

eppendorf



Pipette 제품가이드

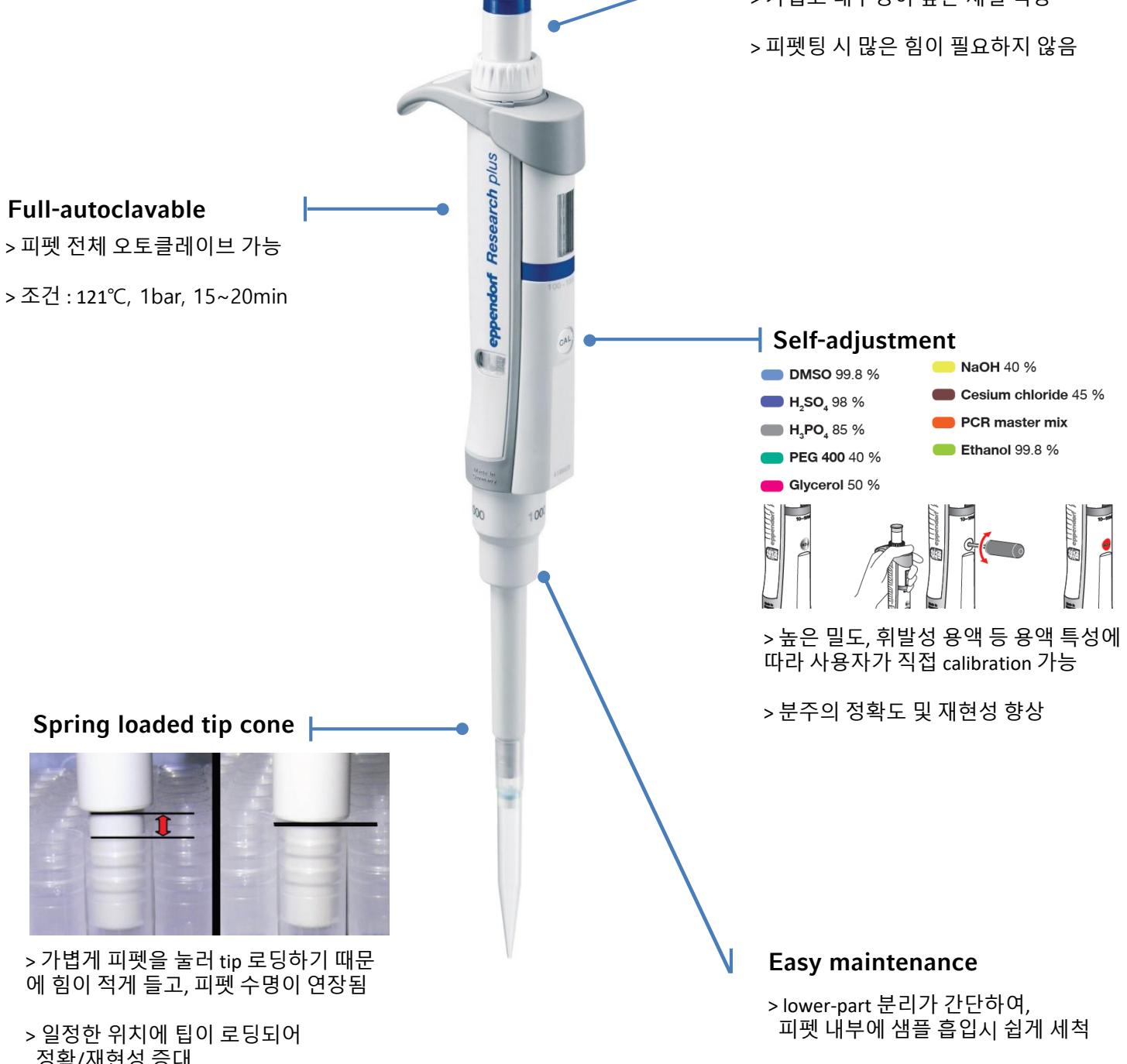
- > Research plus
- > Reference2
- > Xplorer / Xplorer plus
- > epT.I.P.S.

Product Overview



Model	Research plus	Reference 2	Xplorer Xplorer plus
Pipette type	Air-cushion	Air-cushion	Air-cushion
Operating mode	Manual (two-button operation system)	Manual (one-button operation system)	Electronic
Application	용액의 흡입/분주	용액의 흡입/분주	>용액의 흡입/분주 >다양한 작동 모드 (예: Mixing, Standard curve, 동량 분주 등)
Available option	1-channel 8-channel 12-channel	1-channel 8-channel 12-channel	1-channel 8-channel 12-channel
Autoclavable	가능	가능	하단부 가능
Available tip	<ul style="list-style-type: none"> > epT.I.P.S > epT.I.P.S Long > epT.I.P.S RoRetention > epDualfilter T.I.P.S > epDualfilter T.I.P.S SealMax > epDualfilter T.I.P.S LoRetention 		
Eppendorf epT.I.P.S. format	<p>epT.I.P.S Standard Box/epT.I.P.S Set epT.I.P.S Racks epT.I.P.S Singles epT.I.P.S Reloads</p>		
Eppendorf epT.I.P.S. Purity grade	<ul style="list-style-type: none"> > Eppendorf Quality > PCR clean and sterile > Eppendorf Biopur > Forensic DNA grade 		

Research plus single channel



Research plus multi-channel

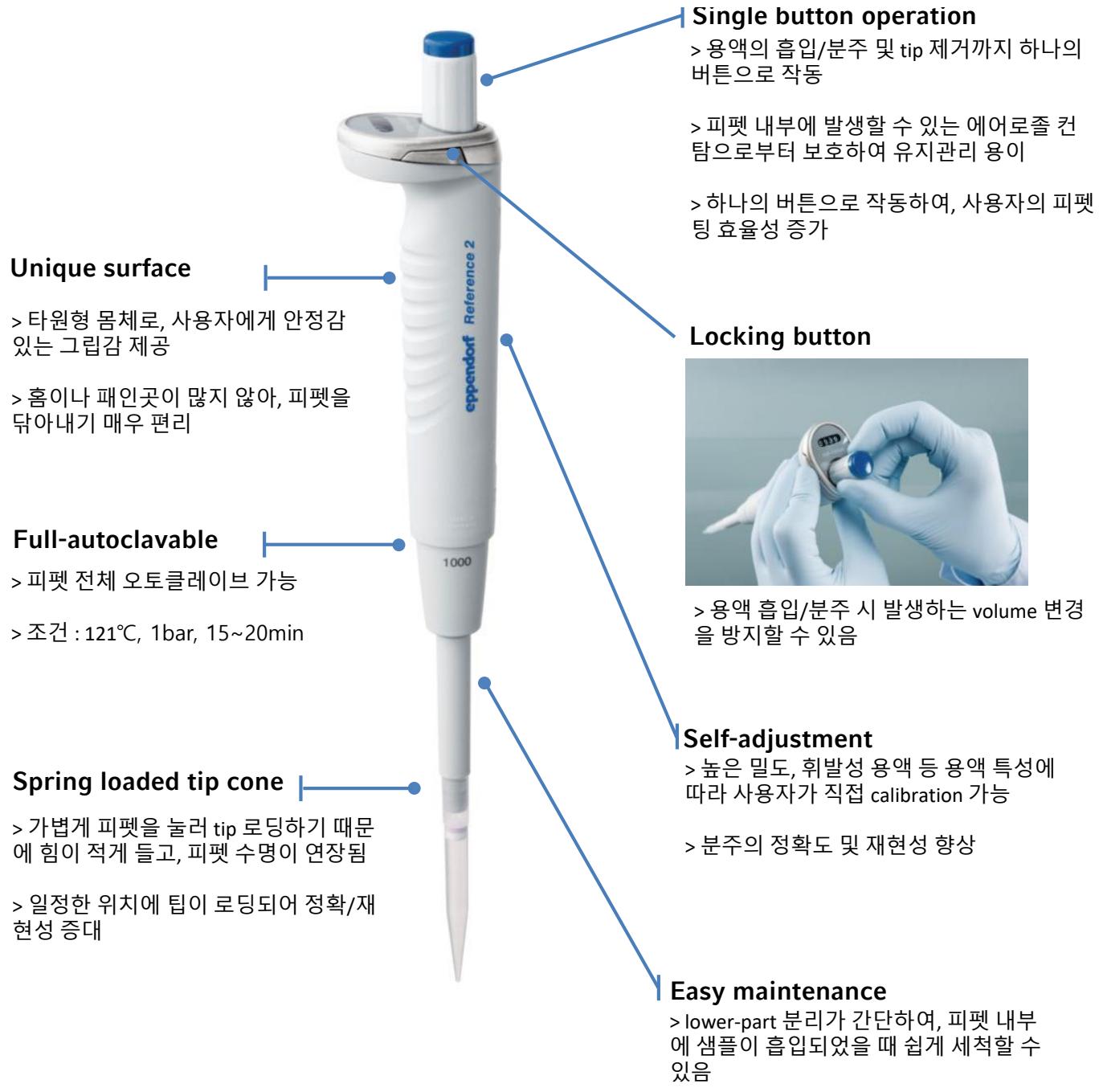


> 사용하는 용기 간격에 따라 채널 조정 가능 (e.g., cell culture plate 사용 시)



> 각 채널의 피스톤이 독립적으로 운용되어 채널별로 흡입 볼륨이 상이한 문제 해결 (epT.I.P.S. 사용 시)

Reference2



Multi-channel pipette

- > 사용하는 용기 간격에 따라 채널 조정 가능 (e.g., cell culture plate 사용시)
- > 각 채널의 피스톤이 독립적으로 운용되어 채널별로 흡입 볼륨이 상이한 문제 해결
- > 8-channel, 12-channel

Xplorer / Xplorer plus

Large display

> 설정값을 display에서 한눈에 확인/설정 가능

Selection dial

> 다이얼을 돌려 쉽게 작동 모드 설정
> 다양한 작동 모드 제공, 사용자의 실험 효율성 증대

Spring loaded tip cone

> 가볍게 피펫을 눌러 tip 로딩하기 때문에 힘이 적게 들고, 피펫 수명이 연장됨

> 일정한 위치에 팁이 로딩되어 정확/재현성 증대

Motorized piston

> 피스톤이 모터로 작동되어, human-error 배제
> 피펫팅의 정확도 및 재현성 향상

Autoclavable lower-part

> lower-part를 분리하여 오토클레이브 가능

> 쉽게 분리할 수 있어, 시료에 의해 오염되었을 경우, 하단부의 세척 용이



Multi-channel pipette

> 사용하는 용기 간격에 따라 채널 조정 가능 (e.g., cell culture plate 사용시)
> 각 채널의 피스톤이 독립적으로 운용되어 채널별로 흡입 볼륨이 상이한 문제 해결
> 8-channel, 12-channel

Xplorer / Xplorer plus : operation mode

Xplorer



Xplorer plus

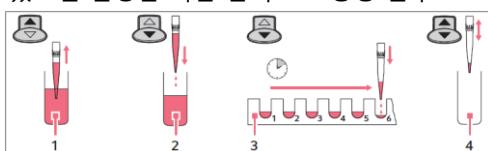


Xplorer plus

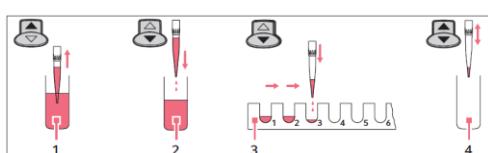


Xplorer/Xplorer plus 공통

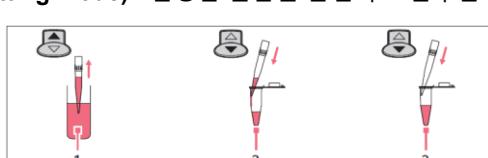
Ads (Automatic dispensing mode) : 분주할 용액을 한번에 흡입하여 설정한 시간 간격으로 동량 분주. Rocker 아래 방향 버튼을 누르고 있으면 설정한 시간 간격으로 동량 분주



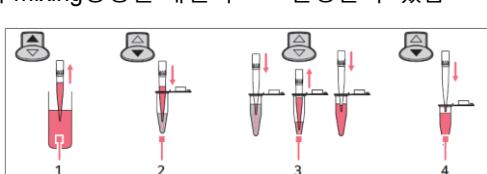
Dis (Dispensing mode) : 분주할 용액을 한번에 흡입하여 동량 분주 *Ads와 차이점 : 분주시마다 rocker 아래 방향 버튼을 눌러줘야함



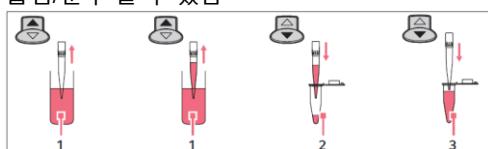
Pip (Pipetting mode) : 설정한 볼륨을 흡입하고 분주할 때



P/M (Pipetting and Mixing mode): Mixing 할 때 사용. 흡입/분주 용량과 mixing 용량을 개별적으로 설정할 수 있음

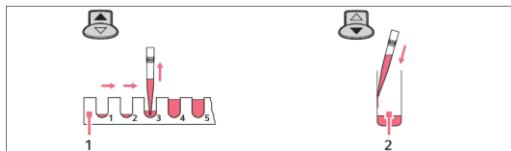


Man (Manual pipetting mode): Rocker 버튼을 누르는 만큼 대상 용액을 흡입/분주 할 수 있음

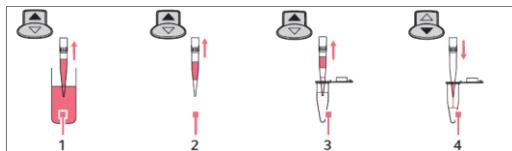


Xplorer plus 추가 기능

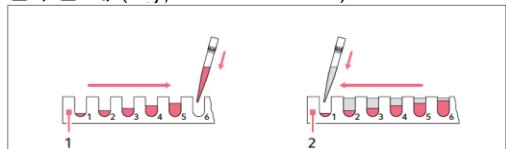
Spc/Multi-Aspirate: 동량의 용액을 흡입한 후 한번에 분주(e.g., 동량의 상층액 회수 후 한번에 버릴 때)



Spc/Diluting : 샘플 희석시 사용

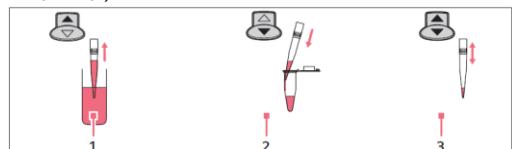


Spc/Seq.Dispensing : 정해진 sample 개수 만큼 서로 다른 volume을 분주할 때 (e.g., standard curve)



Spc/Rev.Pipetting

: 문제성 시료 분주 시 사용하는 모드 (e.g., 휘발성 용액, 점성용액 등의 분주)



Prg (Program) : 저장된 프로그램 확인

Edit : 새로운 프로그램을 만들고자 할 때

Fix : 자주 쓰는 고정 볼륨 프로그램을 불러오고자 할 때

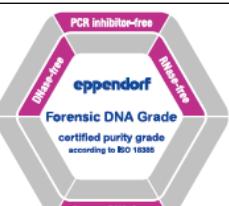
epT.I.P.S

Product Overview

	Model	Features
Non-filter	epT.I.P.S (기본형)	<ul style="list-style-type: none">> Eppendorf 피펫과 사용 시 높은 정확도 및 정밀도 보장> 타사 피펫과 호환 가능
	epT.I.P.S Long	<ul style="list-style-type: none">> 기본형에 비해 긴 길이. Deep well plate와 같이 높이가 긴 용기 사용 시 적합> Available volume : 0.5-20μl, 50-1,250μl, 0.2-5ml, 0.5-10ml
	epT.I.P.S LoRetention	<ul style="list-style-type: none">> Detergent가 포함된 용액 분주 시 정확한 용량 분주 가능, 재현성 증가> 분자단계에서 변형하여 극 소수성 내부 표면 생성. 반복 사용 시 기능 유지> 화학적 내성이 우수, 오토클레브 가능
Filter	epT.I.P.S Dualfilter	<ul style="list-style-type: none">> 2중 필터로, 에어로졸 컨탐 뿐만 아닌 biomolecule(e.g., DNA, RNA, protein)까지 완벽 차단> PCR 실험 시, inhibitor 차단 및 cross-contamination 방지
	epT.I.P.S Dualfilter SealMax	<ul style="list-style-type: none">> 2중 필터로, 에어로졸 컨탐 뿐만 아닌 biomolecule(e.g., DNA, RNA, protein)까지 완벽 차단> PCR 실험 시, inhibitor 차단 및 cross-contamination 방지> Liquid protection이 향상된 필터 장착
	epT.I.P.S Dualfilter LoRetention	<ul style="list-style-type: none">> epDualfilter T.I.P.S.에 LoRetention 기능이 추가 된 제품> Detergent 용액을 사용하며, cross-contamination 우려가 있는 실험 시 사용 적합 (e.g., PCR, qPCR)

epT.I.P.S

Eppendorf epT.I.P.S purity grade

Model	Features
Eppendorf Quality	<ul style="list-style-type: none"> > 일반적인 purity level 
Sterile	<ul style="list-style-type: none"> > 멸균, pyrogen-free 조건 충족 > Lot-specific control (인증서 제공) > Microbiology 또는 cell culture 실험에 적용 
PCR Clean	<ul style="list-style-type: none"> > Human DNA-free, DNase-free, RNase-free, PCR inhibitor-free 조건 충족 > Lot-specific control (인증서 제공) > 핵산 분석 및 추출 실험에 적합 
PCR clean and Sterile	<ul style="list-style-type: none"> > 멸균, pyrogen-free, Human DNA-free, DNase-free, RNase-free, PCR inhibitor-free 조건 충족 > Lot-specific control (인증서 제공) 
Biopur	<ul style="list-style-type: none"> > Human DNA-free, Bacterial DNA-free, DNase-free, RNase-free, PCR inhibitor-free, ATP-free, Pyrogen-free, Sterile 조건 충족 > 가장 높은 purity level을 요구하는 실험에 적합. > 소량 포장 또는 개별 포장 > Lot-specific control (인증서 제공) 
Forensic DNA grade	<ul style="list-style-type: none"> > Human DNA-free, DNase-free, RNase-free, PCR inhibitor-free 조건 충족 > 소량 포장 (single) 또는 개별 포장 > Lot-specific control (인증서 제공) > epDualfilter T.I.P.S. 만 제공 

Ordering information Research® plus

Variable(가변형), single channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Research® plus, single-channel, variable, incl. epT.I.P.S.® Box							
0.1 – 2.5 µL	■ dark gray	0.1 µL	±48.0 %	±0.048 µL	±12.0 %	±0.012 µL	3120 000.011
		0.25 µL	±12.0 %	±0.03 µL	±6.0 %	±0.015 µL	
		1.25 µL	±2.5 %	±0.031 µL	±1.5 %	±0.019 µL	
		2.5 µL	±1.4 %	±0.035 µL	±0.7 %	±0.018 µL	
0.5 – 10 µL	■ medium gray	0.5 µL	±8.0 %	±0.04 µL	±5.0 %	±0.025 µL	3120 000.020
		1 µL	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL	
		5 µL	±1.5 %	±0.075 µL	±0.8 %	±0.04 µL	
		10 µL	±1.0 %	±0.1 µL	±0.4 %	±0.04 µL	
2 – 20 µL	■ light gray	2 µL	±5.0 %	±0.1 µL	±1.5 %	±0.03 µL	3120 000.097
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	
2 – 20 µL	■ yellow	2 µL	±5.0 %	±0.1 µL	±1.5 %	±0.03 µL	3120 000.038
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±1.0 %	±0.1 µL	3120 000.046
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL	
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL	
20 – 200 µL	■ yellow	20 µL	±2.5 %	±0.5 µL	±0.7 %	±0.14 µL	3120 000.054
		100 µL	±1.0 %	±1.0 µL	±0.3 %	±0.3 µL	
		200 µL	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	
30 – 300 µL	■ orange	30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL	3120 000.100
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL	
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL	
100 – 1,000 µL	■ blue	100 µL	±3.0 %	±3.0 µL	±0.6 %	±0.6 µL	3120 000.062
		500 µL	±1.0 %	±5.0 µL	±0.2 %	±1.0 µL	
		1,000 µL	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL	
0.5 – 5 mL	■ violet	0.5 mL	±2.4 %	±0.012 mL	±0.6 %	±0.003 mL	3120 000.070
		2.5 mL	±1.2 %	±0.03 mL	±0.25 %	±0.006 mL	
		5 mL	±0.6 %	±0.03 mL	±0.15 %	±0.008 mL	
1 – 10 mL	■ turquoise	1 mL	±3.0 %	±0.03 mL	±0.6 %	±0.006 mL	3120 000.089
		5 mL	±0.8 %	±0.04 mL	±0.2 %	±0.01 mL	
		10 mL	±0.6 %	±0.06 mL	±0.15 %	±0.015 mL	

¹⁾ The error data, according to EN ISO 8655, only apply if original Eppendorf tips are used. Technical specifications are subject to change. Errors and omissions excepted.

Variable(가변형), Multi-channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Research® plus, 8-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL	3122 000.019
		1 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 µL	
		5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL	
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL	
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL	3122 000.035
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL	
		100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL	
30 – 300 µL	■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL	3122 000.051
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL	
		300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL	
Eppendorf Research® plus, 12-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL	3122 000.027
		1 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 µL	
		5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL	
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL	
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL	3122 000.043
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL	
		100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL	
30 – 300 µL	■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL	3122 000.060
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL	
		300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL	

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Ordering information Research® plus

Fixed(고정형), single channel

Volume range	Color code	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Research® plus, single-channel, fixed						
10 µL	■ medium gray	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	3121 000.015
10 µL	■ yellow	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	3121 000.023
20 µL	■ light gray	±0.8 %	±0.16 µL	±0.3 %	±0.06 µL	3121 000.031
20 µL	■ yellow	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	3121 000.040
25 µL	■ yellow	±1.0 %	±0.25 µL	±0.3 %	±0.08 µL	3121 000.058
50 µL	■ yellow	±0.7 %	±0.35 µL	±0.3 %	±0.15 µL	3121 000.066
100 µL	■ yellow	±0.6 %	±0.6 µL	±0.2 %	±0.2 µL	3121 000.074
200 µL	■ yellow	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	3121 000.082
200 µL	■ blue	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	3121 000.090
250 µL	■ blue	±0.6 %	±1.5 µL	±0.2 %	±0.5 µL	3121 000.104
500 µL	■ blue	±0.6 %	±3.0 µL	±0.2 %	±1.0 µL	3121 000.112
1,000 µL	■ blue	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL	3121 000.120

¹⁾ The error data, according to EN ISO 8655, only apply if original Eppendorf tips are used. Technical specifications are subject to change. Errors and omissions excepted.

Variable(가변형), Option pack

Description	Order no.
Eppendorf Research® plus 3-pack (IVD), single-channel, variable, incl. epT.I.P.S.® Box or sample bag and ballpoint pen	
Option 1: 0.5 – 10 µL, 10 – 100 µL, 100 – 1,000 µL	3120 000.909
Option 2: 2 – 20 µL yellow, 20 – 200 µL, 100 – 1,000 µL	3120 000.917
Option 3: 100 – 1,000 µL, 0.5 – 5 mL, 1 – 10 mL	3120 000.925

Ordering information Reference®2

Variable(가변형), single channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Reference® 2, single-channel, variable, incl. epT.I.P.S.® Box							
0.1 – 2.5 µL	■ dark gray	0.1 µL	±48.0 %	±0.048 µL	±12.0 %	±0.012 µL	4920 000.016
		0.25 µL	±12.0 %	±0.03 µL	±6.0 %	±0.015 µL	
		1.25 µL	±2.5 %	±0.031 µL	±1.5 %	±0.019 µL	
		2.5 µL	±1.4 %	±0.035 µL	±0.7 %	±0.018 µL	
0.5 – 10 µL	■ medium gray	0.5 µL	±8.0 %	±0.04 µL	±5.0 %	±0.025 µL	4920 000.024
		1.0 µL	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL	
		5.0 µL	±1.5 %	±0.075 µL	±0.8 %	±0.04 µL	
		10 µL	±1.0 %	±0.10 µL	±0.4 %	±0.04 µL	
2 – 20 µL	■ light gray	2.0 µL	±3.0 %	±0.06 µL	±1.5 %	±0.03 µL	4920 000.032
		10 µL	±1.0 %	±0.10 µL	±0.6 %	±0.06 µL	
		20 µL	±0.8 %	±0.16 µL	±0.3 %	±0.06 µL	
2 – 20 µL	■ yellow	2.0 µL	±5.0 %	±0.10 µL	±1.5 %	±0.03 µL	4920 000.040
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±0.7 %	±0.07 µL	4920 000.059
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL	
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL	
20 – 200 µL	■ yellow	20 µL	±2.5 %	±0.5 µL	±0.7 %	±0.14 µL	4920 000.067
		100 µL	±1.0 %	±1.0 µL	±0.3 %	±0.3 µL	
		200 µL	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	
30 – 300 µL	■ orange	30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL	4920 000.075
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL	
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL	
100 – 1,000 µL	■ blue	100 µL	±3.0 %	±3.0 µL	±0.6 %	±0.6 µL	4920 000.083
		500 µL	±1.0 %	±5.0 µL	±0.2 %	±1.0 µL	
		1,000 µL	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL	
0.25 – 2.5 mL	■ red	0.25 mL	±4.8 %	±0.012 mL	±1.2 %	±0.003 mL	4920 000.091
		1.25 mL	±0.8 %	±0.010 mL	±0.2 %	±0.0025 mL	
		2.5 mL	±0.6 %	±0.015 mL	±0.2 %	±0.005 mL	
0.5 – 5 mL	■ violet	0.5 mL	±2.4 %	±0.012 mL	±0.6 %	±0.003 mL	4920 000.105
		2.5 mL	±1.2 %	±0.030 mL	±0.25 %	±0.006 mL	
		5.0 mL	±0.6 %	±0.030 mL	±0.15 %	±0.0075 mL	
1 – 10 mL	■ turquoise	1.0 mL	±3.0 %	±0.030 mL	±0.6 %	±0.006 mL	4920 000.113
		5.0 mL	±0.8 %	±0.040 mL	±0.2 %	±0.010 mL	
		10.0 mL	±0.6 %	±0.060 mL	±0.15 %	±0.015 mL	

¹⁾ The error data, according to EN ISO 8655, only apply if original Eppendorf tips are used. Technical specifications are subject to change. Errors and omissions excepted.

Variable(가변형), Multi-channel

Volume range	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Reference® 2, 8-channel, variable, incl. epT.I.P.S.® Box						
0.5 – 10 µL	■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL
		1.0 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 µL
		5.0 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL
		100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL
30 – 300 µL	■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL
		300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL
Eppendorf Reference® 2, 12-channel, variable, incl. epT.I.P.S.® Box						
0.5 – 10 µL	■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL
		1.0 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 µL
		5.0 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL
		100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL
30 – 300 µL	■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL
		300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL

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Ordering information Reference®2

Fixed(고정형), single channel

Volume range	Color code	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Reference® 2, single-channel, fixed						
1 µL	■ dark gray	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL	4921 000.010
2 µL	■ dark gray	±2.0 %	±0.04 µL	±1.2 %	±0.024 µL	4921 000.028
5 µL	■ medium gray	±1.2 %	±0.06 µL	±0.6 %	±0.03 µL	4921 000.036
10 µL	■ medium gray	±1.0 %	±0.1 µL	±0.5 %	±0.05 µL	4921 000.044
10 µL	■ yellow	±1.2 %	±0.12 µL	±0.5 %	±0.05 µL	4921 000.052
20 µL	■ light gray	±0.8 %	±0.16 µL	±0.3 %	±0.06 µL	4921 000.060
20 µL	■ yellow	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	4921 000.079
25 µL	■ yellow	±1.0 %	±0.25 µL	±0.3 %	±0.075 µL	4921 000.087
50 µL	■ yellow	±0.7 %	±0.35 µL	±0.3 %	±0.15 µL	4921 000.095
100 µL	■ yellow	±0.6 %	±0.6 µL	±0.2 %	±0.2 µL	4921 000.109
200 µL	■ yellow	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	4921 000.117
200 µL	■ blue	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	4921 000.125
250 µL	■ blue	±0.6 %	±1.5 µL	±0.2 %	±0.5 µL	4921 000.133
500 µL	■ blue	±0.6 %	±3.0 µL	±0.2 %	±1.0 µL	4921 000.141
1,000 µL	■ blue	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL	4921 000.150
2 mL	■ red	±0.6 %	±0.012 mL	±0.2 %	±0.004 mL	4921 000.168
2.5 mL	■ red	±0.6 %	±0.015 mL	±0.2 %	±0.005 mL	4921 000.176

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Variable(가변형), Option pack

Description	Order no.
Eppendorf Reference® 2, 3-pack, single-channel, variable, incl. epT.I.P.S.® Box or sample bag and ballpoint pen	
Option 1: 0.5 – 10 µL, 10 – 100 µL, 100 – 1,000 µL	4920 000.903
Option 2: 2 – 20 µL yellow, 20 – 200 µL, 100 – 1,000 µL	4920 000.911
Option 3: 100 – 1,000 µL, 0.5 – 5 mL, 1 – 10 mL	4920 000.920

Ordering information Xplorer®

Variable(가변형), single channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Xplorer®, single-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±6.0 %	±0.03 µL	±3.0 %	±0.015 µL	4861 000.015
		1 µL	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL	
		5 µL	±1.5 %	±0.075 µL	±0.8 %	±0.04 µL	
		10 µL	±1.0 %	±0.1 µL	±0.4 %	±0.04 µL	
5 – 100 µL	■ yellow	5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL	4861 000.023
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL	
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL	
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL	
15 – 300 µL	■ orange	15 µL	±5.0 %	±0.75 µL	±1.4 %	±0.21 µL	4861 000.031
		30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL	
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL	
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL	
50 – 1,000 µL	■ blue	50 µL	±6.0 %	±3 µL	±1.0 %	±0.5 µL	4861 000.040
		100 µL	±3.0 %	±3 µL	±0.6 %	±0.6 µL	
		500 µL	±1.0 %	±5 µL	±0.2 %	±1 µL	
		1,000 µL	±0.6 %	±6 µL	±0.2 %	±2 µL	
0.2 – 5 mL	■ violet	250 µL	±4.8 %	±12 µL	±1.2 %	±3 µL	4861 000.058
		500 µL	±3.0 %	±15 µL	±0.6 %	±3 µL	
		2,500 µL	±1.2 %	±30 µL	±0.25 %	±6.25 µL	
		5,000 µL	±0.6 %	±30 µL	±0.15 %	±7.5 µL	
0.5 – 10 mL	■ turquoise	500 µL	±6.0 %	±30 µL	±1.2 %	±6 µL	4861 000.066
		1,000 µL	±3.0 %	±30 µL	±0.6 %	±6 µL	
		5,000 µL	±0.8 %	±40 µL	±0.2 %	±10 µL	
		10,000 µL	±0.6 %	±60 µL	±0.15 %	±15 µL	

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Variable(가변형), Multi-channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Xplorer®, 8-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861 000.104
		1 µL	±5.0 %	±0.05 µL	±3.0 %	±0.03 µL	
		5 µL	±3.0 %	±0.15 µL	±1.5 %	±0.075 µL	
		10 µL	±2.0 %	±0.2 µL	±0.8 %	±0.08 µL	
5 – 100 µL	■ yellow	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861 000.120
		10 µL	±2.0 %	±0.2 µL	±2.0 %	±0.2 µL	
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL	
		100 µL	±0.8 %	±0.8 µL	±0.25 %	±0.25 µL	
15 – 300 µL	■ orange	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861 000.147
		30 µL	±2.5 %	±0.75 µL	±1.0 %	±0.3 µL	
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL	
		300 µL	±0.6 %	±1.8 µL	±0.25 %	±0.75 µL	
50 – 1,200 µL	■ green	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861 000.163
		120 µL	±6.0 %	±7.2 µL	±0.9 %	±1.08 µL	
		600 µL	±2.7 %	±16.2 µL	±0.4 %	±2.4 µL	
		1,200 µL	±1.2 %	±14.4 µL	±0.3 %	±3.6 µL	
Eppendorf Xplorer®, 12-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861 000.112
		1 µL	±5.0 %	±0.05 µL	±3.0 %	±0.03 µL	
		5 µL	±3.0 %	±0.15 µL	±1.5 %	±0.075 µL	
		10 µL	±2.0 %	±0.2 µL	±0.8 %	±0.08 µL	
5 – 100 µL	■ yellow	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861 000.139
		10 µL	±2.0 %	±0.2 µL	±2.0 %	±0.2 µL	
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL	
		100 µL	±0.8 %	±0.8 µL	±0.25 %	±0.25 µL	
15 – 300 µL	■ orange	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861 000.155
		30 µL	±2.5 %	±0.75 µL	±1.0 %	±0.3 µL	
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL	
		300 µL	±0.6 %	±1.8 µL	±0.25 %	±0.75 µL	
50 – 1,200 µL	■ green	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861 000.171
		120 µL	±6.0 %	±7.2 µL	±0.9 %	±1.08 µL	
		600 µL	±2.7 %	±16.2 µL	±0.4 %	±2.4 µL	
		1,200 µL	±1.2 %	±14.2 µL	±0.3 %	±3.6 µL	

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Ordering information Xplorer® plus

Variable(가변형), single channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Xplorer® plus, single-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±6.0 %	±0.03 µL	±3.0 %	±0.015 µL	4861 000.708
		1 µL	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL	
		5 µL	±1.5 %	±0.075 µL	±0.8 %	±0.04 µL	
		10 µL	±1.0 %	±0.1 µL	±0.4 %	±0.04 µL	
5 – 100 µL	■ yellow	5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL	4861 000.716
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL	
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL	
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL	
15 – 300 µL	■ orange	15 µL	±5.0 %	±0.75 µL	±1.4 %	±0.21 µL	4861 000.724
		30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL	
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL	
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL	
50 – 1,000 µL	■ blue	50 µL	±6.0 %	±3 µL	±1.0 %	±0.5 µL	4861 000.732
		100 µL	±3.0 %	±3 µL	±0.6 %	±0.6 µL	
		500 µL	±1.0 %	±5 µL	±0.2 %	±1 µL	
		1,000 µL	±0.6 %	±6 µL	±0.2 %	±2 µL	
0.2 – 5 mL	■ violet	200 µL	±4.8 %	±12 µL	±1.2 %	±3 µL	4861 000.740
		500 µL	±3.0 %	±15 µL	±0.6 %	±3 µL	
		2,500 µL	±1.2 %	±30 µL	±0.25 %	±6.25 µL	
		5,000 µL	±0.6 %	±30 µL	±0.15 %	±7.5 µL	
0.5 – 10 mL	■ turquoise	500 µL	±6.0 %	±30 µL	±1.2 %	±6 µL	4861 000.759
		1,000 µL	±3.0 %	±30 µL	±0.6 %	±6 µL	
		5,000 µL	±0.8 %	±40 µL	±0.2 %	±10 µL	
		10,000 µL	±0.6 %	±60 µL	±0.15 %	±15 µL	

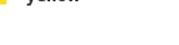
¹⁾ The error data, according to EN ISO 8655, only apply if original Eppendorf tips are used. Technical specifications are subject to change. Errors and omissions excepted.

Variable(가변형), Multi-channel

Volume range	Color code	Volume	Rel. systematic error ¹⁾	Abs. systematic error ¹⁾	Rel. random error ¹⁾	Abs. random error ¹⁾	Order no.
Eppendorf Xplorer® plus, 8-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861 000.767
		1 µL	±5.0 %	±0.05 µL	±3.0 %	±0.03 µL	
		5 µL	±3.0 %	±0.15 µL	±1.5 %	±0.075 µL	
		10 µL	±2.0 %	±0.2 µL	±0.8 %	±0.08 µL	
5 – 100 µL	■ yellow	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861 000.783
		10 µL	±2.0 %	±0.2 µL	±2.0 %	±0.2 µL	
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL	
		100 µL	±0.8 %	±0.8 µL	±0.25 %	±0.25 µL	
15 – 300 µL	■ orange	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861 000.805
		30 µL	±2.5 %	±0.75 µL	±1.0 %	±0.3 µL	
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL	
		300 µL	±0.6 %	±1.8 µL	±0.25 %	±0.75 µL	
50 – 1,200 µL	■ green	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861 000.821
		120 µL	±6.0 %	±7.2 µL	±0.9 %	±1.08 µL	
		600 µL	±2.7 %	±16.2 µL	±0.4 %	±2.4 µL	
		1,200 µL	±1.2 %	±14.4 µL	±0.3 %	±3.6 µL	
Eppendorf Xplorer® plus, 12-channel, variable							
0.5 – 10 µL	■ medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861 000.775
		1 µL	±5.0 %	±0.05 µL	±3.0 %	±0.03 µL	
		5 µL	±3.0 %	±0.15 µL	±1.5 %	±0.075 µL	
		10 µL	±2.0 %	±0.2 µL	±0.8 %	±0.08 µL	
5 – 100 µL	■ yellow	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861 000.791
		10 µL	±2.0 %	±0.2 µL	±2.0 %	±0.2 µL	
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL	
		100 µL	±0.8 %	±0.8 µL	±0.25 %	±0.25 µL	
15 – 300 µL	■ orange	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861 000.813
		30 µL	±2.5 %	±0.75 µL	±1.0 %	±0.3 µL	
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL	
		300 µL	±0.6 %	±1.8 µL	±0.25 %	±0.75 µL	
50 – 1,200 µL	■ green	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861 000.830
		120 µL	±6.0 %	±7.2 µL	±0.9 %	±1.08 µL	
		600 µL	±2.7 %	±16.2 µL	±0.4 %	±2.4 µL	
		1,200 µL	±1.2 %	±14.2 µL	±0.3 %	±3.6 µL	

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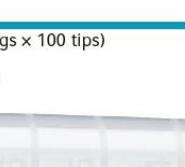
Ordering information epT.I.P.S

Volume range/epT.I.P.S. [®] epT.I.P.S. [®] LoRetention (all tips shown are actual size)	Standard/Bulk	Reloads	Reloads
 dark gray	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
0.1 – 10 µL, 34 mm 	0030 000.811	0030 073.363 0030 072.049 LoRetention	0030 073.746 0030 072.006 LoRetention
 medium gray	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
0.1 – 20 µL, 40 mm 	0030 000.838	0030 073.380	0030 073.762
 light gray	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
0.5 – 20 µL L, 46 mm 	0030 000.854	0030 073.401 0030 072.057 LoRetention	0030 073.789 0030 072.014 LoRetention
 yellow	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
2 – 200 µL, 53 mm 	0030 000.889 0030 000.870 yellow tips	0030 073.428 0030 072.065 LoRetention	0030 073.800 0030 072.022 LoRetention
 orange	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
20 – 300 µL, 55 mm 	0030 000.900 0030 000.897 yellow tips	0030 073.444	0030 073.827
 blue	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
50 – 1,000 µL, 71 mm 	0030 000.927 0030 000.919 blue tips	0030 073.460 0030 072.073 LoRetention	0030 073.843 0030 072.030 LoRetention
 green	1,000 tips (2 bags × 500 tips)	960 tips (10 trays × 96 tips)	960 tips (10 trays × 96 tips)
50 – 1,250 µL, 76 mm 	0030 000.935	0030 073.487	0030 073.860

Ordering information epT.I.P.S

Box	Set	Singles	Racks
1 reusable box x 96 tips 0030 073.002	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.207 0030 072.251 LoRetention		
1 reusable box x 96 tips 0030 073.029	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.223	100 tips, individually packed 0030 010.019	480 tips (5 racks x 96 tips) 0030 075.005
1 reusable box x 96 tips 0030 073.045	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.240 0030 072.260 LoRetention		
1 reusable box x 96 tips 0030 073.061	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.266 0030 072.278 LoRetention	100 tips, individually packed 0030 010.035	480 tips (5 racks x 96 tips) 0030 075.021
1 reusable box x 96 tips 0030 073.088	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.282		480 tips (5 racks x 96 tips) 0030 075.048
1 reusable box x 96 tips 0030 073.100	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.304 0030 072.286 LoRetention	100 tips, individually packed 0030 010.051	480 tips (5 racks x 96 tips) 0030 075.064
1 reusable box x 96 tips 0030 073.126	480 tips (5 trays x 96 tips), 1 reusable box 0030 073.320		480 tips (5 racks x 96 tips) 0030 075.080

Ordering information epT.I.P.S.

Volume range/epT.I.P.S. [®] epT.I.P.S. [®] LoRetention (all tips shown are actual size)	Standard/Bulk	Reloads	Reloads
 dark green 50 – 1,250 µL L, 103 mm	1,000 tips (2 bags × 500 tips) 0030 000.730	960 tips (10 trays × 96 tips) 0030 073.606	960 tips (10 trays × 96 tips) 0030 073.614
 red 0.25 – 2.5 mL, 115 mm	500 tips (5 bags × 100 tips) 0030 000.951	480 tips (10 trays × 48 tips) 0030 073.509	480 tips (10 trays × 48 tips) 0030 073.886
 violet 0.1 – 5 mL, 120 mm	500 tips (5 bags × 100 tips) 0030 000.978		
 turquoise 0.2 – 5 mL L, 175 mm	300 tips (3 bags × 100 tips) 0030 000.650		
 turquoise 0.5 – 10 mL, 165 mm	200 tips (2 bags × 100 tips) 0030 000.765		
 turquoise 0.5 – 10 mL L, 243 mm	200 tips (2 bags × 100 tips) 0030 000.781		

(Image reduced size)

Ordering information epT.I.P.S



Box

1 reusable box x 96 tips

0030 073.622



Set

Singles



Racks



480 tips (5 racks x 96 tips)

0030 075.129

1 reusable box x 48 tips

0030 073.142

240 tips (5 trays x 48 tips), 1 reusable box

0030 073.347

240 tips (5 racks x 48 tips)

0030 075.102

1 reusable box x 24 tips

0030 073.169

120 tips (5 racks x 24 tips)

0030 075.137

120 tips (5 racks x 24 tips)

0030 075.188

120 tips (5 racks x 24 tips)

0030 075.145

Ordering information epDualfilter T.I.P.S

Volume range/ ep Dualfilter T.I.P.S.®
 ep Dualfilter T.I.P.S.® LoRetention/
 ep Dualfilter T.I.P.S.® SealMax



Racks
 PCR clean/Sterile (sterile and pyrogen-free)

dark gray



960 tips (10 racks x 96 tips)

0.1 – 10 µL S, 34 mm

0030 077.504

0030 077.610

0030 077.806

SealMax

medium gray



960 tips (10 racks x 96 tips)

0.1 – 10 µL M, 40 mm

0030 077.512

0030 077.768

light gray



960 tips (10 racks x 96 tips)

0.5 – 20 µL L, 46 mm

0030 077.520

0030 077.628

0030 077.814

SealMax

yellow



960 tips (10 racks x 96 tips)

2 – 20 µL, 53 mm

0030 077.539

0030 077.776

yellow



960 tips (10 racks x 96 tips)

2 – 100 µL, 53 mm

0030 077.547

0030 077.644

0030 077.822

SealMax

yellow



960 tips (10 racks x 96 tips)

2 – 200 µL, 55 mm

0030 077.555

0030 077.830

0030 077.784

orange



960 tips (10 racks x 96 tips)

20 – 300 µL, 55 mm

0030 077.563

0030 077.636

0030 077.849

SealMax

blue



960 tips (10 racks x 96 tips)

50 – 1,000 µL, 76 mm

0030 077.571

0030 077.652

0030 077.857

0030 077.792

dark green



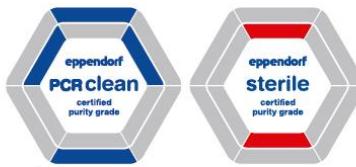
480 tips (5 racks x 96 tips)

50 – 1,250 µL L, 103 mm

0030 077.750

Ordering information epDualfilter T.I.P.S

Volume range/ ep Dualfilter T.I.P.S.®/
ep Dualfilter T.I.P.S.® LoRetention/
ep Dualfilter T.I.P.S.® SealMax



Racks

PCR clean/Sterile (sterile and pyrogen-free)

violet

0.1 – 5 mL, 120 mm

120 tips (5 racks x 24 tips)

0030 077.580



violet

0.2 – 5 mL L, 175 mm

120 tips (5 racks x 24 tips)

0030 077.725



turquoise

0.5 – 10 mL L, 243 mm

100 tips, individually packed

0030 077.598



epService - Pipette calibration

From single repair services to all inclusive programs



Premium In-House System

- > 피펫 점검 전용 공간 운용으로 온도/습도 등 국제표준 규격 준수 (ISO8655)
- > 소수점 이하 5~6 자리수 저울 사용을 통한 정확도 확보
- > 증발 방지를 위한 Evaporation trap 사용
- > Eppendorf Training을 통해 인증받은 피펫 엔지니어의 점검
- > Calibration report 제공 및 점검필증 부착

epService Process



Pipette Performance Plans

Service Operation	QUICK	BASIC	STANDARD
Maintenance and calibration services:			
Check of seals for damage / integrity			
Lubrication of seals, O-rings and piston if applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Preventive maintenance and cleaning:			
Checking and lubrication of seals, O-rings and piston, replacement of small parts like seals and O-rings, checking seals for damage/integrity			<input checked="" type="checkbox"/>
Calibration/adjustment according to EN ISO 8655 specifications with 10 measurements per test volume (min, mid, max)			<input checked="" type="checkbox"/>
Calibration/adjustment according to EN ISO 8655 specifications with 4 measurements per test volume (min, mid, max)		<input checked="" type="checkbox"/>	
Calibration/adjustment according to EN ISO 8655 specifications with 4 measurements per test volume(min, max)	<input checked="" type="checkbox"/>		
Issue calibration report	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Service turnaround (from time of receipt, in business days, excl.shipping duration)	5	5	5
Ordering information for pipette services as described above:			
Fixed-volume pipette	0050 600.225	0050 600.015	0050 600.017
Adjustable-volume pipette	0050 600.229	0050 600.071	0050 600.076
8-channel pipette	0050 600.235	0050 600.116	0050 600.122
12-channel pipette	0050 600.239	0050 600.128	0050 600.130
Ordering information for hand dispenser maintenance and calibration:			
Hand dispenser	0050 600.229	0050 600.071	0050 600.076