s inlet velocity and 50% rel. air humidity. Phage T3, 99.94% at 0.3 m/s inlet velocity and 80% rel. humidity.
Filtration area	38.5 cm²
Conditions for use	Room temperature, max. 30 °C, max. air humidity 85%
Sterilization	Supplied pre-sterilized by gamma irradiation

Ordering Information

Order No.	Description
17528-80-ACD	Individually packed in 1 polyethylene bag each
17528-80-BZD	Individually packed in 3 polyethylene bags each
17528-80-VPD	Individually packed in 3 polyethylene bags each, but label on innermost bag

Disposable Gelatine units, Sterile, pack of 10

■ Combisart

Strile-vented Filter Station Individual and Multi-branch Systems



- 최상 품질의 Steel manifold
- 미생물 분석 및 미세 잔유물 측정을 위해서 모든 타입의 Filter Holder와 Funnel을 장착하여 사용
- 다양한 종류(1 / 3/ 6 Branch)의 제품 가능
- 모든 종류의 Filter Holder 장착 가능(Disposable, Stainless, Funnels, Glass Funnels 등)
- 무균적인 Venting : 3-way valve, 세척 및 멸균의 간편함, 시간 절약, 경제적

□ Technical Specifications

Combisart

Stainless steel quality	High-grade stainless steel: B.S. 304S31 AISI 304
Dimensions L x H x D [mm]	3-branch manifold: 435 x 103 x 120 6-branch manifold: 910 x 103 x 120
Max. operating pressure	Vacuum only
Sterilization	By autoclaving (max. 134 °C), By dry heat (max. 180 °C), By flaming, By other methods acc. to ISO 8199
Parts and materials	Lid, funnel, base part, filter support, clamp and tap made of stainless steel. Silicone flat gasket. Silicone lid seal
Flow rate per filter station	200 ml/min with 0.2 µm membrane filter
for water at 90% vacuum	600 ml/min with 0.45 µm membrane filter
Filtration area	12.5 cm ² (if using stainless steel funnels)
Suitable membrane	50 mm (47 mm, if using a 47 mm frit 6980103) filter diameter

□ Ordering Information

Combisart® Individual and Multi-branch Bases

Order No.	Description
16841	Combisart® individual base, stainless steel, with frit (50 mm), to accommodate stainless steel funnels and Biosart® 100 250
16844	Combisart® 1-branch stainless steel manifold, without frit
16842	Combisart® 3-branch stainless steel manifold, without frits
16843	Combisart® 6-branch stainless steel manifold, without frits
16840	Combisart® Single base with frit (for 50 mm membranes), stainless steel, accommodate stainless steel funnels and Biosart® 100 250
1ZU-0002	Microsart® Base 47 mm, with frit



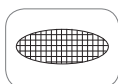
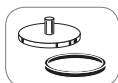
■ Combisart Filter Holder & Funnels

Stainless Steel Funnels 40, 100, 500ml

For Colony Counting or Particle Counting



- 안전하고 Autoclave 가능
- 시간 절약, 화염 멸균 가능하고, 사용의 편리성
- 재 사용에 따른 경제적 절약

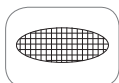


Glass Filter Holder 30ml

For Particle Counting and Hybridization test



- 안전하고 Autoclave 가능
- 시간 절약, 화염 멸균 가능하고, 사용의 편리성
- 재 사용에 따른 경제적 절약

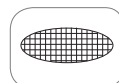


Glass Filter Holder 250ml

For Colony Counting Particle Counting



- 안전하고 Autoclave 가능
- 시간 절약, 화염 멸균 가능하고, 사용의 편리성
- 재 사용에 따른 경제적 절약

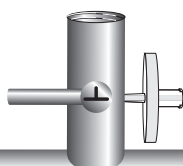


Description	Order No.
40 ml capacity	6981004
100 ml capacity	6981065
500 ml capacity	6981002

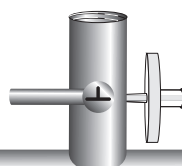
Description	Order No.
30 ml capacity	16306

Description	Order No.
250 ml capacity	16307

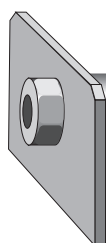
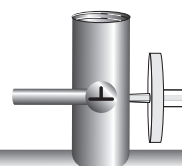
16840



16836



16837

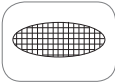


Polycarbonate Filter Holder 250ml

For Colony and Particle Counting



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- 안전하고 Autoclave 가능
- 저렴하고, 부분 재사용에 따라 비용 절감 가능

Biosart 100 monitors 100ml

For Colony Counting



+



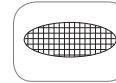
- 안전하고, 멸균된 개별포장, Funnel안에 Filter 포함하여 다른 장비 필요 없음
- Membrane Filter는 ISO7740을 만족하고, 다양한 Membrane 색을 가짐
- Filter 후 배지만을 넣어서 바로 Incubating 가능(Ready-to-use 제품)

Biosart 250 Funnel 250ml

For Colony Counting and Particle Counting



+

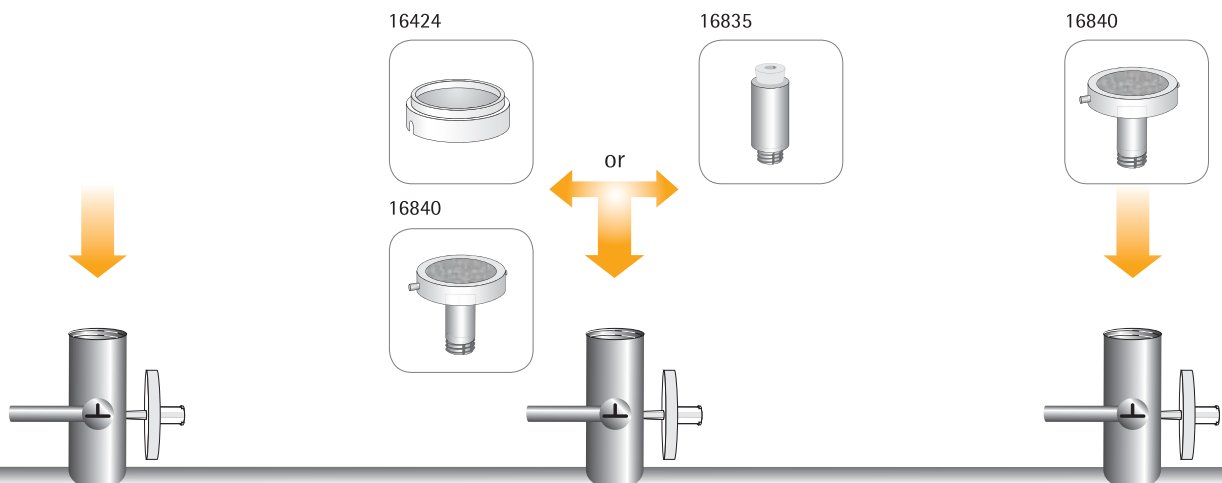


- 경우에 따라 Autoclave 가능
- Base에 고정시킬 수 있어 안전하게 사용가능
- Funnel 벽면에 Volume range 표시로 정량 측정 용이

Description	Order No.
250 ml capacity	16511

Description	Order No.
0.2 µm, white black, 47 mm	16401-47-07-ACK
0.45 µm, white black, 47 mm	16401-47-06-ACK
0.45 µm, green dark green, 47 mm	16402-47-06-ACK
0.45 µm, gray white, 47 mm	16403-47-06-ACK

Description	Order No.
250 ml, 50 units, sterile	16407-25-ALK
250 ml, 50 units, individually sterile	16407-25-ACK



Microsart Funnel 100|250

For Colony Counting



- 멸균된 Funnel로 Cross Contamination을 최소화
- Funnel 벽면에 Volume range 표시로 정량 측정 용이
- Click-fit Closure로 장착 및 분리 용이(쉽고 빠른 Test 시행)
- 100 ml과 250 ml Volume Size 선택

Microsart @filter 100|250

For Colony Counting



- 멸균 포장과 Membrane Filter와 Funnel의 일체형 구성
- Membrane Filter와 Pore Size, 색상 선택 가능
- Click-fit Closure로 장착 및 분리 용이(쉽고 빠른 Test 시행)
- 100 ml과 250 ml Volume Size 선택

Description	Order No.
Microsart® 100 Funnel 100 funnels, sterile in 5 sealed bags	16A07 - 10 - N
Microsart® 96 funnels Funnel 250, sterile in 6 sealed bags	16A07 - 25 - N

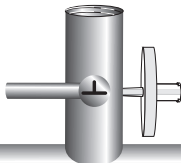
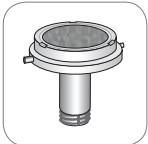
Membrane@Filter 100	Pore Size	Order No.
Cellulose nitrate white black	0.2 µm	16D01-10-07-BL
Cellulose nitrate green dark green	0.45 µm	16D02-10-06-BL
Regenerated cellulose white (w/o grid)	0.45 µm	16D05-10-06-BL
Cellulose nitrate white black	0.45 µm	16D01-10-06-BL

47 mm, 60units

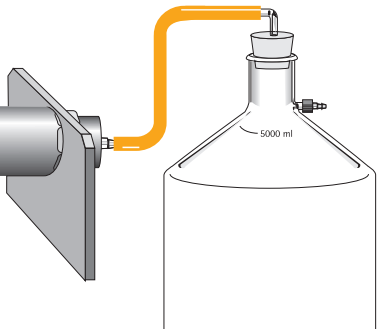
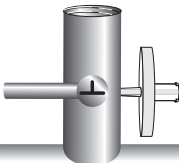
Membrane@Filter 250	Pore Size	Order No.
Cellulose nitrate white black	0.2 µm	16D01-25-07-BK
Cellulose nitrate green dark green	0.45 µm	16D02-25-06-BK

47 mm, 48units

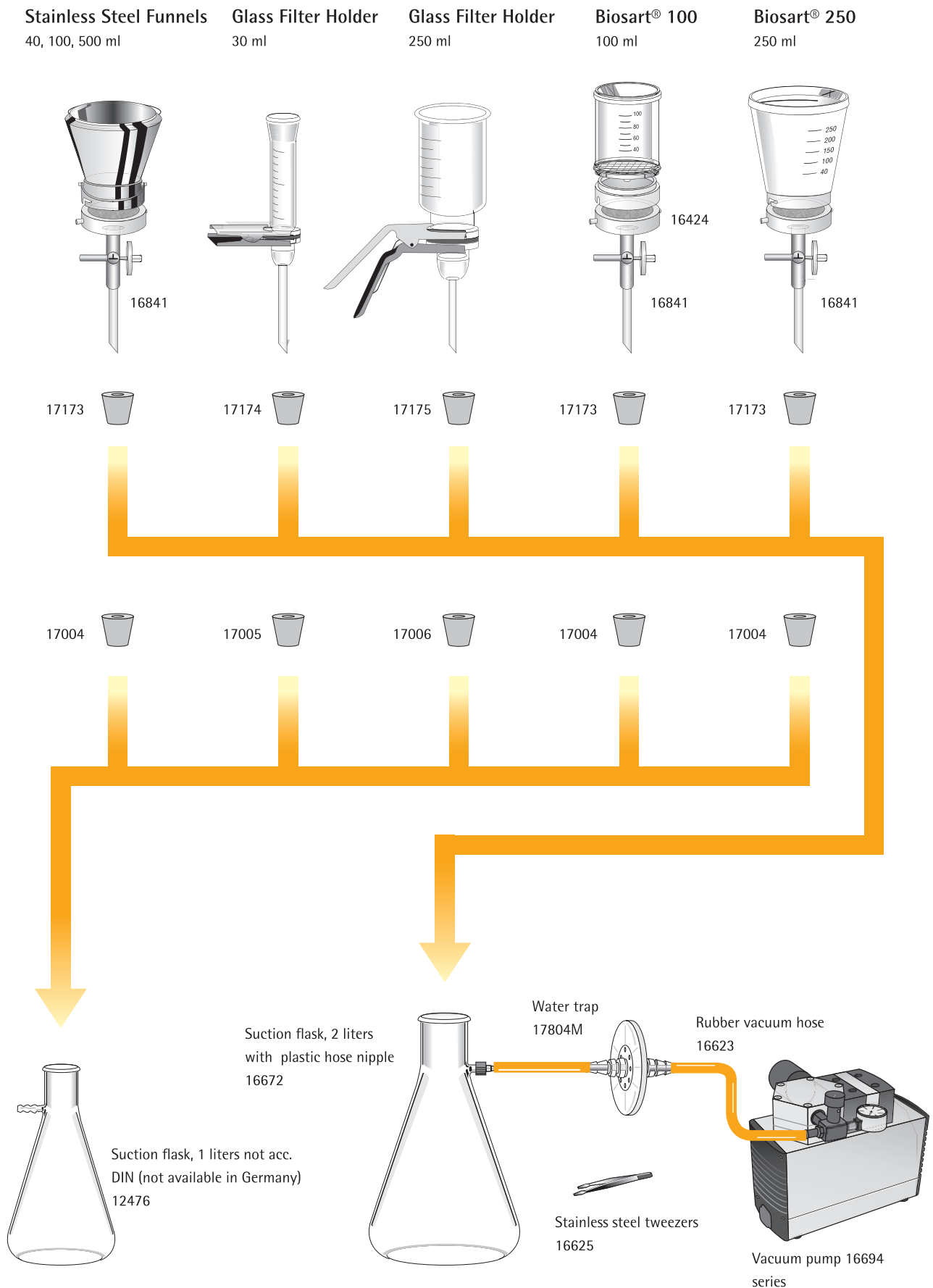
1ZU - 0002



1ZU - 0002



■ Combisart® Individual System



■ Microsart® e.motion Dispenser



제품 용도

- Sensor를 이용하여 자동화 시킨 membrane filter dispenser

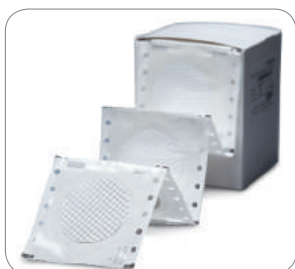
제품 특징

- 멸균 처리 후 개별 포장 된 membrane filter를 Optical sensor 또는 터치 버튼을 통해 배출
- 새롭게 장착 된 모터 트래션 롤러로 신속하고 안전하게 membrane filter를 제공
- 2차 오염 방지
- 페달 스위치 옵션으로 설치 가능

□ Ordering Information

Order No.	Description
16712	Microsart® e.motion dispenser, fully automated membrane filter dispenser
1ZE-0028	Pedal (foot switch) for Microsart® e.motion dispenser

■ Microsart e.motion Membrane Filters



제품 용도

- Microsart e.motion dispenser 전용 membrane filter
- 제약, 물, 화장품, 식품, 음료 산업 등에서 미생물 colony counting을 위해 사용하는 격자 무늬 membrane filter

제품 특징

- 빠르고 쉽게 교체 가능
- 개별 포장 및 밀봉 처리되어 2차 오염 없이 membrane filter 제공
- 뛰어난 미생물 회수율
- ISO 7704에 따른 0.45 µm pore size 가능
- 타사 dispenser와 호환 가능
- Gamma-irradiation 35kGray로 멸균 처리
- High Flow형태의 membrane filter 구입 가능

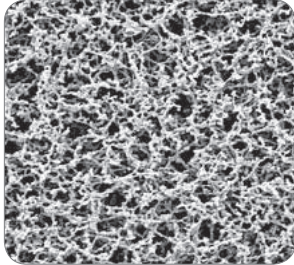
□ Ordering Information

Order No.	Color	Pore Size
11407Z-47-SCM	White black	0.2 µm
114H6Z-47-SCM	White black	0.45 µm High Flow
11406Z-47-SCM	White black	0.45 µm
11404Z-47-SCM	White black	0.8 µm
11403Z-47-SCM	White black	1.2 µm
11402Z-47-SCM	White black	3 µm
139H6Z-47-SCM	White green	0.45 µm High Flow
13906Z-47-SCM	White green	0.45 µm
13806Z-47-SCM	Green dark green	0.45 µm
13006Z-47-SCM	Gray* white	0.45 µm
13005Z-47-SCM	Gray* white	0.65 µm
13004Z-47-SCM	Gray* white	0.8 µm

Diameter 47 mm , in Pack of 3 x 100 Membranes, Individually, Sterile Packaged, without Protective Paper

■ Cellulose Nitrate (Cellulose Ester) Membrane Filters

Gridded, 멸균



제품 용도

- 멸균 처리 및 개별 포장 된 membrane filter
- 제약, 물, 화장품, 식품, 음료 산업 등에서 미생물 colony counting을 위해 사용하는 격자무늬 membrane filter

제품 특징

- 뛰어난 미생물 회수율
- ISO7704에 따른 0.45 μm
- High Flow형태의 membrane filter 구입 가능
- Membrane filter 색상 3가지 중 선택 가능
- Gamma-irradiation로 멸균 처리

□ Ordering Information

White Membrane with Black Grid

for Detection of Bacteria with Dyed Media, Particle Count & Microscopy, Type 114, Individually, Sterile Packaged

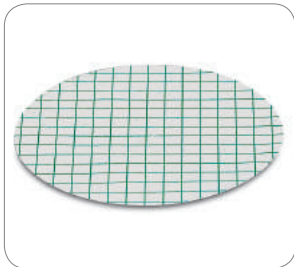
Order No.	Diameter	Pore Size	Pack Size
11407-47-ACN	47 mm	0.2 μm	100
11407-50-ACN	50 mm		100
11406-47-ACN	47 mm	0.45 μm	100
11406-50-ACN	50 mm		100
114H6-47-ACN	47 mm	0.45 μm High Flow	100
114H6-50-ACN	50 mm		100



White Membrane with Green Grid

for Detection of Bacteria with Dyed Media, Particle Count and Microscopy, Type 139, Individually, Sterile Packaged

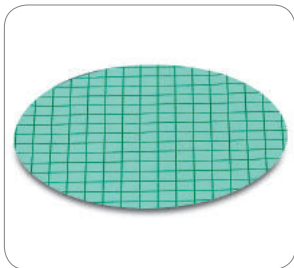
Order No.	Diameter	Pore Size	Pack Size
13906-47-ACN	47 mm	0.45 μm	100
13906-50-ACN	50 mm		100
139H6-47-ACN	47 mm	0.45 μm High Flow	100
139H6-50-ACN	50 mm		100



Green Membrane with Dark-Green Grid

Providing Optimal Contrast to Light-Colored or Transparent Bacteria Colonies, Type 138, Individually, Sterile Packaged

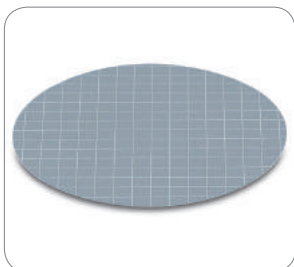
Order No.	Diameter	Pore Size	Pack Size
13806-47-ACN	47 mm	0.45 μm	100
13806-50-ACN	50 mm		100



Gray Membrane (after Wetting, Black) with White Grid

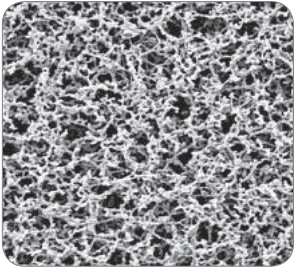
for Detection of Yeasts and Molds, Particle Count and Microscopy, Type 130, Individually, Sterile Packaged

Order No.	Diameter	Pore Size	Pack Size
13006-47-ACN	47 mm	0.45 μm	100
13006-50-ACN	50 mm		100



Cellulose Nitrate (Cellulose Ester) Membrane Filters

Gridded, 비열균



제품 용도

- 제약, 물, 화장품, 식품, 음료 산업 등에서 미생물 colony counting을 위해 사용하는 격자무늬 membrane filter

제품 특징

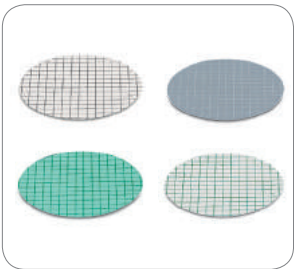
- 뛰어난 미생물 회수율
- ISO7704에 따른 0.45 μm
- Membrane filter 색상 3가지 중 선택 가능

Ordering Information

White Membrane with Black Grid

for Detection of Bacteria with Dyed Media, Particle Count & Microscopy, Type 114, Non-sterile

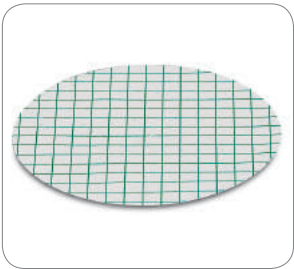
Order No.	Diameter	Pore Size	Pack Size
11407-25-N	25 mm	0.2 μm	100
11407-47-N	47 mm		100
11407-50-N	50 mm		100
11406-25-N	25 mm	0.45 μm	100
11406-47-N	47 mm		100
11406-50-N	50 mm		100



White Membrane with Green Grid

for Detection of Bacteria with Dyed Media, Particle Count and Microscopy, Type 139, Non-sterile

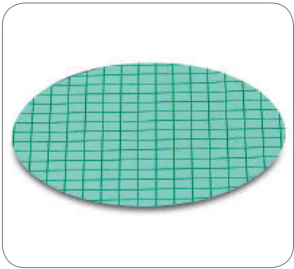
Order No.	Diameter	Pore Size	Pack Size
13906-47-N	47 mm	0.45 μm	100
13906-50-N	50 mm		100



Green Membrane with Dark-Green Grid

Providing Optimal Contrast to Light-Colored or Transparent Bacteria Colonies, Type 138, Non-sterile

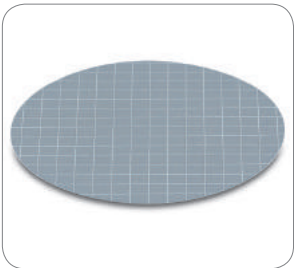
Order No.	Diameter	Pore Size	Pack Size
13806-47-N	47 mm	0.45 μm	100
13806-50-N	50 mm		100



Gray Membrane (After Wetting, Black) with White Grid

for Detection of Yeasts and Molds, Particle Count and Microscopy, Type 130, Non-sterile

Order No.	Diameter	Pore Size	Pack Size
13006-25-N	25 mm	0.45 μm	100
13006-47-N	47 mm		100
13006-50-N	50 mm		100



Nutrient Pad Sets

Dehydrated Media Pads In Petri Dishes with Matching Membrane Filters



제약, 물, 화장품, 식품, 음료 산업 등에서 미생물 배양을 위해 사용하는 petri dish 형태의 배지와 격자 무늬의 membrane filter가 함께 판매되는 제품

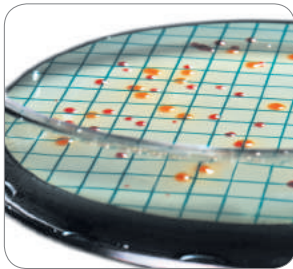
- 편리성: 미생물 colony counting을 위해 사용 하는 배지와 membrane filter가 함께 제공
- 멸균 및 건조 된 형태의 nutrient media로 장기간 (18개월 이상) 보관 가능
- Nutrient pad위에 membrane filter를 올려놓고 배양하거나 샘플량이 적은 경우, 직접 도포 후 배양 가능

Ordering Information

Nutrient Pad Sets for Total Colony Counting

Order No.	Determination of	NPS Type (Filter Type)*
14063-47-N	Total count	Caso ⁽¹⁾
14084-47-RDN	Total count	R2A ⁽¹⁾
14084-47-N	Total count	R2A ⁽¹⁾
14055-47-RDN	Total count	Standard TTC ⁽¹⁾
14055-47-N	Total count	Standard TTC ⁽¹⁾
14085-47-N	Total count	Standard TTC I mod. ⁽¹⁾
14064-47-N	Total count	Standard ⁽¹⁾
14076-47-RDN	Total count	TGE ⁽¹⁾ Tryptone Glucose Extract
14076-47-N	Total count	TGE ⁽¹⁾ Tryptone Glucose Extract
14090-47-N Total count	Yeast Extract ⁽¹⁾	

individually, sterile packaged in petri dishes, 100 per box, with 100 individually,
sterile packaged 47 mm membrane filters (order no. -RDN = Microsart® e.motion Membranes)



Nutrient Pad Sets for E. coli, Coliforms and Enterobacteria

Order No.	Determination of	NPS Type (Filter Type)*
14087-47-RDN	E. coli and coliforms	Chromocult ⁽⁷⁾
14087-47-N	E. coli and coliforms	Chromocult ⁽⁷⁾
14082-47-N	E. coli	ECD ⁽²⁾
14053-47-RDN	E. coli and coliforms	Endo ⁽⁹⁾
14053-47-N	E. coli and coliforms	Endo ⁽⁹⁾
14097-47-N	Enterobacteria, E. coli	MacConkey ⁽²⁾
14068-47-N	E. coli and coliforms	m FC ⁽²⁾
14068-50-PDN	E. coli and coliforms	m FC in closed petri dishes ⁽²⁾
14067-47-RDN	E. coli and coliforms	Teepol Lauryl Sulphate ⁽²⁾
14067-47-N	E. coli and coliforms	Teepol Lauryl Sulphate ⁽²⁾
14056-47-RDN	E. coli and coliforms	Tergitol TTC ⁽²⁾
14056-47-N	E. coli and coliforms	Tergitol TTC ⁽²⁾

individually, sterile packaged in petri dishes, 100 per box, with 100 individually,
sterile packaged 47 mm membrane filters (order no. -RDN = Microsart® e.motion Membranes)

Nutrient Pad Sets Starter Kit

Order No.	Determination of	NPS Type (Filter Type)*
14095-47-N	E. coli and coliforms, total count, yeasts and molds	Mixed types: Endo, Standard, Wort ^(1, 2, 3)

individually, sterile packaged in petri dishes, 100 per box, with 100 individually,
sterile packaged 47 mm membrane filters

Nutrient Pad Sets for Other Faecal Bacteria

Order No.	Determination of	NPS Type (Filter Type)*
14051-47-RDN	Enterococci	Azide KF Strep ⁽¹⁾
14051-47-N	Enterococci	Azide KF Strep ⁽¹⁾
14057-47-N	Salmonellae	Bismuth Sulfite ⁽¹⁾

individually, sterile packaged in petri dishes, 100 per box, with 100 individually,
sterile packaged 47 mm membrane filters (order no. -RDN = Microsart® e.motion Membranes)

Nutrient Pad Sets for Non-Faecal, Pathogenic Bacteria

Order No.	Determination of	NPS Type (Filter Type)*
14075-47-RDN	Pseudomonas	aeruginosa Cetrimide ⁽²⁾
14075-47-N	Pseudomonas	aeruginosa Cetrimide ⁽²⁾
14074-47-N	Staphylococci, Staph. aureus	Chapman ⁽²⁾

individually, sterile packaged in petri dishes, 100 per box, with 100 individually,
sterile packaged 47 mm membrane filters (order no. -RDN = Microsart® e.motion Membranes)

Nutrient Pad Sets for Yeasts and Molds

Order No.	Determination of	NPS Type (Filter Type)*
14061-47-N	Wild yeasts	Lysine ⁽³⁾
14086-47-CCN	Yeasts and molds	Malt Extract ⁽⁸⁾
14086-47-N	Yeasts and molds	Malt Extract ⁽⁶⁾
14069-47-N	Yeasts and molds	Sabouraud ⁽¹⁰⁾
14070-47-N	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽⁴⁾
14072-47-N	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽⁵⁾
14080-47-RDN	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽⁶⁾
14080-47-N	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽⁶⁾
14083-47-N	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽³⁾
14091-47-RDN	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽⁸⁾
14091-47-N	Yeasts and molds	Schaufus Pottinger m green yeast and mold ⁽⁸⁾
14089-47-N	Yeasts and molds and bacteria	Wallerstein Nutrient WL Nutrient ⁽²⁾
14058-47-RDN	Yeasts and molds	Wort ⁽³⁾
14058-47-N	Yeasts and molds	Wort ⁽³⁾
14092-47-RDN	Yeasts and molds	Wort ⁽⁸⁾

individually, sterile packaged in petri dishes, 100 per box, with 100 individually,
sterile packaged 47 mm membrane filters (order no. -RDN = Microsart® e.motion Membranes)

* Filter Type

(1) Green with dark-green grid, 0.45 µm pore size

(2) White with green grid, 0.45 µm pore size

(3) Gray (after wetting black) with white grid, 0.65 µm pore size

(4) White with green grid, 0.65 µm pore size

(5) White with green grid, 1.2 µm pore size

(6) Gray (after wetting black) with white grid, 0.8 µm pore size

(7) White with black grid, 0.45 µm pore size

(8) Gray (after wetting black) with white grid, 0.45 µm pore size

(9) White with green grid, 0.45 µm pore size, High Flow

(10) Gray (after wetting black) with white grid, 0.45 µm pore size, High Flow

■ Microsart e.jet

Transfer pump with quick connection



Combisart 3-branch manifold 사용에 적합한 펌프

- 미생물 실험에 적합
- 별도의 suction flask 구매 불필요
- 작업공간 차지 최소화



□ Technical Specifications

Microsart e.jet

Flow rate	> 4.0 l/min
Max. vacuum	0.4 bar
Max. pressure	1.0 bar
Mains	100–240 V 50–60 Hz
Materials (in contact with filtrate)	PTFE, ETFE, Polypropylene, EPDM, POM, PSU
Weight [g]	Pump: 1425.3; Power supply: 202.8
Dimensions W x L x H [mm]	120 x 170 x 190
Max. ambient Temp.	+ 5...+ 40 °C
Max. temp of liquid	+ 5...+ 80 °C
Max. viscosity	<150 cSt
Protection type	IP 64
Protection class	III
Inlet outlet	Quick Connection on hose nipples for DN 10 tubings

□ Ordering Information

Order No.	Description
166MP-4	Microsart® e.jet Transfer Pump with Quick Connection, without tubings, inlet and outlet hose nipples for DN 10 tubings

Accessories

1ZA-0006	Tubing with Quick Connection Coupling (PSU), silicone, 20 cm, for vacuum-sided connection, inner diameter DN 10, outer diameter DN 20, wall thickness 5 mm (when ordering, please state length required in meters)
1ZAS-0007	Silicone tubing, 1 m, for pressure-sided connection, inner diameter DN 10, outer diameter DN 14, wall thickness 2 mm

Replacement Parts

1EP-0001	Pump head complete for 166MP-3 and 166MP-4
1EE-0007	Power supply complete for 166MP-3 and 166MP-4

Threaded Fittings

1EAS-0027	Quick Connection set, 2 Nipples (POM) on R3/8" male thread and 2 Couplings (PSU) on DN 10 hose nipple
1EAS-0026	Quick Connection Nipple, stainless steel
1EAF-0020	DN 10 hose nipple on R3/8" male thread

■ Electric Vacuum Pump

Microsart mini.vac / Microsart maxi.vac



□ Technical Specifications

	Microsart® maxi.vac	Microsart® mini.vac
Order No.	16694-2-50-22 16694-1-60-22	16694-2-50-06 16694-1-60-06
Delivery [l/min]	22	6
Ultimate Vacuum [mbar]	100	100
Noise level [100 mbar]	57.5–59.0 dBA	53.5 dBA
Operating Pressure [bar]	1	2.5
Materials (contact with filtrate possible)	Aluminum, CR (Neoprene), NBR (Perbunan)	PPS, EPDM, FPM (Viton)
Connectors for Tube [mm]	ID 9	ID 4
Ambient Temperature	5...40 °C	5...40 °C
Mains	16694-2-50-22: 230 V 50 Hz 16694-1-60-22: 115 V 60 Hz	16694-2-50-06: 230 V 50 Hz 16694-1-60-06: 115 V 60 Hz
Motor Protection	IP 44	IP 20
Power P1 [W]	130	65
Operating Current [A]	0.9	0.63
Weight [kg]	7.1	1.9
Dimensions W x H x D [mm]	261 x 204 x 110	164 x 141 x 90
Recommended application	All multi-branch manifolds individual filter station	Single filtration run up to 3-branch manifolds

□ Ordering Information

Order No.	Description
16694-2-50-22	Microsart® maxi.vac for multiple filtration runs, 230 V, 50 Hz
16694-1-60-22	Microsart® maxi.vac for multiple filtration runs, 115 V, 60 Hz
16694-2-50-06	Microsart® mini.vac up to 3 filter stations in parallel, 230 V, 50 Hz
16694-1-60-06	Microsart® mini.vac up to 3 filter stations in parallel, 115 V, 60 Hz

Replacement Parts

1ED-0054	Replacement kit for 16694-2-50-06 and -1-60-06, set of one membrane, two valve springs and two head seals
1ED-0055	Replacement kit for 16694-2-50-22 and -1-60-22, set of one membrane, two valve springs and two head seals
1EH-0001	Sound absorber for 16694-2-50-06 and -1-60-06
1EH-0002	Sound absorber for 16694-2-50-22 and -1-60-22
1EV-0001	Fine adjustment head for 16694-2-50-06 and -1-60-06
1EV-0002	Fine adjustment head for 16694-2-50-22 and -1-60-22
1EV-0003	Fine adjustment head for 16694-2-50-06 and -1-60-06, for pressure filtration

■ Suction Flask and Stoppers



Duran Glass로 만든 Vacuum-resistant flask, 안전한 Plastic 재질의 Hose Nipple 구성

□ Suction Flasks

Order No.	Description
16672-1	Suction flask, 5 liters acc. to DIN 12476, incl. stopper 75 D and glass tube
16672	Suction flask, 2 liters acc. to DIN 12476, without stopper
17204	Tube connector for connecting a Combisart® stainless steel manifold to a suction flask 1 or 2 liters (not necessary when a Vacusart® is connected directly to the bored stopper)
16606	Suction flask, 1 liter (not available in countries which have safety restrictions on glass hose nipples)

□ Replacement Parts for Suction Flasks

Order No.	Description
1EAQ-0017	Glass tube for silicon stopper 75 D for suction flask 5 liters 16672-1
1EAS-0019	Bored stopper 75 D for suction flask 5 liters 16672-1
1EA-0018	Assembling kit for hose barb for suction flask 5 liters 16672-1
6983003	Hose barb, complete, Polypropylene, for suction flask 2 liters 16672

□ Stoppers for Suction Flask 2 Liters 16672

Order No.	Description	Adaptation
17173	Silicone stopper	Combisart® individual base 16841 or other individual stainless steel filter holders (16201, 16219, 16220) onto the suction flask 16672
17174	Silicone stopper	16306 15 (glass funnels, 30 ml) onto the suction flask 16672
17175	Silicone stopper	16307 (glass funnel, 250 ml) onto the suction flask 16672

□ Stoppers for Suction Flask 1 Liter 16606

Order No.	Description	Adaptation
17004	Silicone stopper	Combisart® individual base 16841 or other individual stainless steel filter holders (16201, 16219, 16220) onto the suction flask 16606
17005	Silicone stopper	16306 15 (glass funnels, 30 ml) onto the suction flask 16606
17006	Silicone stopper	16307 16 (glass funnel, 250 ml) onto the suction flask 16606

Sterisart® Universal Pump

Sterility Testing Systems



- 100 - 500 µl 샘플 볼륨 처리 가능
- 샘플 준비를 위한 간단한 단계 제공
- 2.2 ml 원심분리기 튜브까지 Fixed Angle Rotor 가능
- 특허 받은 Vertical membrane (막 오염 최소화, 고속 농도 제공)

Technical Specifications

Technical Specifications for Sterisart® Universal Pump

Pump flow rate [ml/min]	70-650
Power requirements [VAC]	100-240
Frequency [Hz]	50-60
Power consumption [W]	100
Dimensions W x D x H [mm]	
Pump	Approx. 336 x 260 x 210 (with lever)
Pump with holding ring for bottles, container	Approx. 440 x 365 x 485
Weight [kg]	
Basic version 16419	Approx. 13.5
Upgraded version 16420 with display and user software	Approx. 14.6

Ordering Information

Order No.	Description
16419	Sterisart® Universal pump, basic version
16420	Sterisart® Universal pump, upgraded version with display user software
Accessories	
1ZE-0033	Footswitch
1ZG-0014	Adapter for Sterisart® NF units, fitting into container for draining of Millipore Equinox pump
1ZG-0025	Adapter for Sterisart® NF units, fitting into container for draining (with two slightly different diameters of the fixation-slots) of new Millipore Equinox pump
1ZE-0039	Transport trolley
1ZE-0040	Communication kit
1ZE-0050	Installation kit for isolators

■ Sterisart® NF

Sterility Testing Systems



- 제약 제품을 무균 Test하기 위해 사용되는 Closed System
- Membrane Filter 방법을 이용해서 제약 Sample 안에 균의 유무를 확인
- Cross Contamination을 제거하기 위해, 1회용 사용으로 Sterisart Pump에 장착하여 Sample의 이동으로 결과 확인

□ Technical Specifications

Sterisart® NF

Pore size of the Sartochem® membrane filter	0.45 µm, tested with Serratia marcescens
Filter area	15.7 cm ² in each Sterisart® container
Flow rate (for water)	500 ml/min at 1 bar approx. 15 psi
Pore size of the air filters	0.2 µm PTFE, validated acc. to HIMA for the retention of B. diminuta
Sample container capacity	120 ml (graduation marks at 50, 75 and 100 ml)
Max. operating pressure	3 bar approx. 44 psi at 20 °C
Max. operating temperature	50 °C
Sterilization	ETO (ethylene oxid gas) or gamma irradiation

□ Ordering Information

Sterisart® NF alpha Disposable Units for Sterility Testing in Clean Rooms

Order No.	Description	Type of Sample	Type of Sample Container
16466-ACD	Sterisart® NF alpha with long dual-needle metal spike, sterile-vented	Closed glass bottles with septum	LVPs
16467-ACD	Sterisart® NF alpha with long needle and protective plate, inclusive sterile venting needle	Open containers, i.e. glass ampoules, glass bottles collapsible bags	LVPs SVPs
16467-TCO	Sterisart® NF alpha with long needle, inclusive sterile venting needle	Open containers, i.e. glass ampoules, glass bottles, collapsible bags	LVPs SVPs
16468-ACD	Sterisart® NF alpha with Luer or Luer Lock connector, inclusive long needle and sterile venting needle	Tubing systems and bags with Luer or Luer Lock connectors	Medical devices

Individually, Sterile Packaged, ETO-sterilized, Needles Made of Flame-sterilizable Stainless Steel, 10 Units

Sterisart® NF gamma Disposable Units for Sterility Testing in Isolators

Order No.	Description	Type of Sample	Type of Sample Container
16466-GBD	Sterisart® NF gamma with long dual-needle metal spike, sterile-vented	LVPs	Closed glass bottles with septum
16476-GBD	Sterisart® NF gamma with short dual-needle metal spike, sterile-vented	SVPs	Closed glass vials with septum
16477-GBD	Sterisart® NF gamma with long needle, (side opening, with solid pointed tip, non-coring), protective plate, inclusive sterile venting needle	LVPs, SVPs, eye drops	Closed plastic containers[vials] ampoules, plastic containers of Blow-Fill-Seal fillings
16467-GBD	Sterisart® NF gamma with long needle and protective plate, inclusive sterile venting needle	LVPs, SVPs	Open containers, (i.e. glass ampoules, glass bottles), collapsible bags
16475-GBD	Sterisart® NF gamma with two dual-needle metal spikes of different length, one is sterile-vented	Lyophilisates, soluble powders, liquid antibiotics	Closed glass vials with septum
16469-GBD	Sterisart® NF gamma with syringe-adapter and long dual-needle metal spike, sterile-vented	Pre-filled syringes	Syringes with and without needles
16468-GBD	Sterisart® NF gamma with Luer Luer Lock connection, inclusive long needle and sterile venting needle	Medical devices	Tubing systems and bags with Luer or or Luer Lock connectors
16478-GBD	Sterisart® NF gamma with female Luer Lock connector	New Medical devices	Containers bags with Luer Lock male connectors

Individually Sterile, Double-packaged, Gamma Irradiated, Needles Made of Flame-sterilizable Stainless Steel, 10 Units

arium® 613L Reverse Osmosis Systems

대용량 1차수 생산 장비



- 높은 효율, thin-film composite (TFC) RO membranes
- 안정적인 물의 흐름 및 압력을 보장하는 Feed Pump 장착
- 100 L Tank 내장, 실용적인 디자인
- Permeate Flow와 압력을 조절 할 수 있는 Flow meter 와 manometer 장착
- Pressure Sensor와 알람 기능 장착
- UV lamp와 Conductivity meter 장착 옵션기능
- 시간당 50L ~ 300L 까지 채수가능
- CE 인증

- 일반적인 실험실에서 사용
- 초 순수 제조를 위한 공급수로 이용
- Glassware machines, autoclaves and air humidifiers를 위한 공급수

Technical Specifications

Systems	613L050	613L100	613L150	613L200	613L250	613L300
Capacity [l/h]**	50	100	150	200	250	300
Tank [l]	100	100	100	100	100	100
Electrical connection [V]	230	230	230	230	230	230
Power consumption [kW/h]	1.3	1.3	1.3	1.3	1.3	1.3
Power frequency [Hz]	50	50	50	50	50	50
Max. water temperature [°C]	25	25	25	25	25	25
Max. water pressure [bar]	7	7	7	7	7	7
Min. water pressure [bar]	2	2	2	2	2	2
Weight (full) [kg]	150	151	152	153	154	155
Number of membranes	1	2	3	4	5	6

** Drinking water quality at 10 °C, 3 bar, max. 500 mg/l total salt content ± 5% flow rate

Product Water Quality

Rejection rates*	
Monovalent ions	Up to 98%
Polyvalent ions	Up to 99%
Particles	> 99%
Microorganisms	> 99%
Dissolved organics (> 300 MW)	> 99%
Max. recovery rate %*	40-80
Conductivity [µS/cm]*	< 20

* Depends on feed water quality

Ordering Information

Order No.	Description
613L050	Complete arium® RO system with distribution pump, 50 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, RO membrane and 100-l tank
613L050D	Complete arium® RO system without distribution pump (in conjunction with an external tank system) 50 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, RO membrane
613L100	Complete arium® RO system with distribution pump, 100 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, RO membrane and 100-l tank
613L100D	Complete arium® RO system without distribution pump (in conjunction with an external tank system), 100 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, & 2 RO membranes
613L150	Complete arium® RO system with distribution pump, 150 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, 3 RO membranes and 100-l tank
613L150D	Complete arium® RO system without distribution pump (in conjunction with an external tank system), 150 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, & 3 RO membranes
613L200	Complete arium® RO system with distribution pump, 200 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, 4 RO membranes and 100-l tank
613L200D	Complete arium® RO system without distribution pump (in conjunction with an external tank system), 200 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, & 4 RO membranes
613L250	Complete arium® RO system with distribution pump, 250 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, 5 RO membranes and 100-l tank
613L250D	Complete arium® RO system without distribution pump (in conjunction with an external tank system), 250 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, & 5 RO membranes
613L300	Complete arium® RO system with distribution pump, 300 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, 6 RO membranes and 100-l tank
613L300D	Complete arium® RO system without distribution pump (in conjunction with an external tank system), 300 l/h, 230 Volt, 50 Hz, including 5 µm prefilter, & 6 RO membranes
613AOV200	Standard 200-l tank with system-controlled distribution pump (for RO 613L050D, 613L100D, 613L150D, 613L200D, 613L250D & 613L300D systems)
613AOV600	Standard 600-l tank with system-controlled distribution pump (for RO 613L050D, 613L100D, 613L150D, 613L200D, 613L250D & 613L300D systems)
613AOV1000	Standard 1000-l tank with system-controlled distribution pump (for RO 613L050D, 613L100D, 613L150D, 613L200D, 613L250D & 613L300D systems)
613L-AE002	Conductivity meter
613L-AE002	UV lamp with housing
613L-CH001	5 µm prefilter
613L-CH002	RO membrane

arium® mini

3차수 생산 장비



- Buffer, media and pH solutions
- Histology
- ELISA
- Solutions for chemical analysis and synthesis
- IC(Ion chromatography)
- ICP-MS
- GC-MS
- HPLC

- 일정한 수질의 3차수 생산
- Bagtank 시스템으로 Cleaning 필요없음
- 터치 스크린으로 손쉬운 사용
- 작고 실용적인 디자인
- 빠른 채수 속도

Technical Specifications

Water type	Type 1
Production Output	-
Water dispensing flow rate	Up to 1 l/min
Typical conductivity	< 0.055 µS/cm compensated to 25°C
Typical resistivity	< 0.05 MΩ x cm compensated to 25°C
Microorganism content	< 1 CFU/1000 ml
Particle content	< 1/ml
TOC content(with UV lamp)	< 5 ppb

Ordering Information

Order No.	Description
H2O-MM-T	arium® mini bench top device, for manual feeding with pretreated feed water
H2O-MM-UV-T	arium® mini bench top device with UV lamp, for manual feeding with Pretreated feed water
H2O-S-PACK	arium® Scientific Kit (1pc)
H2O-CEL1	arium® UV lamp (185 254nm), (1pc)
H2O-CBS-5-S	arium® 5 liter Bag (1pc)
5441307H4-CE-B	arium® Sterile filter (Sartopore® 2 150 capsule) 0.2µm pore size, (5pcs)

arium® mini plus

1차수 & 3차수 통합 생산 장비



- Buffer, media and pH solutions
- Histology
- ELISA
- Solutions for chemical analysis and synthesis
- IC(Ion chromatography)
- ICP-MS
- GC-MS
- HPLC

- 1차수 & 3차수 생산 가능
- Bagtank 시스템으로 Cleaning 필요없음
- 터치스크린으로 손쉬운 사용
- 작고 실용적인 디자인
- 빠른 채수 속도

Technical Specifications

Water type	Type 1	Type 3
Output	-	Up to 8l/h
Water dispensing flow rate	Up to 1.0L/min	Depressurized via ball valve
Typical conductivity	0.055 µS/cm compensated to 25 °C	< 20 µS/cm
Typical resistivity	18.2 MΩ x cm compensated to 25 °C	< 0.05 MΩ x cm
Microorganism content	< 1CFU/1,000 ml	< 1CFU/1,000ml
Particle content	< 1/ml	< 1/ml
TOC content(with UV lamp)	< 5 ppb	-
Typical ion retention	-	Up to 98%
Retention of dissolved organic substances(MW>300 Dalton)	-	> 99%

Ordering Information

Order No.	Description
H2O-MA-T	arium® mini plus, bench top device, flow capacity Type 3 pure water 8l/h
H2O-MA-UV-T	arium® mini plus, bench top device with UV lamp, flow capacity Type 3 pure water 8l/h
H2O-CPR	arium® mini plus Pre-treatment Cartridge (1pc)
H2O-S-PACK	arium® Scientific Kit (1pc)
H2O-CEL1	arium® UV lamp (185 254nm), (1pc)
H2O-CBS-5-S	arium® 5 liter Bag (1pc)
5441307H4-CE-B	arium® Sterile filter (Sartopore® 2 150 capsule) 0.2µm pore size, (5pcs)

arium® advance RO

1차수 생산 장비



- Feed water for ultrapure water systems
- Rinsing of glass and laboratory containers
- Feed water for various laboratory devices, such as humidifiers, autoclaves and lab glassware washers

- 일정한 수질의 1차수 생산
- 손 쉬운 터치패널 방식 시스템 도입
- 최적화된 물 절약 시스템
- 공간 절약을 위한 맞춤형 설계

Technical Specifications

Water type	Type 3
Output	8 / 16 / 24 l/h
Water dispensing flow rate	3 l/min
Typical conductivity	< 20 µs/cm
Typical resistivity	< 0.05 MΩ × cm
Microorganism content	< 1 CFU/1000 ml
Particle content	< 1/ml
Typical ion retention	up to 98%
Retention of dissolved organic substances (MW > 300 Dalton)	> 99 %
Particle and microorganism retention	> 99 %

Ordering Information

Order No.	Description
H2O-RO-1-T	arium® advance RO Bench-Top system in a compact design for every laboratory workstation, product water flow rate 8 l/h
H2O-RO-2-T	arium® advance RO Bench-Top system in a compact design for every laboratory workstation, product water flow rate 16 l/h
H2O-RO-3-T	arium® advance RO Bench-Top system in a compact design for every laboratory workstation, product water flow rate 24 l/h
613CPF05-V	arium® RO Pretreatment Cartridge Set, qty. 2 units
613CPM4-V	arium® RO Modules, qty. 2 units
H2O-CCS	arium® RO Module Cleaning Set, qty. 1 unit

arium® advance EDI

2차수 생산 장비



- Microbiological media and reagents
- Solutions for chemical analysis and synthesis
- Histology
- ELISA, RIA
- Buffers and pH solutions
- Feed water for various laboratory devices, such as autoclaves, glassware washers, etc.

- 일정한 수질의 2차수 생산
- 손 쉬운 터치패널 방식 시스템 도입
- 최적화된 물 절약 시스템
- 공간 절약을 위한 맞춤형 설계

Technical Specifications

Water type	Type 2
Typical conductivity	0.2 - 0.07 µs/cm at 25 °C
Typical resistivity	5 - 15 MΩ × cm at 25 °C
Retention rate	up to 99 %
Bacteria	< 1 CFU/1000 ml
Particles	< 1/ml
Product water flow performance	5 or 10 l/h

Ordering Information

Order No.	Description
H2O-EDI-1-T	arium® advance EDI benchtop system in a compact design for every laboratory workstation, product water flow rate 5 l/h
H2O-EDI-2-T	arium® advance EDI Bench-Top system in a compact design for every laboratory workstation
613CPF05-V	arium® RO Pretreatment cartridge
H2O-CRO-H-2	arium® RO modules, qty. 2 units
H2O-CSO	2 softener cartridges

arium® pro Ultrapure Water System

3차수 생산 장비



- arium pro Ultrapure Water System은 3차수를 공급하기 위한 장치
- 혁신적인 디자인, 이해하기 쉬운 Menu 조작법, 높은 초 순수 Quality 보장
- UV와 VF 모델은 내부장착형 TOC 모니터 선택 가능
- 수량은 최고 2 L/min까지 가능, 채수를 위해 Volume과 시간을 조절 가능
- 원수 소비량을 Monitoring할 수 있고, SD 카드를 이용하여 Data 저장 가능
- Display 상 Service와 Alarm 기능 추가
- 혁신적인 Touch Panel 기능으로 Flow Rate 조절

Technical Specifications

Product Water Quality	pro DI	pro UV	pro UF	pro VF
Resistivity [$M\Omega \times cm$]	18.2	18.2	18.2	18.2
TOC at 50 ppb* feed water [ppb]	< 5	1-2	< 5	1-2
Endotoxin [EU/ml]	n.a.	n.a.	< 0.001	< 0.001
Particules (at 0.2 μm)	< 1/ml	< 1/ml	< 1/ml	< 1/ml
Bacteria (CFU/1000 ml)	< 1	< 1	< 1	< 1
Flow rate [l/min]**	up to 2	up to 2	up to 1.7	up to 1.7



Cartridge Set

Ordering Information

Order No.	TOC Monitor	Description
H20pro-DI-T		arium® pro DI bench-top system for producing ultrapure water for standard applications with front top-mounted display dispenser unit
H20pro-UV-T		arium® pro UV Bench-Top system in a compact design for every laboratory workstation, incl. UV Lamp
H20pro-UV-T	H20pro-UV-T-TOC	arium® pro UV bench-top system for producing ultrapure water for chromatographic applications with front topmounted display dispenser unit
H20pro-UF-T		arium® pro UF bench-top system for producing ultrapure water for cell culture applications with front top-mounted display dispenser unit
H20pro-VF-T		arium® pro VF Bench-Top system in a compact design for every laboratory workstation, incl. UV Lamp and Ultrafilter
H20pro-VF-T	H20pro-VF-T-TOC	arium® pro VF bench-top system for producing ultrapure water for standard, cell culture and chromatographic applications with front top-mounted display dispenser unit

Accessories

H20-A-PACK	Cartridge Set for arium® pro/611 VF or UV ultrapure water systems
H20-B-PACK	Cartridge Set for arium® pro/611 UF ultrapure water systems
H20-E-PACK	Cartridge Set for arium® pro/basic/611 DI ultrapure water systems
H20-U-PACK	Cartridge Set for arium® ultrapure water systems with tap water feed
5441307H4-CE-B	Sartopore® 2 150 final filter, pore size: 0.2 μm (pack with 5 pcs.)
611CDU5	UF cartridge
611CEL1	UV lamp



UV Lamp



UF Cartridge

- HPLC
- GC-MS, AAS, ICP-MS
- Ion chromatography
- TOC analysis
- PCR
- Electrophoresis
- Endotoxin analysis
- Immunocytochemistry
- Nutrient media for cell culture
- Production of monoclonal antibodies
- Photometry

■ arium® comfort I Space-saving Twin Technology

1차수 & 3차수 통합 형 모델



- HPLC
- GC-MS, AAS, ICP-MS
- Ion chromatography
- TOC-Analysis
- Photometry
- Buffer and pH-solutions
- Feed water for laboratory devices, such as autoclaves, glassware washers etc.

- 1차수 & 3차수 생산 가능
- Lowest TOC < 2 bbp
- 혁신적인 소프트웨어로 일정 수질 보장
- 분당 2 L 초 순수 생산
- 손 쉬운 터치패널 방식 시스템 도입
- 지능적인 알람 시스템 기능

□ Technical Specifications

Type of water	ASTM Type 1	Type 3
Output	120 l/h	8 or 16 l/h
Water dispensing flow rate	up to 2 l/min	up to 3 l/min
Volume controlled output	2 l/min in 100 ml, 1 l or 5 l steps, depending on total dispense between 0,1 l and 60 l	-
Volume accuracy	3 % in the range of 0.25 l and 60 l	-
Typical conductivity	-	< 20 µS/cm
Typical resistivity	-	< 0.05 MΩ × cm
Conductivity	0.055 µS/cm compensated to 25°C	-
Resistivity	18.2 MΩ × cm compensated to 25°C	-
TOC content	< 2 ppb	-
Microorganism content	< 1 CFU/1,000 ml	< 1 CFU/1,000 ml
Particle content	< 1/ml	< 1/ml
Typical Ion retention	-	up to 98%
Retention of dissolved organic substances (MW > 300 Dalton)	-	> 99 %
Particle and microorganism retention	-	> 99 %

□ Ordering Information

Order No.	Description
H20-I-1-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 3 production flow rate 8 l/h without UV Lamp and TOC Monitor
H20-I-1-UV-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 3 production flow rate 8 l/h Inc. UV Lamp
H20-I-1-TOC-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 3 production flow rate 8 l/h Inc. UV Lamp and TOC Monitor
H20-I-2-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 3 production flow rate 16 l/h without UV Lamp and TOC Monitor
H20-I-2-UV-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 3 production flow rate 16 l/h Inc. UV Lamp
H20-I-2-TOC-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 3 production flow rate 16 l/h Inc. UV Lamp and TOC Monitor

Accessories

5441307H4-CE-B	Sterile-grade Sartopore® 2 150 capsules, 0.2 µm pore size, qty. 5 units
H20-C-PACK	arium® comfort Kit, qty. 1 unit
H20-CPF	arium® comfort Pre-Treatment Cartridge, qty. 2 units
613CPM4-V	arium® RO Modules, qty. 2 units
611CEL1	arium® UV Lamp (185 254 nm), qty. 1 unit

arium® comfort II Space-saving Twin Technology

2차수 & 3차수 통합 형 모델



- HPLC
- GC-MS, AAS, ICP-MS
- Ion chromatography
- TOC analysis
- Photometry
- Microbiological media and reagents
- Histology
- ELISA, RIA
- Buffers and pH solutions
- Feed water for laboratory devices, such as autoclaves, glassware washers, humidifiers, water baths etc.

- 2차수 & 3차수 생산 가능
- Lowest TOC < 2 ppb
- 혁신적인 소프트웨어로 일정 수질 보장
- 분당 2 L 초 순수 생산
- 손 쉬운 터치패널 방식 시스템 도입
- 지능적인 알람 시스템 기능

Technical Specifications

Type of water	ASTM Type 1	Type 2
Output	120 l/h	5 or 10 l/h
Water dispensing flow rate	up to 2 l/min	up to 3 l/min
Volume controlled output	2 l/min in 100 ml, 1 l or 5 l steps, depending on total dispense between 0,1 l and 60 l	-
Volume accuracy	3 % in the range of 0.25 l and 60 l	-
Typical conductivity	-	0.2 - 0.07 µS/cm
Typical resistivity	-	5 - 15 MΩ × cm
Conductivity	0.055 µS/cm compensated to 25°C	-
Resistivity	18.2 MΩ × cm compensated to 25°C	-
TOC content	< 2 ppb	-
Microorganism content	< 1 CFU/1,000 ml	< 1 CFU/1,000 ml
Particle content	< 1/ml	< 1/ml
Typical Ion retention	-	-
Particle and microorganism retention	-	> 99%

Ordering Information

Order No.	Description
H20-II-1-T	arium® comfort II bench-top system in a compact design for every laboratory workstation, Type 2 production flow rate 5 l/h without UV lamp and TOC monitor
H20-II-1-UV-T	arium® comfort II bench-top system in a compact design for every laboratory workstation, Type 2 production flow rate 5 l/h Inc. UV lamp
H20-II-1-TOC-T	arium® comfort II bench-top system in a compact design for every laboratory workstation, Type 2 production flow rate 5 l/h Inc. UV lamp and TOC monitor
H20-II-2-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 2 production flow rate 10 l/h without UV Lamp and TOC Monitor
H20-II-2-UV-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 2 production flow rate 10 l/h Inc. UV Lamp
H20-II-2-TOC-T	arium® comfort I Bench-Top system in a compact design for every laboratory workstation, Type 2 production flow rate 10 l/h Inc. UV Lamp and TOC Monitor

Accessories

H20-CPF	2 pre-treatment cartridges
H20-CRO-H-2	arium® RO modules, qty. 2 units
H20-CSO	2 Softener cartridges
H20-C-PACK	1 arium® comfort kit
5441307H4--CE-B	Sartopore® 2 150 final filters (pack with 5 pcs.)

Accessories



Bagtanks



Dispense Gun



Dispense Gun W/display



Water Guard

arium® bagtanks

- CO₂로부터 오염 방지
- 시간 절약 및 손쉬운 교체
- Cleaning 시약이 사용 되지 않음

Technical Specifications

Materials	
arium® bagtank	Stainless steel plastics
arium® bag	S71 Film
Tubing	PE silicon
Dimensions, without rollers and wall brackets [H xW xD]	
bagtank 20	80.8 x 16.6 x 43.7 cm
bagtank 50	85.2 x 25.4 x 58.7 cm
bagtank 100	85.2 x 51.4 x 58.7 cm
arium® bag 20 L	86.5 x 43.0 cm
arium® bag 50 L	90.0 x 58.1 cm

Number of bags per tank	
bagtank 20 L	1 x 20 Liter
bagtank 50 L	1 x 50 Liter
bagtank 100 L	2 x 50 Liter
Empty weight without arium® bag	
Operating weight with filled arium® bag	
bagtank 20	19 kg 40 kg
bagtank 50	33 kg 84 kg
bagtank 100	47 kg 148 kg

Order No.	Description
H20-AOV-20	arium® bagtank 20 l, without pump, qty. 1 unit
H20-AOV-50	arium® bagtank 50 l, with pump 240 VAC 50 Hz, qty. 1 unit
H20-AOV-100	arium® bagtank 100 l, with pump 240 VAC 50 Hz, qty. 1 unit
H20-ADP-20	arium pump® bagtank 20 l, 240 VAC 50 Hz, qty. 1 unit
H20-ATR	Rollers for arium® bagtank 50 & bagtank 100, incl. fittings, qty. 4 units
H20-CBS-20	arium® 20 l bag for arium® 20 l bagtank, qty. 2 units
H20-CBS-50	arium® 50 l bag for arium® 50 l and 100 l bagtank, qty. 2 units
H20-ATB	Wall bracket for arium® bagtank 20, qty. 1 unit

arium® dispense gun

- 최장 3.7 m까지 연장 가능
- 벽 또는 스탠드 타입 가능
- 손쉬운 사용 및 제균 필터 장착 가능

Order No.	Description
H20pro-AMDG1	arium® Dispense Gun inclusive height-adjustable Stand, qty. 1 unit
H20pro-AMDG2	arium® Dispense Gun inclusive wall mounting kit, qty. 1 unit
613-AMDG1	arium® Dispense Gun inclusive height-adjustable Stand, qty. 1 unit
613-AMDG2	arium® Dispense Gun inclusive wall mounting kit,qty. 1 unit
H20-ADD	arium® Multifunction Stand, display mounting kit with dispense gun, height-adjustable, for arium® Built-In system. qty 1 unit

Water Guard

- 민감도 높은 광 센서 사용
- 경보 알람 기능
- 누수 발생 시 automation stop 기능
- 비 부식성 고급 재료 사용
- 간편한 설치

Order No.	Description
610AWG1	arium® water guard, qty. 1 unit

Cubis

Completely Modular Design Balance



- 디스플레이
MSA : 고해상도의 컬러 터치스크린
MSU : 고해상도의 흑백 디스플레이
MSE : 흑백 디스플레이

■ 방풍챔버

DO 팬사이즈 206 x 200 mm의 방풍 챔버없는 모델 선택 시

DE 1 mg 정밀도 저울의 Precision용 수동 개폐 챔버

DU 0.1 mg, 1 mg 정밀도 저울의 Analytical용 수동 개폐 챔버

DA 0.1 mg, 1 mg 정밀도 저울의 Analytical용 자동 개폐 챔버

DI 정전기 제거 장치가 장착된 자동 개폐 챔버

- 모듈식 구성: 사용자가 계량 목적 및 응용 범위에 따른 맞춤형 디스플레이, Chamber 등을 구성
- Q-guidance 제공: 각 단계마다 User Guidance 제공으로 사용이 간편
- Q-Pan :사귀오차를 최소화하여 보다 넓은 팬 사이즈 제공
- Q-Level : 자동 수평 조절 장치. 단 한번의 키버튼 누름으로 자동 수평 조절 가능
- 자동 보정 기능 (isoCAL 기능)

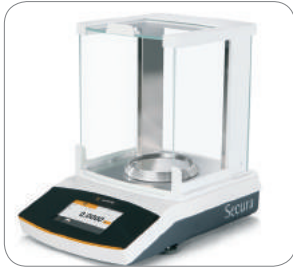
Ordering Information

Cubis Micro, Semi-micro, Analytical

	Readability [mg]	Weighing capacity [g]	Repeatability [mg]	Linearity [mg]	Pan Size (W X D) [mm]	Sample weight
2.7S	0.0001	2.1	0.00025	0.0009	Ø 20	0.082 mg
6.6S	0.001	6.1	0.001	0.004	Ø 30	0.82 mg
3.6P	0.001/0.002/0.005	1.1/2.1/3.1	0.003/0.004/0.005	0.004	Ø 30	0.82 mg
225S	0.01	220	0...60 g: 0.015, 60...220 g: 0.025	0.1	85 x 85	8.2 mg
225P	0.01/0.02/0.05	60/120/220	0...60 g: 0.015, 60...220 g: 0.04	0.15	85 x 85	8.2 mg
125P	0.01/0.1	60/120	0...60 g: 0.015, 60...120 g: 0.06	0.15	85 x 85	8.2 mg
524S	0.1	520	0.1	0.4	85 x 85	82 mg
524P	0.1 0.2 0.5	120 240 520	0.15 0.2 0.4	0.5	85 x 85	82 mg
324S	0.1	320	0.1	0.3	85 x 85	82 mg
324P	0.1 0.2 0.5	80 160 320	0.1 0.2 0.4	0.5	85 x 85	82 mg
224S	0.1	220	0.07	0.2	85 x 85	82 mg
124S	0.1	120	0.1	0.2	85 x 85	82 mg
5203S	1	5,200	1	5	140 x 140	0.82 g
5203P	1 2 5	1,200 2,400 5,200	1	5	140 x 140	0.82 g
3203S	1	3,200	1	5	140 x 140	0.82 g
2203S	1	2,200	1	3	140 x 140	0.82 g
2203P	1 10	1,010 2,200	1 6	5	140 x 140	0.82 g
1203S	1	1,200	0.7	2	140 x 140	0.82 g
623S	1	620	0.7	2	140 x 140	0.82 g
623P	1 2 5	150 300 620	1 2 4	5	140 x 140	0.82 g
323S	1	320	0.7	2	140 x 140	0.82 g
14202S	10	14,200	10	30	206 x 206	8.2 g
14202P	10 20 50	3,500 7,000 14,200	10 20 40	50	206 x 206	8.2 g
10202S	10	10,200	7	20	206 x 206	8.2 g
8202S	10	8,200	7	20	206 x 206	8.2 g
6202S	10	6,200	7	20	206 x 206	8.2 g
6202P	10 20 50	1,500 3,000 6,200	7 20 40	50	206 x 206	8.2 g
5202S	10	5,200	6	10	140 x 140	8.2 g
4202S	10	4,200	7	20	206 x 206	8.2 g
2202S	10	2,200	7	20	206 x 206	8.2 g
1202S	10	1,200	7	20	206 x 206	8.2 g
12201S	100	12,200	50	100	206 x 206	82 g
8201S	100	8,200	50	100	206 x 206	82 g
5201S	100	5,200	50	100	206 x 206	82 g
70201S	100	70,200	100	500	400 x 300	82 g
36201S	100	36,200	100	200	400 x 300	82 g
36201P	100/1000	10,200/36,200	100/500	200	400 x 300	82 g
20201S	1000	20,200	100	200	400 x 300	82 g
70200S	1000	70,200	500	1000	400 x 300	820 g
36200S	1000	36,200	500	1000	400 x 300	820 g

■ Secura®

규정에 따라 쉽고, 신뢰할 수 있는 Weighing



- Level Control : 광전자 센서 내장으로 수평에서 벗어나면 사용자에게 알림
- SQ min : USP에 적합한 최소 시료 무게 쉽게 측정
- 자동 보정 기능 (isoCAL)
- 한글지원
- 터치스크린 디스플레이
- 미니 USB포트 사용으로 프린터 연결
- 데이터를 바로 Microsoft Window program 으로 전송 가능

□ Technical Specifications



Model	Readability [mg]	Weighing Capa. [g]	Repeatability [mg]	Linearity [mg]	Sample weight [g] according to USP"	Pan size [mm]	Stabilization time [s]
225D	0.01 0.01 0.1	60 120 220	0.02 0.04 0.07	0.1 0.1 0.2	0.025	Ø80	6 6 2
125	0.01 0.01	60 120	0.02 0.04	0.1 0.1	0.025	Ø80	6 6
324	0.1	320	0.1	0.3	0.16	Ø90	2
224	0.1	220	0.1	0.2	0.12	Ø90	2
124	0.1	120	0.1	0.2	0.12	Ø90	2
613	1	610	1	2	1.5	Ø120	1
513	1	510	1	2	1.5	Ø120	1
313	1	310	1	2	1.5	Ø120	1
213	1	210	1	2	1.5	Ø120	1
6102	10	6,100	10	20	12	Ø180	1
5102	10	5,100	10	20	12	Ø180	1
3102	10	3,100	10	20	12	Ø180	1
2102	10	2,100	10	20	12	Ø180	1
1102	10	1,100	10	20	12	Ø180	1
612	10	610	10	20	12	Ø180	1

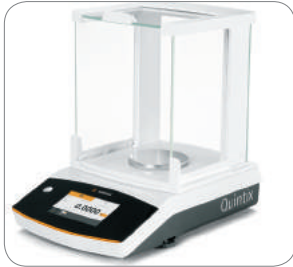
□ Accessories

Printers and Communications

Premium GLP Laboratory Printer	YDP30
Printer paper for GLP laboratory printer	69Y03285
Endless labels for GLP laboratory printer	69Y03286
Standard Laboratory Printer	YDP40
Printer paper for standard laboratory printer	69Y03287
Data Cable Mini USB USB A	YCC04-D09
Date Cable Mini USB / RS232 9-pin	YCC03-D09

Quintix®

효율적이고 쉽게 작업 가능한 표준형 Balance



- 자동 보정 기능 (isoCAL)
- 인체공학적, 실용적이며 견고한 방풍챔버 사용으로 계량의 편의성 제공
- 한글지원
- 미니 USB포트 사용으로 프린터 연결
- 데이터를 바로 Microsoft Window program 으로 전송 가능
- 터치스크린 디스플레이

Technical Specifications



Model	Readability [mg]	Weighing Capa. [g]	Repeatability [mg]	Linearity [mg]	Pan size [mm]	Stabilization time [s]
125D	0.01 0.01 0.1	40 60 120	0.02 0.04 0.07	0.1 0.1 0.2	Ø80	6 6 2
65	0.01 0.01	40 60	0.02 0.04	0.1 0.1	Ø80	6 6
35	0.01	30	0.03	0.1	Ø80	6
224	0.1	220	0.1	0.2	Ø90	2
124	0.1	120	0.1	0.2	Ø90	2
64	0.1	60	0.1	0.2	Ø90	2
613	1	610	1	2	Ø120	1
513	1	510	1	2	Ø120	1
313	1	310	1	2	Ø120	1
213	1	210	1	2	Ø120	1
6102	10	6100	10	20	Ø180	1
5102	10	5100	10	20	Ø180	1
3102	10	3100	10	20	Ø180	1.5
2102	10	2100	10	30	Ø180	1.5
1102	10	1100	10	30	Ø180	1.5
612	10	610	10	30	Ø180	1.5
412	10	410	10	30	Ø180	1.5
6101	100	6100	100	300	Ø180	1.5
5101	100	5100	100	300	Ø180	1.5
2101	100	2100	100	300	Ø180	1.5
6100	1000	6100	500	1000	Ø180	1.5
5100	1000	5100	500	1000	Ø180	1.5

Accessories

Printers and Communications

Premium GLP Laboratory Printer	YDP20-OCE
Standard Laboratory Printer	YDP10-OCE
Date Cable Mini USB RS232 9-pin	YCC03-D09

Density Determination

Density kit for analytical balances	YDK03
Density kit for precision balances for lab balance model 2102; 1102; 612	YDK04

■ Practum®

올바른 Weighing의 시작



- 한글지원
- 관리자 Lock 기능
- 빠르고 쉬운 데이터 전송 (Microsoft Window program)
- USB mini port (Printer or PC)
- 외부 분동 이용하여 보정 가능

□ Technical Specifications



Model	Readability [mg]	Weighing Capa. [g]	Repeatability [mg]	Linearity [mg]	Pan size [mm]	Stabilization time [s]
224	220	0.1	0.1	0.2	Ø90	2
124	120	0.1	0.1	0.2	Ø90	2
64	60	0.1	0.1	0.2	Ø90	2
513	510	1	1	2	Ø120	1
313	310	1	1	2	Ø120	1
213	210	1	1	2	Ø120	1
3102	3,100	10	10	30	Ø180	1.5
2102	2,100	10	10	30	Ø180	1.5
1102	1,100	10	10	30	Ø180	1.5
612	610	10	10	30	Ø180	1.5
412	410	10	10	30	Ø180	1.5
6101	6,100	100	100	300	Ø180	1.5
5101	5,100	100	100	300	Ø180	1.5
2101	2,100	100	100	300	Ø180	1.5
6100	6,100	1,000	500	1,000	Ø180	1
5100	5,100	1,000	500	1,000	Ø180	1

□ Accessories

Printers and Communications

Premium GLP Laboratory Printer	YDP20-OCE
Standard Laboratory Printer	YDP10-OCE
Date Cable Mini USB RS232 9-pin	YCC03-D09

Density Determination

Density kit for analytical balances	YDK03
Density kit for precision balances	YDK04
for lab balance model 2102; 1102; 612	

Entris® Just Weighing



- 내부 보정용 모델 선택 가능 (모델명에 i표기됨, 예, Entris224i-1S)
- 모노리틱 셀 장착 (높은 정확성 보장)
- 일상적인 작업에 필요한 application 내장
(동물계량, 간단 비중측정, 계수 기능, 단위변환, 퍼센트 계량)
- 후면 발광 디스플레이 장착

Technical Specifications



Model	Weighing capacity [g]	Read-ability [mg]	Repeat-ability [mg]	Linearity [mg]	Typical stabilization time [s]	Pan size [mm]	Calibration	Design
Analytical balances								
ENTRIS224i-1S	220	0.1	0.1	0.2	2.5	Ø 90	Internal	1
ENTRIS224-1S	220	0.1	0.1	0.2	2.5	Ø 90	External	1
ENTRIS124i-1S	120	0.1	0.1	0.2	2.5	Ø 90	Internal	1
ENTRIS124-1S	120	0.1	0.1	0.2	2.5	Ø 90	External	1
ENTRIS64i-1S	60	0.1	0.1	0.2	2.5	Ø 90	Internal	1
ENTRIS64-1S	60	0.1	0.1	0.2	2.5	Ø 90	External	1
Precision balances								
ENTRIS623i-1S	620	1	1	2	1.0	Ø 115	Internal	2
ENTRIS623-1S	620	1	1	2	1.0	Ø 115	External	2
ENTRIS423i-1S	420	1	1	2	1.0	Ø 115	Internal	2
ENTRIS423-1S	420	1	1	2	1.0	Ø 115	External	2
ENTRIS323i-1S	320	1	1	2	1.1	Ø 115	Internal	2
ENTRIS323-1S	320	1	1	2	1.1	Ø 115	External	2
ENTRIS153i-1S	150	1	1	2	1.3	Ø 115	Internal	2
ENTRIS153-1S	150	1	1	2	1.3	Ø 115	External	2
ENTRIS6202i-1S	6200	10	10	30	1.5	180 x 180	Internal	3
ENTRIS6202-1S	6200	10	10	30	1.5	180 x 180	External	3
ENTRIS4202i-1S	4200	10	10	30	1.5	180 x 180	Internal	3
ENTRIS4202-1S	4200	10	10	30	1.5	180 x 180	External	3
ENTRIS3202i-1S	3200	10	10	30	1.5	180 x 180	Internal	3
ENTRIS3202-1S	3200	10	10	30	1.5	180 x 180	External	3
ENTRIS2202i-1S	2200	10	10	30	1.5	180 x 180	Internal	3
ENTRIS2202-1S	2200	10	10	30	1.5	180 x 180	External	3
ENTRIS822i-1S	820	10	10	30	1.5	Ø 150	Internal	4
ENTRIS822-1S	820	10	10	30	1.5	Ø 150	External	4
ENTRIS8201i-1S	8200	100	100	300	1.5	180 x 180	Internal	3
ENTRIS8201-1S	8200	100	100	300	1.5	180 x 180	External	3
ENTRIS5201i-1S	5200	100	100	300	1.5	180 x 180	Internal	3
ENTRIS5201-1S	5200	100	100	300	1.5	180 x 180	External	3
ENTRIS2201i-1S	2200	100	100	300	1.5	180 x 180	Internal	3
ENTRIS2201-1S	2200	100	100	300	1.5	180 x 180	External	3

LMA Series

마이크로웨이브 수분측정기



LMA100PM



LMA200PM

LMA100PM

- 4,000개 이상의 플라스틱 레진 솔루션 보유하며, 50 ppm 정밀도의 극소량 시료 수분 측정 가능
- 하나의 컨트롤러에 최대 4개의 건조기 연결 가능
- 300가지 시료에 따른 프로그램 저장
- 열방식 프린터 내장

LMA200PM

- 페이스트 및 액상 시료의 수분 측정 시, 마이크로웨이브를 이용하여 빠르게 측정
- 8-100 %까지의 수분 함유량 분석에 있어서 평균 40-120초 이내로 가능
- 일반적인 오븐법 보다 300 배, 적외선 수분측정기 보다 10 배, 다른 타입의 초음파 수분측정기 보다 4-6 배 빠르게 측정 가능

Ordering Information

Order No.	최소표시	최소표시	최대용량	재현성 오차 샘플량 (약 1 g)	열원 타입
LMA100P	0.001 %	0.0001 g	100 g	± 0.05 %	Infrared Quartz, Cylinders
LMA200PM	0.001 %	0.0001 g	70 g	± 0.05 %	마이크로웨이브

MA Series

적외선 수분측정기



MA37



MA160



MA100

MA37

- 세척이 간편한 보급형 수분측정기
- 공간 절약형 디자인
- 상태 표시등으로 측정상태를 즉각적으로 확인 가능

MA160

- 액체, 페이스트, 고체샘플의 수분 함유량을 빠른 시간내에 분석 가능
- 최대 100개 파라미터 및 최대 999개 결과값 저장 가능
- 정확한 결과값 및 높은 재현성

MA100

- 가열 램프를 세라믹, 할로겐, 석영 방식 중 (COR) 시료의 특성에 따라 다양한 선택 가능
- Auto Tray 방식: 가열 부위를 자동 개폐할 수 있어 잔열에 의한 전건조 방지 및 진동 최소화
- 데이터 프린터를 본체 내부에 설치 가능
- 30개의 프로그램 설정 가능
- 끝내기 기능: 자동, 반자동, 시간설정, SPRM(자동 관찰 조정) 기준으로 끝내기 가능
- 샘플의 분석과정을 통해 최적의 파라미터를 찾아주는 SPRM 모드 내장

Ordering Information

Order No.	최소표시	최소표시	최대용량	재현성 오차 샘플량 (약 5 g)	설정 온도	열원 타입
MA37	0.01 %	0.001 g	35 g	± 0.05 %	40 - 160 °C	메탈 튜브
MA160	0.01 %	0.001 g	200 g	± 0.05 %	40 - 160 °C	AURI Heater
MA100	0.001 %	0.001 g	100 g	± 0.02 %	30 - 180 °C	세라믹, 할로겐, 석영

* 열원 타입은 선택이 가능합니다.

석영 타입은 설정 온도가 220도 까지 가능합니다. (MA100 모델은 up to 230도)

Centrisart



A-14C



G-16C



G-26C

A-14 / A-14C

- 실용으로 디자인된 High-Speed Bench Top Microcentrifuge
- 간단한 버튼 조작으로 사용 가능
- 0.5 - 2 ml Tube 24개 까지 장착 가능

G-16C / D-26C

- Modern drive로 인한 적은 소음
- Steel Housing으로 안정성 겸비
- 짧은 시간에 가속 / 감속 가능
- Refrig. 기능 추가

Ordering Information

Model	Refrig.	Max. Speed (rpm)	Angle Rotor					Swing Rotor with Bucket & Adapter		
			2mlx12	2mlx24	50mlx6	80mlx4	85mlx6	45mm	85 mm	microplate
A-14	No	14,800	A1							
A-14C	Yes	15,000	A1	A2						
D-16C	Yes	15,300		A4	A9			S1		S5
G-16	No	15,300		A6	A5	A7	A8		S2	S6
G-16C	Yes	15,300		A6	A5	A7	A8		S2	S6
G-26C	Yes	26,000		A6	A5	A7	A8	S3		S5

Accessories

Rotor & Bucket

Order No.	Volume	Description resemble	Bucket
YCSR-A1C	12 x 1.5-2 ml	Angle Rotor	
YCSR-A2B	24 x 1.5-2 ml	Angle Rotor	
YCSR-A4B	12 x 1.5-2 ml	Angle Rotor	
YCSR-A5B	6 x 50 ml	Angle Rotor	
YCSR-A6B	24 x 1.5-2 m	Angle Rotor	
YCSR-A7B	4 x 80 ml	Angle Rotor	
YCSR-A8B	6 x 85 ml	Angle Rotor	
YCSR-A9B	6 x 50 ml	Angle Rotor	
YCSR-S1B	-	Swing Rotor, 4 Inserts	YCSB - B9B(85 mm)
YCSR-S2B	-	Swing Rotor, 4 Inserts	YCSB - B8B(45 mm)
YCSR-S3B	-	Swing Rotor, 4 Inserts	YCSB - B9B(85 mm)
YCSR-S5B	-	Complete set Swing out rotor for microtiter plates	
YCSR-S6B	-	Complete set Swing out rotor for microtiter plates	

Adatper

Order No.	Description	Order No.	Description
for YCSB-B8B		for YCSB-B9B / YCSR-S5&6B	
YCSA-C3B	for 10 Eppendorf reaction caps	YCSA-A0B	for 1 culture tube 50 ml
YCSA-C2B	for 5 culture tubes 15 ml	YCSA-A9B	for 2 culture tubes 15 ml
YCSA-C4B	for 3 culture tubes 50 ml	YCSA-AAB	for 4 reaction vials 1.5 2.0 ml
YCSA-C5B	for 1 bottle 250 mL	YCSA-ABB	for 1 tube 30 ml
YCSA-C6B	for 20 reaction vials 1.5-2.0 ml	YCSA-ACB	for 3-5 ml Eppendorf reaction cap
YCSA-C7B	for 9 culture tubes 15 ml	YCSA-S5B	for microtiter plates, 2ea
YCSA-C8B	for 4 culture tubes 50 ml	YCSA-S6B	for microtiter plates, 2ea

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