

HEALTHY AND WASTE CAPS,

A ONE WAY AIR CHECK VALVE TECHNOLOGY

Before

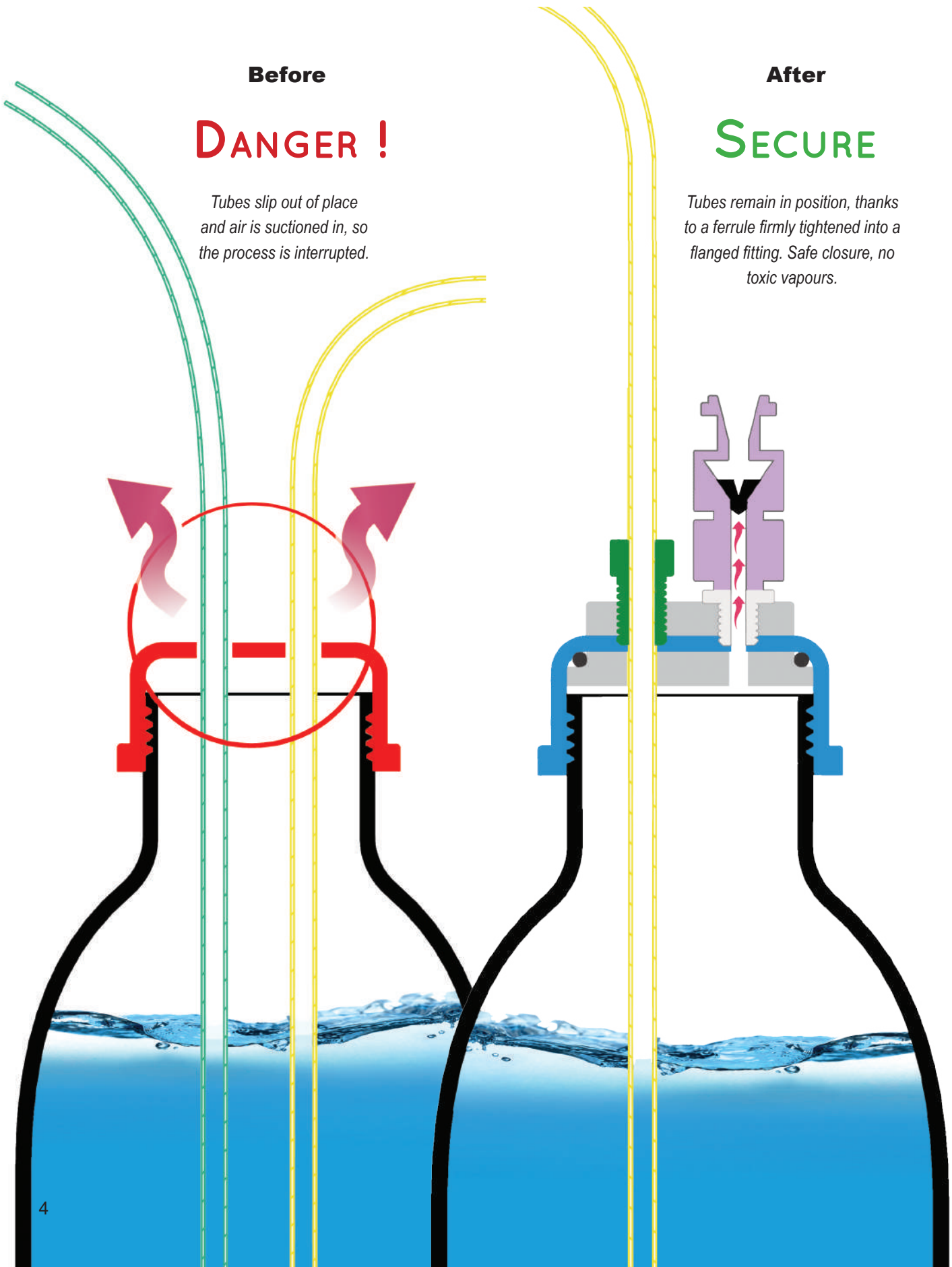
DANGER !

Tubes slip out of place and air is suctioned in, so the process is interrupted.

After

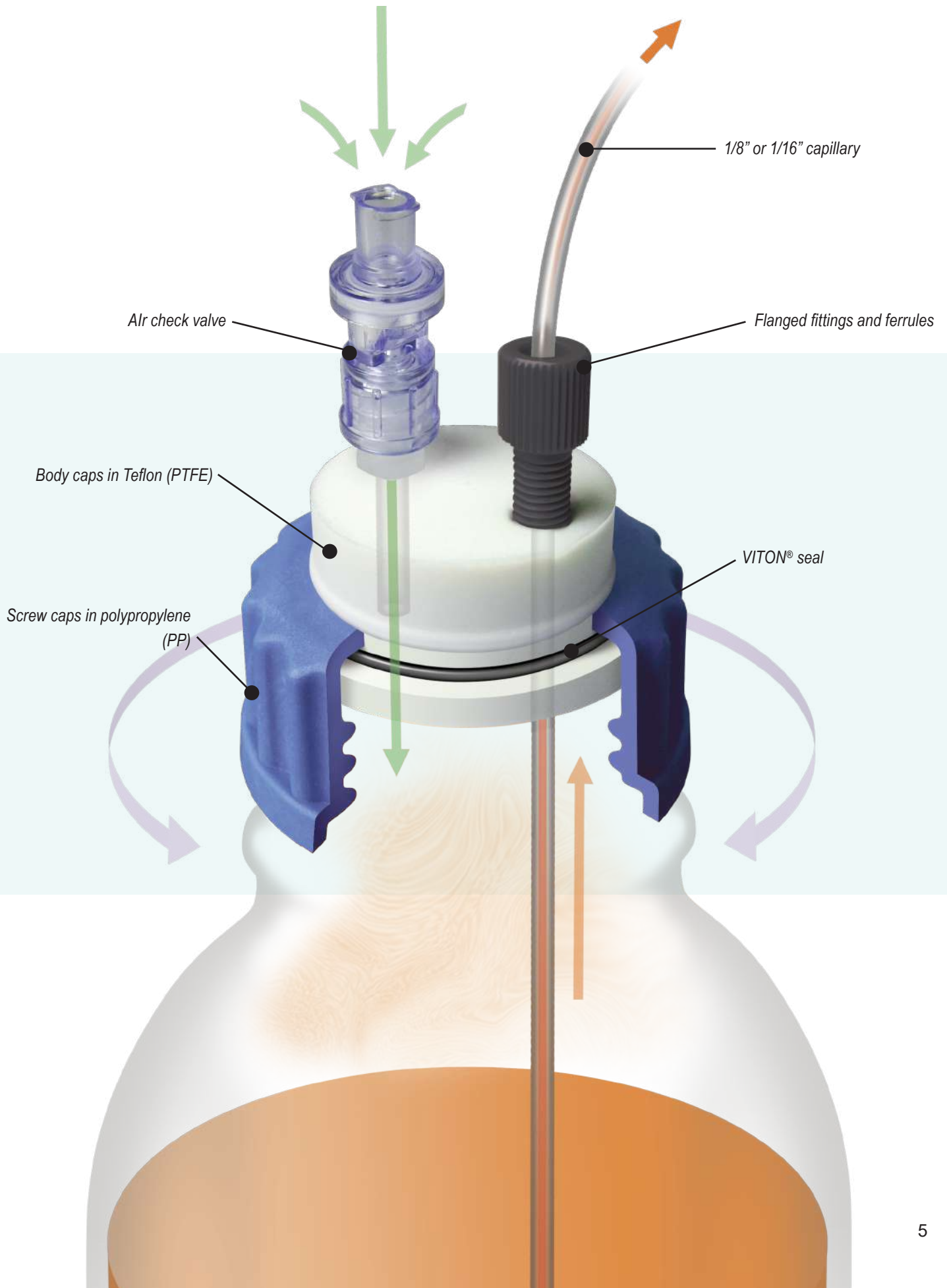
SECURE

Tubes remain in position, thanks to a ferrule firmly tightened into a flanged fitting. Safe closure, no toxic vapours.



HOW DOES IT WORK ?

A TECHNOLOGY TO PROTECT YOUR HEALTH



HEALTHY AND WASTE CAPS,

PRE-INSTALLED
ON YOUR
SMART HEALTHY CAPS!

A ONE WAY AIR CHECK VALVE TECHNOLOGY

Smart Healthy Caps are in response to modern laboratory safety regulations.

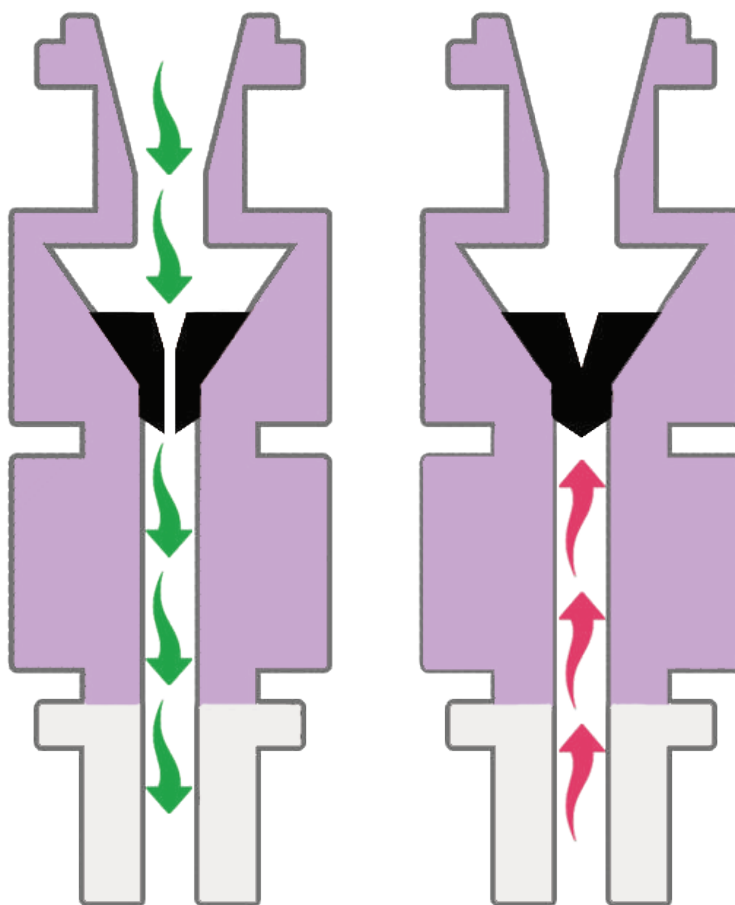
They are made of inert materials resistant to chemicals.

The use of a one-way air check valve allows for low cost safe and secure solvent extraction in your laboratory.

- ▶ No solvent evaporation. ✓
- ▶ Keep your concentration accurate for several days. ✓
- ▶ No mobile phase external contamination. ✓

360° ROTATION!

The rotation of the central part of the caps allows a good ease of installation, and also avoids any entanglement of tubes.



*The membrane allows
air to enter for pressure
equalization.*

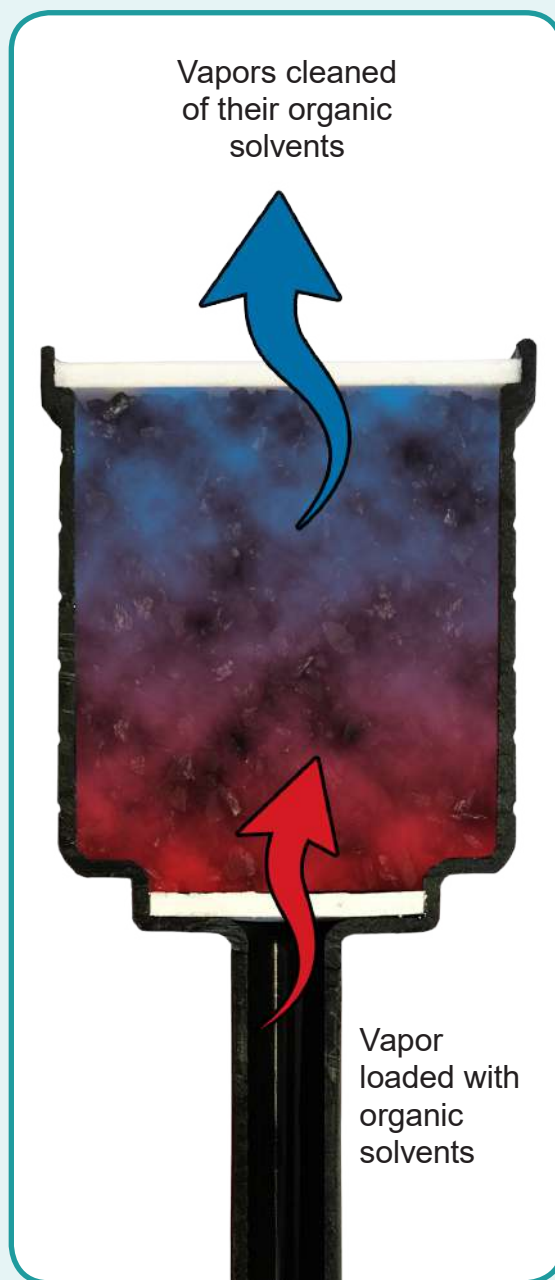
*The membrane is a barrier
against eluent vapours and
gas leaks.*

HOW DOES IT WORK ?

A TECHNOLOGY TO PROTECT YOUR HEALTH

A Smart Waste Caps is formed by an airtight cap, drilled by a variable number of holes to host effluents tubes outgoing of the HPLC system.

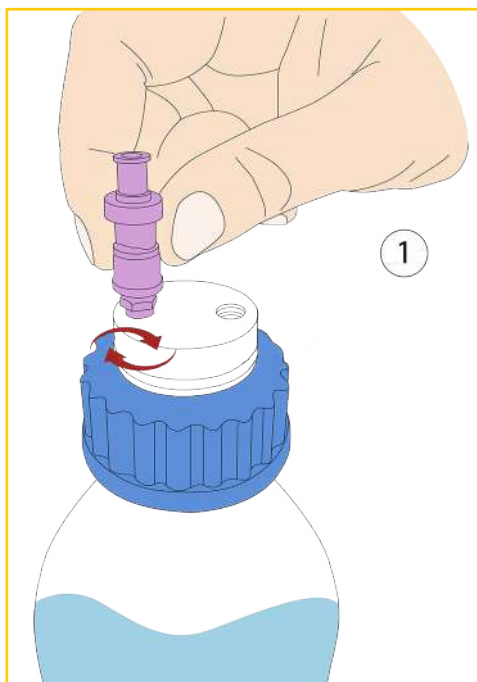
The main piece is a cartridge filled with activated charcoal attached to the cap. This filter allows the absorption of 98% of the solvent's vapours released by the solvent's can.



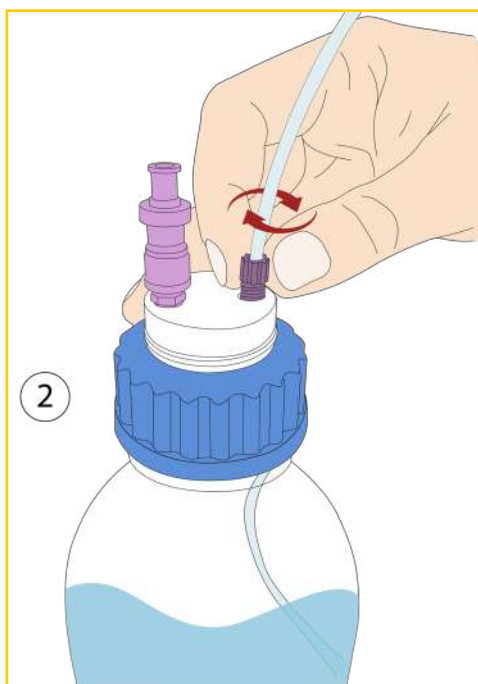
AIT France offers a diversified range of activated charcoal cartridge for the emission of eluent or solvent vapors; by special charcoal impregnation, the cartridges become an excellent barrier against concentrated acids or bases.
See page 26.

SMART HEALTHY CAPS

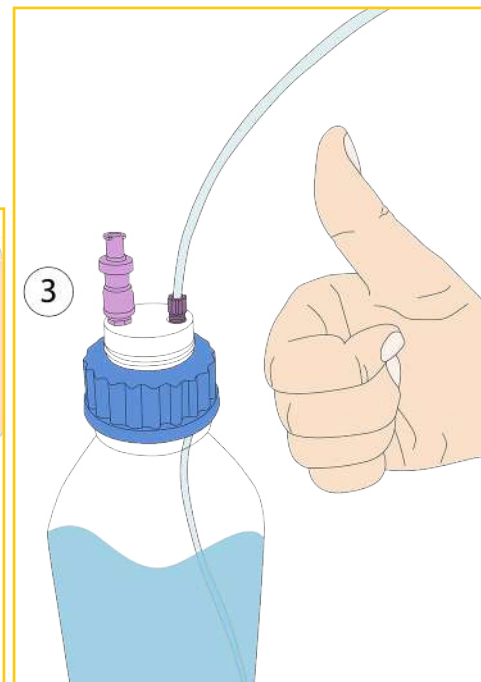
GUIDE FOR INSTALLING A SMART HEALTHY CAPS



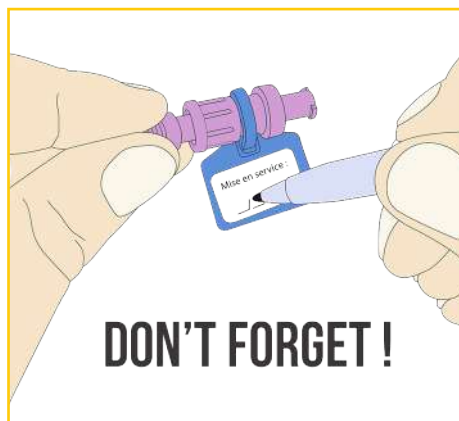
- Our Smart Healthy Caps are delivered with their pre-installed air check valves. However, if you need a valve that is resistant to polar solvent or amine derivatives vapors, simply unscrew the valve in place and then screw the new valve into its proper thread in the cap.



- Screw the universal capillary connector into its proper thread on your Smart Healthy Cap. (See our “Installing a universal capillary connector” guide on page 21 for more details)



- Installation completed!



...And do not forget to indicate the date of commissioning of your air check valve in order to be able to anticipate its renewal!



SMART HEALTHY CAPS

ANALYTICAL SYSTEM

GL45 THREAD TYPE WITH AIR CHECK VALVE

Smart Healthy Caps for GL45 or DURAN® types are the most widespread in laboratories. Smart Healthy Caps are delivered with their universal capillary connector (external diameter 1/8" to 1/16") and their air check valve.



DESCRIPTION	FOR TUBE (OD)*	REFERENCE
Smart healthy caps GL45, 1 outlet and 1 air check valve	1/8"	SHC-1
Smart healthy caps GL45, 2 outlets and 1 air check valve	1/8"	SHC-2
Smart healthy caps GL45, 3 outlets and 1 air check valve	1/8"	SHC-3
Smart healthy caps GL45, 4 outlets and 1 air check valve	1/8"	SHC-4
Smart healthy caps GL45, 5 outlets and 1 air check valve	1/8"	SHC-5



* For another diameter, precise it when you order it.

NEW : Choose the color of your caps, for exemple choose it according to the solvent in your bottle.



Add at the end of the reference the letter corresponding to the color you want. Caps are delivered in blue without any indications from you.
Exemple for a green cap : **SHC-1-G**

* Color Code

SMART HEALTHY CAPS

STARTER KIT FOR SMART HEALTHY CAPS

WITHOUT BOTTLES

These kits have everything you need to discover our products with attractive prices.



DESCRIPTION	FOR TUBE (OD)*	REFERENCE
4x Smart Healthy Caps GL45, 1 outlet & 1 air check valve	1/8"	KIT-SHC-1
4x Smart Healthy Caps GL45, 2 outlets & 1 air check valve & 4 plugs*	1/8"	KIT-SHC-2
4x Smart Healthy Caps GL45, 3 outlets & 1 air check valve & 8 plugs*	1/8"	KIT-SHC-3



Plugs are usefull if you need to block an outlet



SMART HEALTHY CAPS

STARTER KIT FOR SMART HEALTHY CAPS

WITH BOTTLES



DESCRIPTION	FOR TUBE (OD)*	REFERENCE
4x Clear glass bottles, 4x Smart Healthy Caps GL45, 2 outlets & 1 air check valve & 4 plugs*	1/8"	KITB-4SHC-2
5x Clear glass bottles, 5x Smart Healthy Caps GL45, 2 outlets & 1 air check valve & 5 plugs*	1/8"	KITB-5SHC-2



SMART HEALTHY CAPS

GL45 THREAD WITH STOPCOCK

GL45 Smart Healthy Caps with a stopcock offer more flexibility, without air bubbles inside the tubing.
Smart Healthy Caps are delivered with their fittings 1/8" (external diameter 3,2 mm).



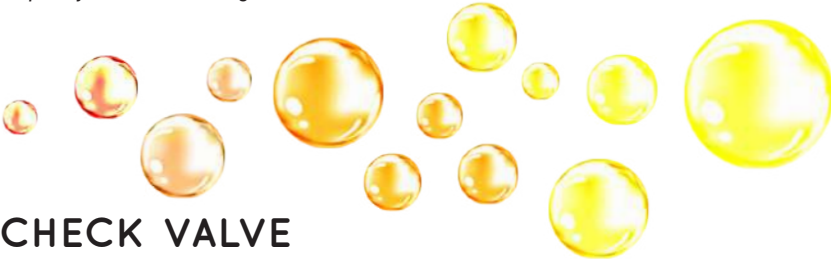
SHC-V1



SHC-V4

DESCRIPTION	FOR TUBE (OD)*	REFERENCE
Smart healthy caps GL45, 1 outlet with shut-off and 1 air check valve	1/8"	SHC-V1
Smart healthy caps GL45, 2 outlets with shut-off and 1 air check valve	1/8"	SHC-V2
Smart healthy caps GL45, 3 outlets with shut-off and 1 air check valve	1/8"	SHC-V3
Smart healthy caps GL45, 4 outlets with shut-off and 1 air check valve	1/8"	SHC-V4

**For another diameter, specify it when ordering.*



GROUND NECK WITH AIR CHECK VALVE

Smart Healthy Caps with ground neck 29/32 are made for ground-necked flasks. Smart Healthy Caps are delivered with their universal capillary connector (external diameter 1/8" to 1/16").



SHC-1-EM



SHC-2-EM



AD-45-EM**

***SHC-2 sold separately.*

SMART HEALTHY CAPS

GROUND NECK WITH AIR CHECK VALVE

DESCRIPTION	FOR TUBE (OD)*	REFERENCE
Smart healthy caps, ground neck (29/32 mm)	1 outlet (1/8"), 1 air check valve	SHC-1-EM
Smart healthy caps, ground neck (29/32 mm)	2 outlets (1/8"), 1 air check valve	SHC-2-EM
Smart healthy caps, ground neck (29/32 mm)	3 outlets (1/8"), 1 air check valve	SHC-3-EM
Smart healthy caps, ground neck (29/32 mm)	4 outlets (1/8"), 1 air check valve	SHC-4-EM

** For another diameter, precise it when you order it.*



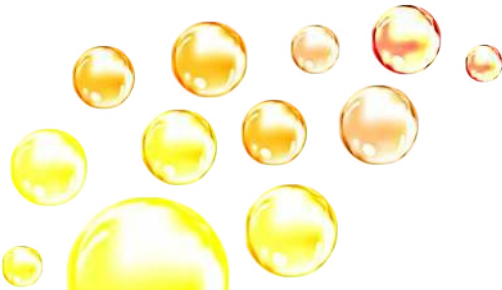
DISTRI SMART SAFE WITH A SMART HEALTHY CAP

DESCRIPTION	REFERENCE
Distri Smart Safe Adapter of 1 outlet (1/8" or 1/16") + 1 air check valve	SHC-1PV
Distri Smart Safe Adapter of 2 outlets (1/8" or 1/16") + 1 air check valve	SHC-2PV
Distri Smart Safe Adapter of 3 outlets (1/8" or 1/16") + 1 air check valve	SHC-3PV
Distri Smart Safe Adapter of 4 outlets (1/8" or 1/16") + 1 air check valve	SHC-4PV
Pipette 1 to 10 mL *	DIS 10
Pipette 2,5 to 25 mL *	DIS 25



A.I.T. is introducing a new variable volume system for eluent distribution which can be directly attached to your HPLC solvent bottle. It provides with the same benefits as the Smart Healthy Caps but with this additional feature. The neck is compatible with the DURAN® GL45 bottles.

** To obtain the same configuration as the picture above, choose a Distri Smart Safe Adapter and a pipette.*



SMART HEALTHY CAPS

ANALYTICAL SYSTEM

Smart Healthy Caps Septum offers you the possibility to introduce or withdraw a volume of solvent or reagent of your choice at any time.

DESCRIPTION	REFERENCE
Smart Healthy Caps GL45 1 septum*, 1 outlet (1/8" or 1/16") and 1 air check valve	SHC-1-SEPT
Smart Healthy Caps GL45 1 septum*, 2 outlets (1/8" or 1/16") and 1 air check valve	SHC-2-SEPT
Smart Healthy Caps GL45 1 septum*, 3 outlets (1/8" or 1/16") and 1 air check valve	SHC-3-SEPT

**The septum is delivered as standard, non-pierced*




SHC-2-SEPT

SMART HEALTHY CAPS

PREPARATIVE SYSTEM

SMART HEALTHY CAPS FOR GL45 SCHOTT®
OR DURAN® TYPE



 Warning : **Change** your air check valve **once a year**.



DESCRIPTION	REFERENCE
Smart Healthy Caps GL45 for preparative HPLC with 1 outlet (1/4") + 1 air check valve	SHC-P-A
Smart Healthy Caps GL45 for preparative HPLC with 2 outlets (1/4" and 1/8") + 1 air check valve	SHC-P-A-C
Smart Healthy Caps GL45 for preparative HPLC with 1 outlet (3/16") + 1 air check valve	SHC-P-B
Smart Healthy Caps GL45 for preparative HPLC with 2 outlets (3/16") + 1 air check valve	SHC-P-2B



SHC-P-A-C



SHC-P-A



SHC-P-B

**OTHER
CONFIGURATIONS
POSSIBLE ON
REQUEST!**

SMART HEALTHY CAPS

PREPARATIVE SYSTEM

SMART HEALTHY CAPS FOR DIN51/S55 AND DIN60/S60 THREADS

Specially adapted for large volumes of preparative HPLC eluents. The air check valve works with a flow rate from 100ml / min to 500ml / min.



DESCRIPTION *	REFERENCE
Smart Healthy Caps S55 for preparative HPLC with 1 outlet (1/4") + 1 air check valve	SHC55-P-A
Smart Healthy Caps S55 for preparative HPLC with 2 outlets (1/4" et 1/8") + 1 air check valve	SHC55-P-A-C
Smart Healthy Caps S55 for preparative HPLC with 1 outlet (3/16") + 1 air check valve	SHC55-P-B
Smart Healthy Caps S60 for preparative HPLC with 1 outlet (1/4") + 1 air check valve	SHC60-P-A
Smart Healthy Caps S60 for preparative HPLC with 2 outlets (1/4" et 1/8") + 1 air check valve	SHC60-P-A-C
Smart Healthy Caps S60 for preparative HPLC with 1 outlet (3/16") + 1 air check valve	SHC60-P-B

**also available with any type of thread (Nalgene, DIN90...)*



Create your own reference !

SHC55-P-2A-C

Cap for S55 thread

1 outlet 1/8"

2 outlets 1/4"

Outlets : A = 1/4", B = 3/16", C = 1/8", D = 5/16"

SMART HEALTHY CAPS

PREPARATIVE SYSTEM

SMART HEALTHY CAPS WITH FUNNEL FOR PREPARATIVE HPLC BOTTLE

This Smart Healthy Caps, equipped with a funnel with hinged lid, allows to pour the eluent into the bottle without having to unscrew the cap. It is equipped with an air check valve.



SHC45-FSP-B

DESCRIPTION

THREAD

REFERENCE

Funnel with hinged lid for solvent reservoir with one outlet of 4 mm (3/16") and one air check valve

GL45

SHC45-FSP-B

S55

SHC55-FSP-B

S60

SHC60-FSP-B

NALGENE® B53

SHCB53-FSP-B

Metallic barrel

SHCBA-FSP-B

Funnel with hinged lid for solvent reservoir with one outlet of 6.4 mm (1/4") and one air check valve

GL45

SHC45-FSP-A

S55

SHC55-FSP-A

S60

SHC60-FSP-A

NALGENE® B53

SHCB53-FSP-A

Metallic barrel

SHCBA-FSP-A

Funnel with hinged lid for solvent reservoir with one outlet of 3.2 mm (1/8") and one air check valve

GL45

SHC45-FSP-C

S55

SHC55-FSP-C

S60

SHC60-FSP-C

NALGENE® B53

SHCB53-FSP-C

Metallic barrel

SHCBA-FSP-C

Create your own reference !

SHC55 - FSP - B

Thread type

Tube outer diameter

Outlets : A = 1/4", B = 3/16", C = 1/8"

SMART HEALTHY CAPS

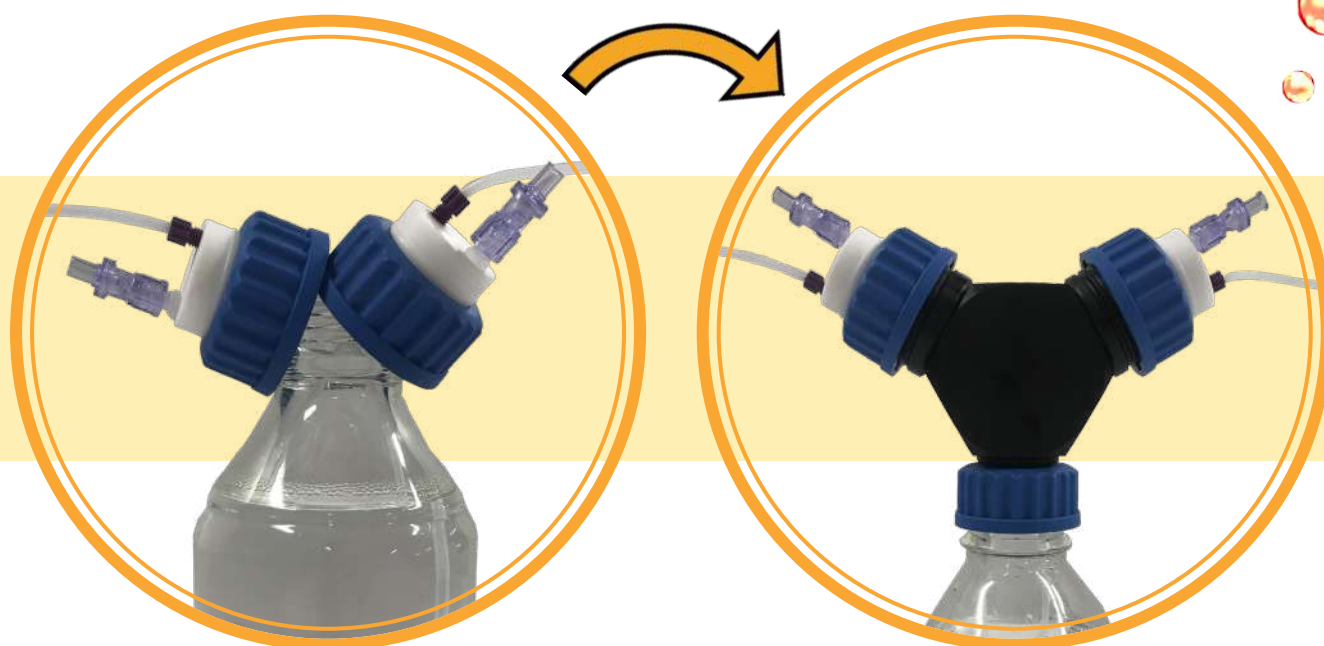
ADAPTERS WITH MULTIPLE WAYS

MULTI-WAYS ADAPTER ALLOWING TO CONNECT A BOTTLE WITH A **GL45** THREAD TO 2 & 4 **GL45** SAFETY CAPS*

The multi-ways adapter allows several channels to be purged in the eluent bottle while remaining airtight.

BEFORE...

AFTER!



AD-2T-GL45
2 heads for bottle GL45



AD-4T-GL45
4 heads for bottle GL45



AD-4T-GL80-GL45
4 heads for bottle GL80

* Also available for other threads of bottles and cans

SMART HEALTHY CAPS

ADAPTERS

OPERATING PRINCIPLE

We can supply you with all types of adapters not described in the catalog.
Do not hesitate to ask us!



32 mm

GL32 bottle
Measures 32 mm for
external threads.



38 mm

GL38 bottle
Measures 38 mm for
external threads.



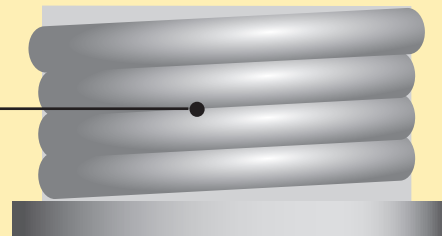
45 mm

GL45 bottle
Measures 45 mm for
external threads.

Smart Healthy Caps GL45



Adapter



Thread



SMART HEALTHY CAPS

CLASSIC ADAPTERS

To connect a GL45 cap on a bottle with a different thread.

THREAD*	TO**	MATERIAL	REFERENCE
GL40	GL45	PTFE	AD-40-45-T
GL40	GL45	PP	AD-40-45-P
GL32	GL45	PTFE	AD-32-45-T
GL32	GL45	PP	AD-32-45-P
GL38	GL45	PTFE	AD-38-45-T
GL38	GL45	PP	AD-38-45-P

PTFE : Teflon.

PP : Polypropylene.

* Bottle thread

** Cap's Thread : Smart Healthy Caps.



AD-40-38-P



AD-38-45-T



AD-40-45-P



SPECIAL MANUFACTURING AT THE REQUEST OF ANY CAP OR ACCESSORY ACCORDING TO YOUR OWN SPECIFICATIONS : FROM A SINGLE TO NUMEROUS PIECES!

SMART HEALTHY CAPS

BOTTLES

DURAN® GL45 BOTTLE

A complete range of solvent bottles perfectly adapted for GL45 Smart Healthy Caps.

VOLUME (mL)	GLASS	REFERENCE
250	Clear	GL250-C
250	Amber	GL250-A
500	Clear	GL500-C
500	Amber	GL500-A
1000	Clear	GL1000-C
1000	Amber	GL1000-A
2000	Clear	GL2000-C
2000	Amber	GL2000-A
5000	Clear	GL5000-C
5000	Amber	GL5000-A

GL250-C



GL2000-C



GL1000-C



GL500-C



SMART HEALTHY CAPS

ACCESSORIES : AIR CHECK VALVES

All our Smart Healthy Caps are equipped with a standard air check valve.

For optimal use, it is recommended to **change the air check valve once a year!**

STANDARD AIR CHECK VALVE

For organo-aqueous eluents.

Weak and strong acidic eluents.

Non-amino basic eluents.

Polar & apolar eluents.

Maximum recommended flow: 100mL / min

REFERENCE	QTY
SHC-SV	1
SHC-SV10	10
SHC-SV50	50



SHC-SV-PREP

AIR CHECK VALVE FOR PREPARATIVE HPLC

Same characteristics as the standard air check valve but for HPLC systems with very high flow rates (>100mL / min and <500mL / min).

AIR CHECK VALVE RESISTANT TO HIGH CONTENT OF AMINO BASES

Same characteristics as the standard air check valve, but essential for the use of eluents containing bases with high pKa (triethylamine) or high concentrations (ammonia).

REFERENCE	QTY
SHC-SV-AB	1
SHC-SV-AB10	10
SHC-SV-AB50	50

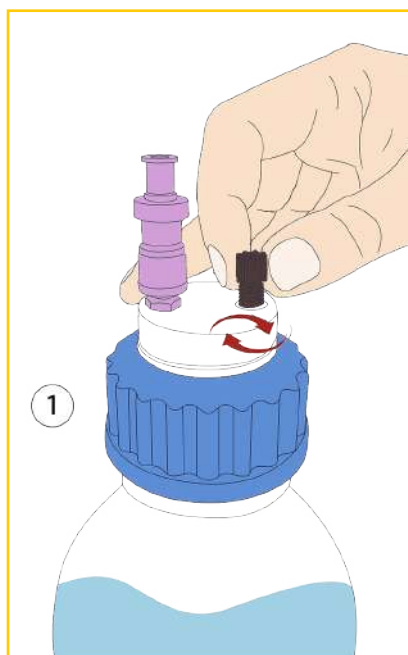


SMART HEALTHY CAPS

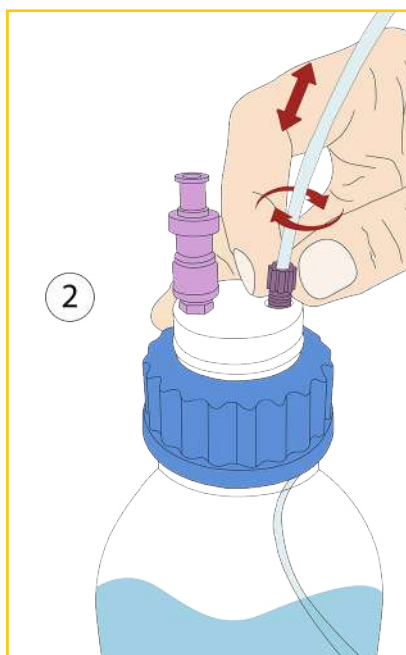
ACCESSORIES : UNIVERSAL CAPILLARY CONNECTORS

- Facilitates the connection of capillary tubes from 1 mm to 3,2 mm (1/8")
- The universal capillary connector replaces the entire fitting + ferrule 1/8" and 1/16"
- The universal capillary connector ensures excellent sealing

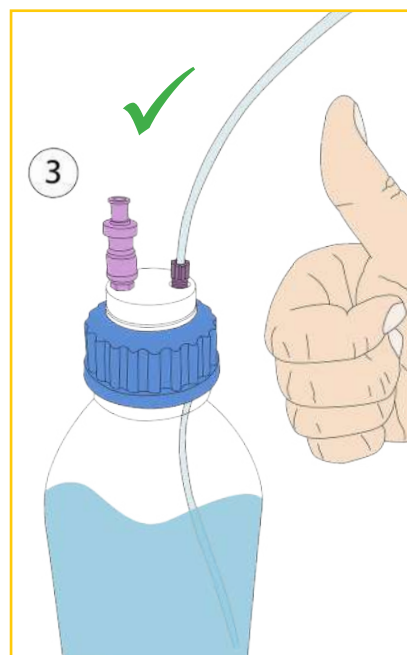
GUIDE FOR UNIVERSAL CAPILLARY CONNECTOR CHANGE:



- Insert the universal capillary connector into its proper thread, without fully tightening it.



- Insert your tube into the universal capillary connector, adjust its length and then screw the fitting until the tube stops moving.



- Installation completed!

DESCRIPTION	FOR TUBE (OD)	COLOR	QTY/PK	REFERENCE
Universal capillary connector, Type I Black	for 1/16" to 1mm	Black	5	CC-ONE-1BL
Universal capillary connector, Type I Purple	for 1/16" to 1mm	Purple	5	CC-ONE-1V
Universal capillary connector, Type II Black	for 1/8" to 1/16"	Black	5	CC-ONE-2BL
Universal capillary connector, Type II Purple	for 1/8" to 1/16"	Purple	5	CC-ONE-2V

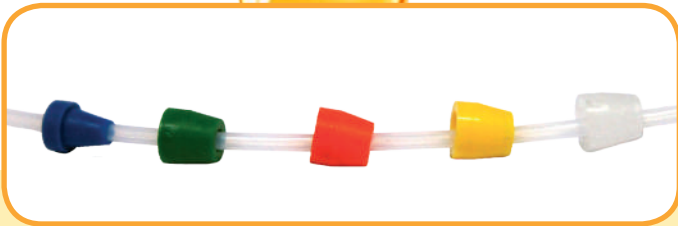


SMART HEALTHY CAPS

ACCESSORIES

NUTS AND FERRULES FOR 1/8" AND 1/16"

Ferrules 1/8", ref : F18. Flangefree fitting for ferrule 1/8" OD.
Ferrules 1/16", ref : F16. Flangefree fitting for ferrule 1/16" OD.



** Please join to the reference the color you want.
For example : R18-N for black nuts.*

Red : R
Blue: B
Green: G
Purple: P
Black: N

TUBE (OD)		REFERENCE NUTS PER 10 UNITS *	REFERENCE FERRULES PER 10 UNITS
INCH	MILLIMETER		
1/4"	6,3 mm	R14	F14
3/16"	4 mm	R316	F316
1/8"	3,2 mm	R18	F18
	2,5 mm	R18	F25
1/16"	1,6 mm	R16	F16
	1,0 mm	R16	F10

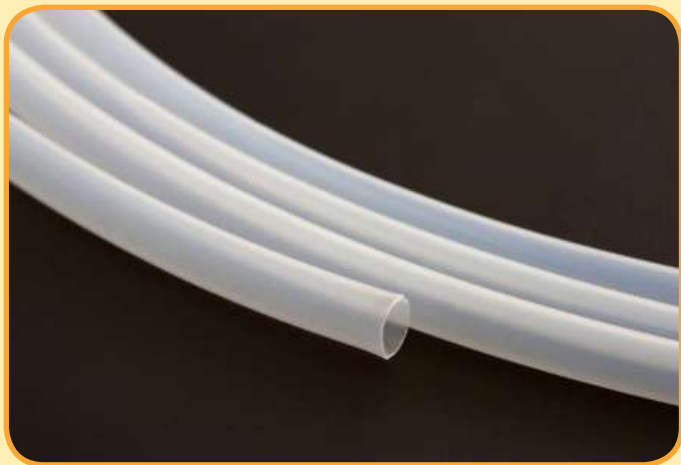
BLIND PLUG, ALLOWING YOU TO CLOSE AN UNUSED OUTLET OF YOUR SMART HEALTHY CAPS

FOR	REFERENCE	QUANTITY
Vis 1/8"-1/16"	VP-F18	Par 10



SMART HEALTHY CAPS

PTFE TUBES



OD	ID	REFERENCE *	QUANTITY
1/4"	6,3 mm	TP14	1 meter
3/16"	3 mm	TP316	1 meter
1/8"	1,6 mm	TP18	1 meter
1/16"	1,0 mm	TP16	1 meter

TYGON™ TUBES

OD	ID	REFERENCE *	QUANTITY
9,5 mm	6,4 mm	TYG-64	1 meter
19,1 mm	12,7 mm	TYG-127	1 meter



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