

# Perfect Liquid Handling

PRECISE RESULTS WITH INNOVATIVE TECHNOLOGY



**VITLAB** <sup>®</sup>  
Competence in Labware

# Reliability from development to service.

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## Tradition

VITLAB can look back on a history of almost 100 years. VITRI GmbH & Co. KG was founded in Mühlthal (Germany) back in 1908. In 1989, the laboratory division was established as the independent company, VITLAB. Today, VITLAB is a leading manufacturer of liquid handling instruments and performance plastic products for one-time or long-term use. We develop and manufacture these products at our own production facility.

## Product range

VITLAB supports laboratory work on a myriad of applications with its comprehensive product range. Whether you're measuring volume, taking and storing samples or you just need general laboratory tools – our laboratory products are developed and manufactured with the aim to simplify your daily work, and ensure consistently perfect results.

## Quality

Independent inspections and routine internal audits guarantee the effectiveness of VITLAB's quality management system throughout the company, from development to shipment. As a result, the phrase 'Made by VITLAB' has become synonymous for quality.

## Service

Thanks to its intensive partnerships with distributors almost everywhere in the world, VITLAB can offer reliable availability of its products, sound advice and seamless logistics. Our qualified product training sessions provide information and tips on using our laboratory products and liquid handling devices. Just in case, our trained repair service is on hand to keep downtimes to an absolute minimum.

# Ultimate liquid handling precision.

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## Simple and safe

Liquid handling represents a large portion of routine laboratory work. The devices you use must allow you to carry out your work easily and safely and, above all, to provide the precision you expect. VITLAB specializes in devices for titration and precise volumetric dispensing for a wide range of applications. But we don't ignore your convenience: VITLAB's liquid handling devices are easy to take apart, thanks to their modular construction, and are very simple to clean. All parts are replaceable, to ensure long-term use, cost-effective maintenance, and minimal downtime.

Our conformity certification confirms that accuracy and precision exceed the German standard DIN EN ISO 8655. For each liquid handling device, the VITLAB certificate documents:

- accuracy (A%)
- coefficient of variation (CV%)
- device type
- serial number

This product data is stored at VITLAB and may be accessed by request. This assures long term traceability of test results for VITLAB instruments.

## Delivery programme



Burettes



Dispensers



Micro-dispensers

# Titration with new dosage technology.

## Bottletop burette VITLAB „continuous“

Chemical volumetric analysis with minute liquid volumes requires a great deal of concentration. With VITLAB „continuous“, the bottletop burette, you can carry out continuous titration and comfortably attain secure results – and save a lot of time in the process. The patented<sup>1)</sup> double-piston pump holds the solution to be measured permanently and pulse-free – filling procedures are not necessary. Furthermore, this innovative technology increases security; its compact structure and low center of gravity reduce risk of spillage, especially with smaller bottles. The height and length of the discharge tube can be adjusted,

allowing you to work safely with both short and tall bottles. The patented<sup>2)</sup> return dosage system from VITLAB has two advantages: it prevents the loss of valuable reagents and reduces the risk of splashing. The simple-to-use calibration function helps meet all the requirements of testing-apparatus monitoring – with minimal downtime. Margins of error are well within those specified in the German DIN EN ISO 8665-3 standard, even for partial volumes.

<sup>1)</sup> EP 801 982

<sup>2)</sup> EP 542 241



By turning both thumbwheels, the titration liquid is pumped continually by the patented<sup>1)</sup> double-piston pump.

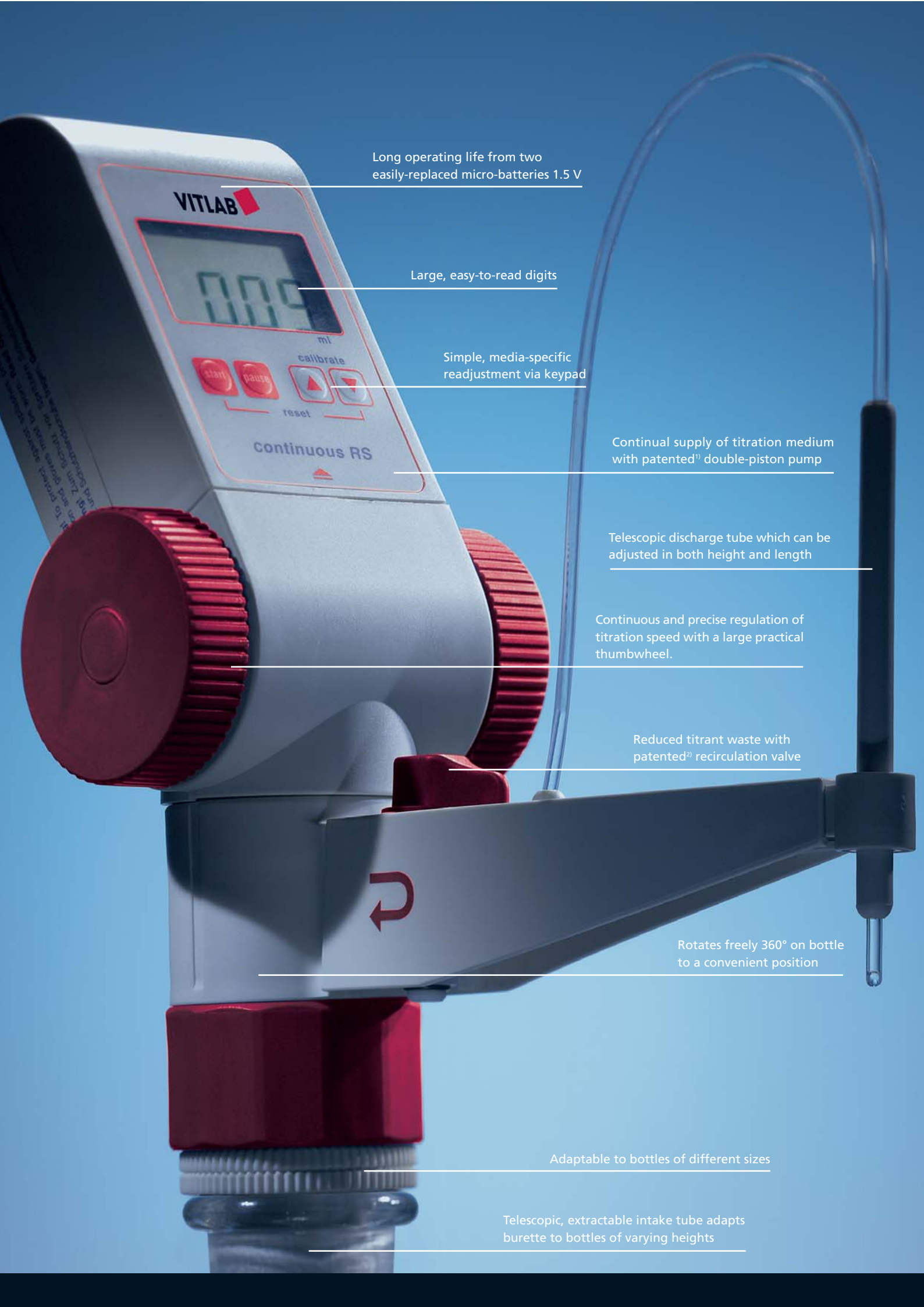


The patented<sup>2)</sup> recirculation valve from VITLAB reduces reagent loss and increases safety.



The angled display clearly shows the titration volume and simplifies operation.





Long operating life from two easily-replaced micro-batteries 1.5 V

Large, easy-to-read digits

Simple, media-specific readjustment via keypad

Continual supply of titration medium with patented<sup>1)</sup> double-piston pump

Telescopic discharge tube which can be adjusted in both height and length

Continuous and precise regulation of titration speed with a large practical thumbwheel.

Reduced titrant waste with patented<sup>2)</sup> recirculation valve

Rotates freely 360° on bottle to a convenient position

Adaptable to bottles of different sizes

Telescopic, extractable intake tube adapts burette to bottles of varying heights

# Totally reliable dispensing

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## Bottletop dispensers VITLAB „genius“ and „simplex“

Extracting measured amounts of liquid from bottles is a routine laboratory task best carried out quickly, accurately, precisely, simply and safely, and without reagent loss.

The VITLAB „genius“ and VITLAB „simplex“ bottletop dispensers are precision devices that not only accomplish these objectives, but also offer many other advantages. The direct displacement plungers, for example, use a fluoroplastic (PFA) seal that works like a windscreen wiper to prevent build-up of easily crystallizing media on the cylinder wall. The glass cylinder is also coated with a synthetic material that reduces risk of splashes if breakage should occur. The telescopic intake tube can easily be smoothly adjusted

to the height of the bottle. And, since the materials in contact with the media (PTFE, PFA, FEP, borosilicate glass and platinum-iridium) are resistant to acids, solvents and bases, the bottletop dispensers from VITLAB can be applied almost universally. All VITLAB dispensers are completely autoclavable at 121°C.

VITLAB „genius“ is also equipped with our patented<sup>2)</sup> recirculation valve that reduces reagent loss when ventilated. The simple-to-use calibration function of the „genius“ helps to meet all of the requirements of testing-apparatus monitoring, with the minimum of downtime.

Media-specific readjustment by turning the adjustment setting („genius“ only)

Smooth handling! Direct displacement plunger with broad PFA seal prevents crystallization build-up.

Settings are quickly and accurately adjusted with a practical screw mechanism

Reduced titrant waste with patented<sup>2)</sup> recirculation valve („genius“ only)

Rotates freely 360° on bottle to a convenient position

Attached tube-cap reduces the risk of drips

Adaptable to bottles of different sizes

Telescopic, extractable intake tube adapts dispenser to bottles of varying heights



# Serial pipetting of the innovative kind.

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## Micro-dispensers VITLAB „piccolo 1“, „piccolo 2“

New analysis systems in all areas of biochemistry and medical research have made it vitally important to be able to dose out tiny quantities of liquids quickly and conveniently. With the VITLAB „piccolo“ you can dispense the smallest quantities directly from the bottle – a big help, particularly for serial dispensing operations. This approach can even reduce costs, since disposable tips are not necessary.

The ergonomic design makes dispensing simple and uncomplicated. The VITLAB „piccolo“ can be used with just one hand. Use the thumb (just like pipetting) to depress the volume dispensing button. The spring-loaded piston refills the micro-dispenser automatically after dispensing. The discharge tube can be rotated 360° so the dispenser can always be used with the

label visible for safety. In order to guarantee high levels of resistance to chemicals and a broad range of applications, only high-quality materials, such as PTFE, PFA, ETFE, FEP, borosilicate glass and platinum-iridium, come in contact with the media.

- The VITLAB „piccolo 1“ comes in four fixed-volume sizes: 100 µl, 250 µl, 500 µl and 1000 µl.
- With the VITLAB „piccolo 2“, two fixed volumes can easily be set with a twist of the button. The „piccolo 2“ is also available in four nominal volumes of 100 / 250 µl, 500 / 1000 µl and 1000 / 2000 µl.
- Other volumes are available on request.



The image shows two white Vitlab piccolo pipettes mounted on brown glass bottles with red caps. The pipettes have red accents and are labeled 'VITLAB piccolo'. The pipette in the foreground has a red volume adjustment dial with '500' printed on it. The pipette in the background is slightly out of focus. Three white callout boxes with thin lines point to specific features: the top box points to the volume dial, the middle box points to the red dial, and the bottom box points to the white pipette body.

Adjustable volumes with a twist of the button („piccolo 2“ only)

One-handed operation

The highest levels of precision thanks to tapered discharge tube.

Rotates freely 360° on bottle to a convenient position

## Items supplied

- Burette „continuous“
- 3 PP adapters  
(GL 32, GL 38, S 40)
- 1 telescopic intake tube
- 1 telescopic discharge tube
- 2 micro-batteries 1,5 V  
(LR 03/AAA)
- Instruction manual
- Quality certificate

				Burette „continuous E“		Burette „continuous RS“	
May be used with titration media up to a concentration of max. 2 mol/l							
Dosage range		from 0,010 to 999,9 ml		from 0,010 to 999,9 ml			
Dosage volumes (per turn of thumbwheel)		2,5 ml/U		5,0 ml/U			
Telescopic discharge tube		140 to 220 mm		140 to 220 mm			
Telescopic intake tube		200 to 350 mm		200 to 350 mm			
Item No.	Volumes	Accuracy*	Coefficient of variation*	Item No.	Volumes	Accuracy*	Coefficient of variation*
Burette „continuous E“				Burette „continuous RS“			
1620506	25 ml	≤ ± 0,2 %	≤ 0,1 %	1620507	50 ml	≤ ± 0,2 %	≤ 0,1 %

# Dispensers VITLAB „simplex“ and VITLAB „genius“

## Items supplied

- Dispenser „simplex“ / „genius“
- 3 PP adapters (see table)
- 1 telescopic intake tube  
(200 to 350 mm)
- 1 mounting key
- Instruction manual
- Quality certificate

Item No.	Volumes	Accuracy*	Coefficient of variation*	Separation	Thread GL	Adapters GL
Dispenser „simplex“						
1601503	0,25 – 2,5 ml	≤ ± 0,6 %	≤ 0,1 %	0,05 ml	32	28, 40, 45
1601504	0,5 – 5,0 ml	≤ ± 0,5 %	≤ 0,1 %	0,10 ml	32	28, 40, 45
1601505	1,0 – 10,0 ml	≤ ± 0,5 %	≤ 0,1 %	0,20 ml	32	28, 40, 45
1601506	2,5 – 25,0 ml	≤ ± 0,5 %	≤ 0,1 %	0,50 ml	45	32, 38, S40
1601507	5,0 – 50,0 ml	≤ ± 0,5 %	≤ 0,1 %	1,00 ml	45	32, 38, S40
1601508	10,0 – 100,0 ml	≤ ± 0,5 %	≤ 0,1 %	2,00 ml	45	32, 38, S40
Dispenser „genius“						
1605503	0,25 – 2,5 ml	≤ ± 0,6 %	≤ 0,1 %	0,05 ml	32	28, 40, 45
1605504	0,5 – 5,0 ml	≤ ± 0,5 %	≤ 0,1 %	0,10 ml	32	28, 40, 45
1605505	1,0 – 10,0 ml	≤ ± 0,5 %	≤ 0,1 %	0,20 ml	32	28, 40, 45
1605506	2,5 – 25,0 ml	≤ ± 0,5 %	≤ 0,1 %	0,50 ml	45	32, 38, S40
1605507	5,0 – 50,0 ml	≤ ± 0,5 %	≤ 0,1 %	1,00 ml	45	32, 38, S40
1605508	10,0 – 100,0 ml	≤ ± 0,5 %	≤ 0,1 %	2,00 ml	45	32, 38, S40
Dispenser „simplex fix“						
1602502	1,0	≤ ± 0,6 %	≤ 0,1 %	–	32	28, 40, 45
1602504	5,0	≤ ± 0,5 %	≤ 0,1 %	–	32	28, 40, 45
1602505	10,0	≤ ± 0,5 %	≤ 0,1 %	–	32	28, 40, 45
Dispenser HF						
1606515	1,0 – 10,0	≤ ± 0,5 %	≤ 0,1 %	0,20	45	25, 28, 32, 38, S40

# Micro-dispensers VITLAB „piccolo 1“ und VITLAB „piccolo 2“

## Items supplied

- Micro-Dispenser „piccolo1“ / „piccolo 2“ complete with
- Discharge tube
- Intake tube
- Mounting key
- Instruction manual

Item No.	Volumes	Accuracy*	Coefficient of variation*	Thread GL	Adapter GL
Micro-Dispenser „piccolo 1“					
1610501	100 µl	≤ ± 3,0 %	≤ 0,4 %	28	32
1610503	250 µl	≤ ± 2,0 %	≤ 0,4 %	28	32
1610504	500 µl	≤ ± 1,5 %	≤ 0,3 %	28	32
1610506	1000 µl	≤ ± 1,0 %	≤ 0,2 %	28	32
Micro-Dispenser „piccolo 2“					
1611503	100 / 250 µl	≤ ± 2,0 %	≤ 0,4 %	28	32
1611506	500 / 1000 µl	≤ ± 1,0 %	≤ 0,2 %	28	32
1611508	1000 / 2000 µl	≤ ± 1,0 %	≤ 0,2 %	28	32

Item No.	Burette VITLAB „continuous E“ / VITLAB „continuous RS“
1671085	Telescopic intake tube, FEP, ETFE, PTFE, length 200 – 350 mm
1655085	Discharge tube incl. recirculation valve, PTFE, PFA
1650135	Discharge tube (complete)
1650162	Discharge tube aid (variable)
1671095	Drying tube (without absorbent)
1670216	Micro-batteries (2 x LR03/AAA)
Item No.	Dispensers VITLAB „simplex“ / VITLAB „genius“
1671085	Telescopic intake tube, FEP, ETFE, PTFE, all sizes, length 200 – 350 mm
1650020	Intake tube, FEP, ETFE, PTFE, for 2,5 / 5 / 10 ml, length 220 mm
1650025	Intake tube, FEP, ETFE, PTFE, for 2,5 / 5 / 10 ml, length 335 mm
1650030	Intake tube, FEP, ETFE, PTFE, for 25 / 50 / 100 ml, length 250 mm
1650035	Intake tube, FEP, ETFE, PTFE, for 25 / 50 / 100 ml, length 335 mm
1655000	Intake valve, ETFE, borosilicate, for 2,5 / 5 / 10 ml
1655005	Intake valve, ETFE, borosilicate, for 25 / 50 / 100 ml
1650080	Discharge tube, FEP, for simplex 2,5 / 5 / 10 ml
1650100	Discharge tube, FEP, for simplex 25 / 50 / 100 ml
1650085	Discharge tube, FEP, for genius 2,5 / 5 / 10 ml
1650110	Discharge tube, FEP, for genius 25 / 50 / 100 ml
1655075	Discharge tube incl. recirculation valve, PTFE, PFA, borosilicate, Platinum-Iridium, for genius 2,5 / 5 / 10 ml
1655080	Discharge tube incl. recirculation valve, PTFE, PFA, borosilicate, Platinum-Iridium, for genius 25 / 50 / 100 ml
1655095	Discharge tube valve, PTFE, PFA, borosilicate, Platinum-Iridium, for simplex 2,5 / 5 / 10 ml
1655100	Discharge tube valve, PTFE, PFA, borosilicate, Platinum-Iridium, for simplex 25 / 50 / 100 ml
1650086	Flexible discharge tube, PTFE, for simplex / genius 2,5 / 5 / 10 ml
1650111	Flexible discharge tube, PTFE, for simplex / genius 25 / 50 / 100 ml
1670650	Filter membrane, 3 µm, for all sizes (bag containing 10 items)
Item No.	Micro-Dispensers VITLAB „piccolo 1“ / VITLAB „piccolo 2“
1650010	Intake tube, length 150 mm
1655011	Intake valve complete with locking nut, ETFE / borosilicate glass
1650145	Discharge tube
1655090	Discharge tube valve, PFA / borosilicate glass / Platinum-Iridium
Item No.	Screw bottles
1671500	1000 ml, coated, GL 45, for continuous / simplex / genius
1671510	2500 ml, coated, GL 45, for continuous / simplex / genius
1671505	100 ml, coated, GL 28, for simplex / genius / piccolo
1671506	100 ml, coated, GL 32, for simplex / genius
1671515	250 ml, coated, GL 32, for simplex / genius
1671520	500 ml, coated, GL 32, for simplex / genius

## Thread adapters

Item No.	Thread dispenser	Thread bottle	Material	Item No.	Thread dispenser	Thread bottle	Material
<b>VITLAB „simplex“ / „genius“</b>							
1670150	GL 32	GL 25	PP	1670100	GL 45	GL 32	PTFE
1670155	GL 32	GL 28	PP	1670115	GL 45	GL 38	PTFE
1670165	GL 32	GL 38	PP	1670125	GL 45	S 40	PTFE
1670170	GL 32	S 40	PP	<b>VITLAB „continuous“</b>			
1670185	GL 32	GL 45	PP	1670066	GL 32	NS 19/26	PP
1670085	GL 38	GL 32	PP	1670067	GL 32	NS 24/29	PP
1670072	GL 32	GL 25	PTFE	1670068	GL 32	NS 29/32	PP
1670080	GL 32	GL 28	PTFE	<b>VITLAB „continuous“ / „simplex“ / „genius“</b>			
1670090	GL 32	GL 38	PTFE	1670180	GL 45	GL 32	PP
1670092	GL 32	S 40	PTFE	1670110	GL 45	GL 38	PP
1670105	GL 32	GL 45	PTFE	1670120	GL 45	S 40	PP
1670095	GL 38	GL 32	PTFE	<b>VITLAB „piccolo 1“ / „piccolo 2“</b>			
				1670145	GL 28	GL 32	PP

# More information about VITLAB?

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We will be happy to send you  
more information about

- VITLAB laboratory products made from PFA
- VITLAB laboratory products for volume measurement
- VITLAB laboratory products for saving and storing
- VITLAB catalogue with complete product range

or

- the options for customized imprints  
on VITLAB laboratory products.

Distributor

