

Sample Concentration by Solvent Evaporation

Interchim Solutions



puriFlash[®] XS-Vap

Gas blowdown evaporator



Located at Montluçon
Interchim Headquarter (France)

High quality control monitoring



PURIFLASH XS-VAP INTERCHIM - COMPLIANCE REPORT

FEATURE INFORMATIONS			
Doc. Revision Date:	19/06/2021	Date Testé:	19/06/2021
Puriflash VAP Serial Number:	PP-05TAP-0236	Value:	220V
Puriflash VAP Part Number:	0236	Operator Name:	Benjamin Planouze
Formaire Year:	0	Software Year:	01/06/2017

LID VALIDATION			
Value	Unit	Validation	Validation range
Switch on	-	VALID	ventilation ON, both light: blue
Press down the manifold up to 70	-	VALID	sample partition open to level 70
Press up the manifold up to 8	-	VALID	sample partition up to level 80

GAS VALIDATION			
Substrates: 3bar			
Set pressure: 0,1MPa(1bar)			
Value	Unit	Validation	Validation range
Value 1:	13 LPM	VALID	10LPM -flange- >20LPM
Value 2:	13 LPM	VALID	10LPM -flange- >20LPM
Value 3:	14 LPM	VALID	10LPM -flange- >20LPM
Value 4:	13 LPM	VALID	10LPM -flange- >20LPM
Value 5:	13 LPM	VALID	10LPM -flange- >20LPM
Value 6:	14 LPM	VALID	10LPM -flange- >20LPM
Standard Deviation:	0,5 LPM	VALID	Standard deviation: 0,5 LPM
Average:	13,3 LPM	VALID	10LPM -flange- >20LPM
RSD:	3,7 %	VALID	RSD: 3

EVAPORATION PROCESS VALIDATION			
Value	Unit	Validation	Validation range
Maximal of 2 indicator	-	VALID	start evaporation: both light (blue / End Evaporation (1-2 indicator): both light: green
Gas valve closed / end of evaporation	-	VALID	stop supply valve: when ethically closed after 2 indicator

BATH VALIDATION			
Value	Unit	Validation	Validation range
Tightness:	-	VALID	no water leakage
Max / Min Level Detector:	-	VALID	water level between Minimum and maximum level: both light: blue
Switch on/off light:	-	VALID	switch on: light: both
Heating resistor:	-	VALID	both light: blue in blue
Heating speed:	10 °/MIN	VALID	time to reach a bathing value at 40°C: 10 indicator



BATH TEMPERATURE			
Time	Bath Temperature		
0	21		
10	40		
13,5	40,7		
14	41,2		
14,5	41		
15	40,9		
15,5	40,8		
16	40,7		
16,5	40,6		
17	40,5		
17,5	40,4		
18	40,3		

STANDARD DEVIATION			
Standard Deviation (°C)	0,34 °C	VALID	Standard deviation: 1°C
Average temp. (°C)	40,6 °C	VALID	39° - average: 40°C
RSD Value:	0,82 %	VALID	RSD: 2%
Drain bath:	45 Seconds	VALID	time to drain 90% of the water: both light: green
Minimum Level Detector:	-	VALID	water level: Minimum level: both light: blue: red and blue: water stopped



Certified by an accredited company

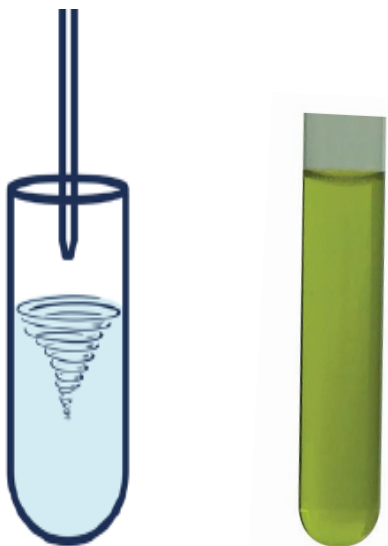


IEC  IEC		Reg. Cert. No. FR-420117
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME		
CB TEST CERTIFICATE		
Product	Evaporator	
Name and address of the applicant	INTERCHIM INSTRUMENTS 2 RUE FRANCOIS TANGUY PRIGENT 56890 SAINT AVE France	
Name and address of the manufacturer	INTERCHIM INSTRUMENTS 6 Rue du commerce, ZA Porte Val de Char, Pont des Neiges 03410 Saint Victor France	
Name and address of the factory	Name and address of the factory <input type="checkbox"/> Additional information on page 2 INTERCHIM INSTRUMENTS 6 Rue du commerce, ZA Porte Val de Char, Pont des Neiges 03410 Saint Victor France	
Notes: When more than one factory, please report on page 2		
Rating and principal characteristics	100-120Vac, 50-60Hz, 2000W / T20A H 250V for US version 220-240Vac, 50-60Hz, 2000W / T20A H 250V for EU version.	
Trademark (if any)	INTERCHIM	
Customer's Testing Facility (CTF) Stage used		
Model / Type Ref.	purFlash XS-Vap (US version) purFlash XS-Vap (EU version)	
Additional information (if necessary may also be reported on page 2)	<input type="checkbox"/> Additional information on page 2	
A sample of the product was tested and found to be in conformity with:	IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016, IEC 61010-2-010:2014	
As shown in the Test Report Ref. No. which forms part of this Certificate	National differences: EU Group Differences, CA, CH, GB, JP, US RSE EMMUL21-F700-INT-1-A & RSE EMMUL21-F700-INT-2-A	
This CB Test Certificate is issued by the National Certification Body		
EMITECH SAS 15 rue de la Cloie, ZI Angers Beaumont, FR-49070 Beaumont, France		
Date: 2022-03-17		Signature: Pascal Bonenfant page 1 of 1



> Step 1

Target : remove all the solvent or keep few μL
Concentrate the solvent to increase the LC/GC
detection



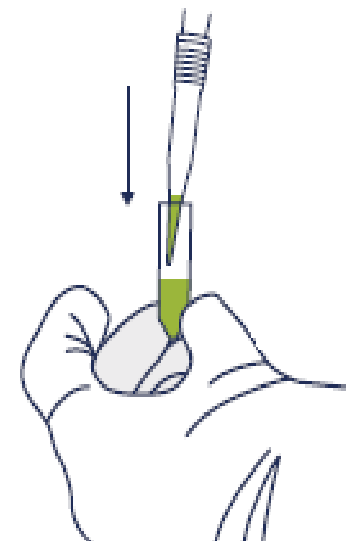
> Step 2

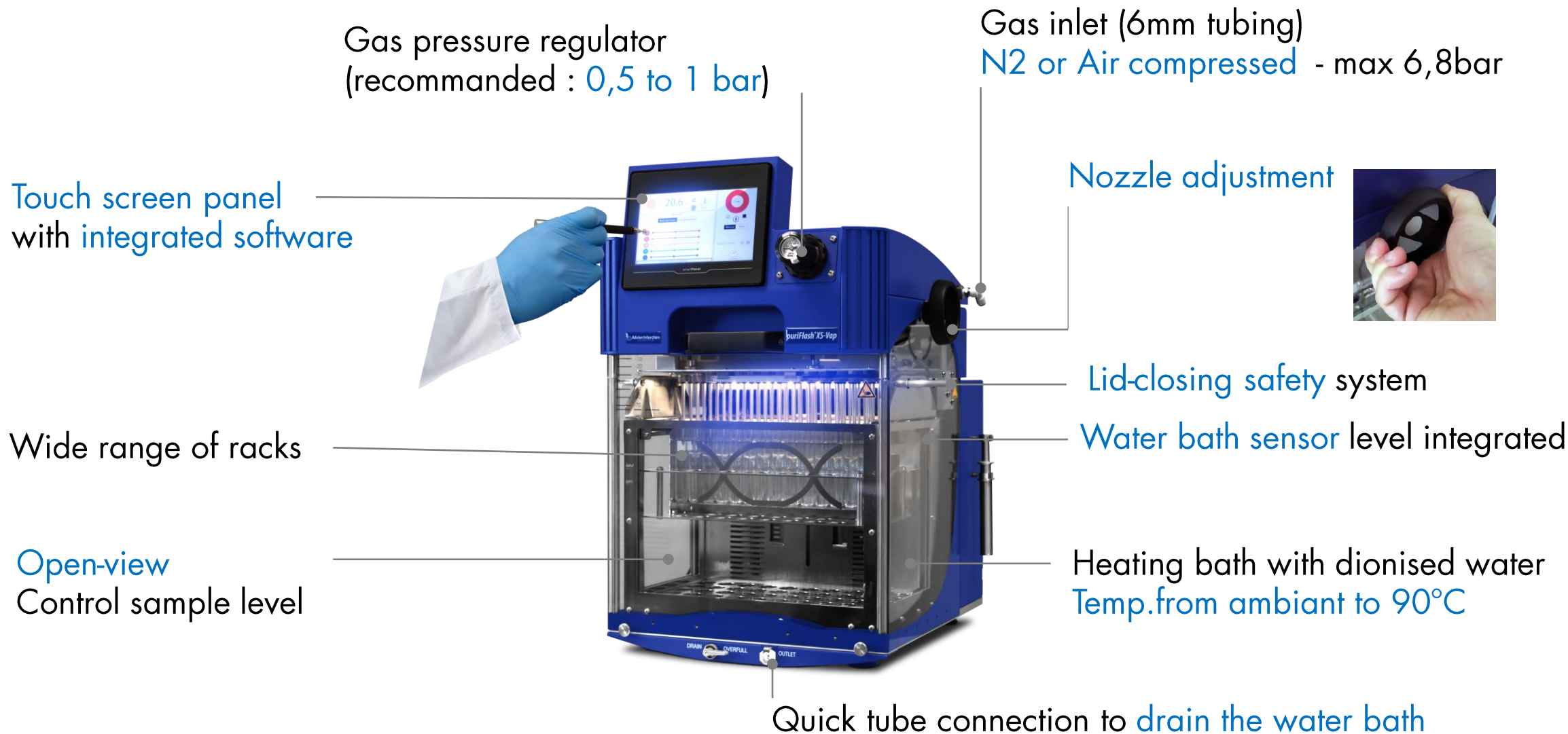
The solvent is evaporated
Sample residue



> Step 3

The residue is reconstituted with a
solvent for final injection by GC or LC
Improved detection level





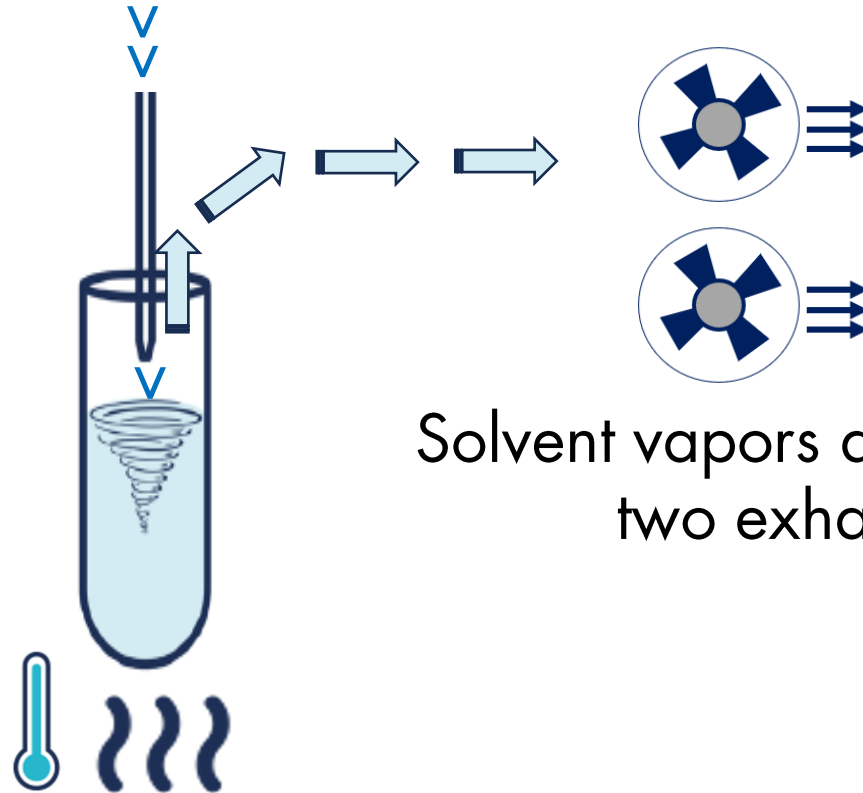
Gas flowrate
(N2 or Air compressed ; <math>< 1\text{ L/min}</math> per nozzle)



No cross contamination
Approval & tested
by users & our partner



Compatible for PFAS analysis



Solvent vapors are removed by
two exhaust fans

Water heats the sample tube



- ✓ Ensures perfect **Reproducibility & Efficiency**



- Quick control of the solvent level during the evaporation
- Makes easy the nozzle position inside the tube
- Different lights indicate the evaporation step



★ Wait



>>

★ Start



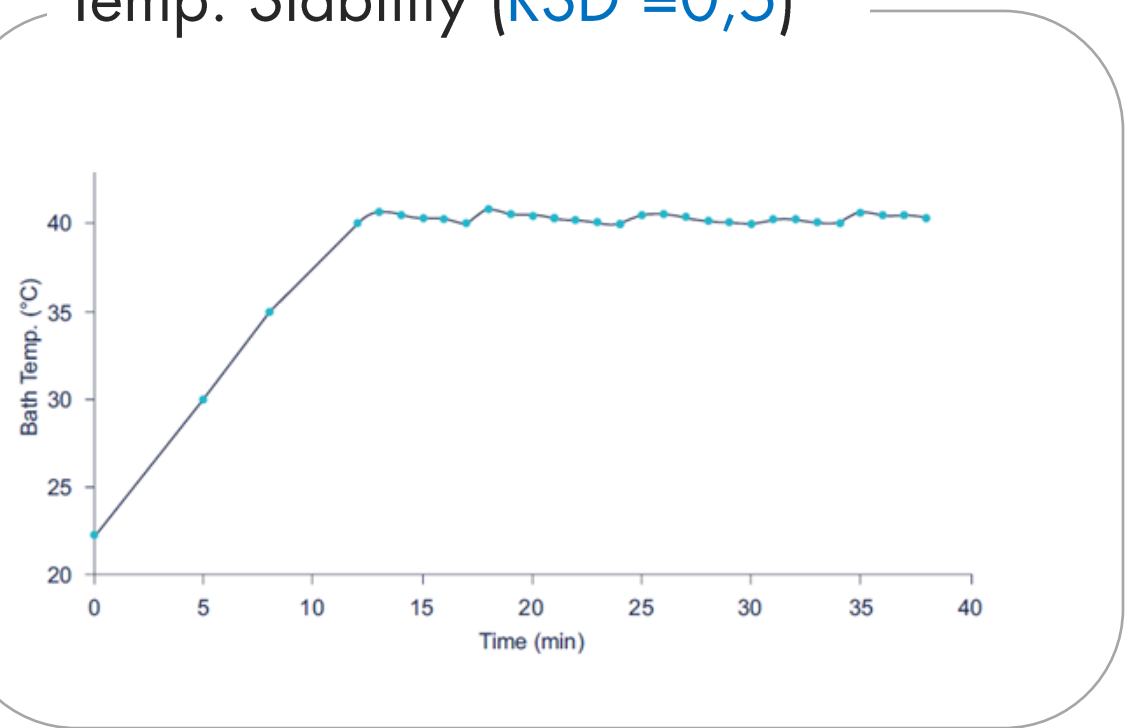
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★ End

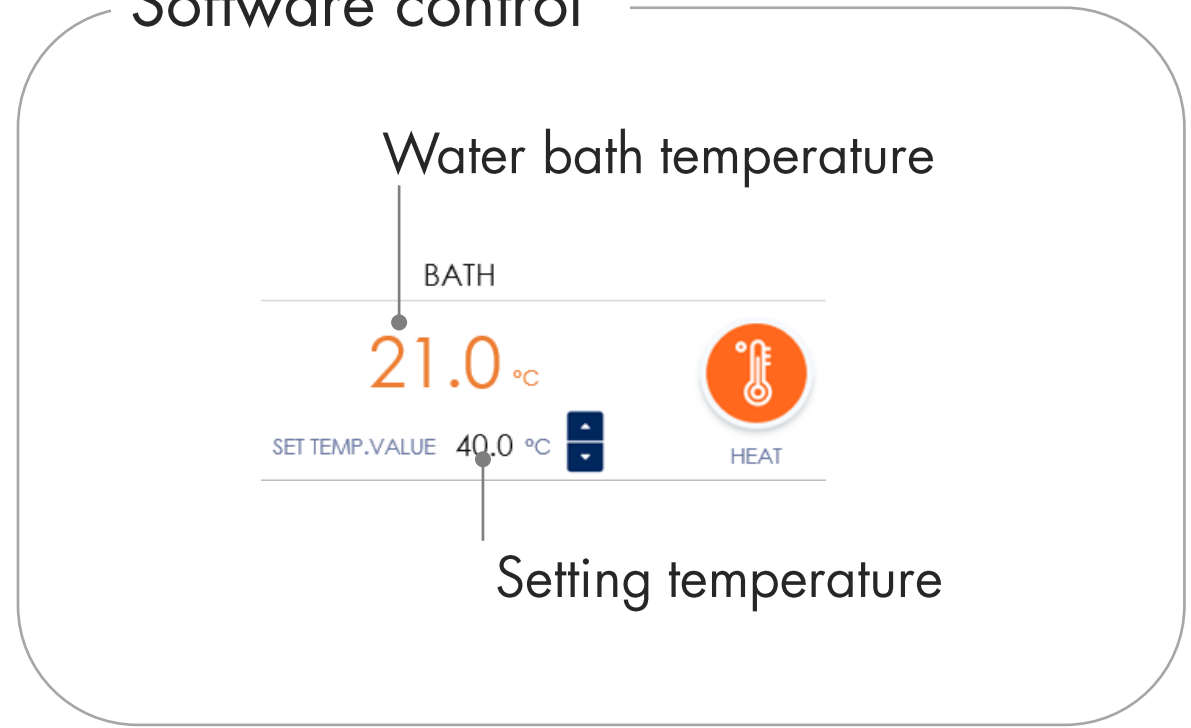


Temperature bath controled by a calibrated probe
~ 10 minutes to reach 40°C

Temp. Stability (RSD = 0,5)



Software control



Reduce gas consumption up to ~50%
Time-Saving up to 40% to evaporate your samples

Step 1

Set the pressure
Start your evaporation



>

Step 2

Move down manually the nozzle
Efficient Evaporation Rate
Gas consumption decreases



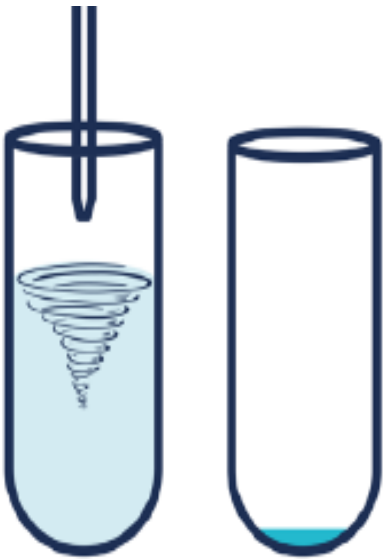
>

Step 3

Evaporation finished



Gas flowrate <math>< 1\text{L}/\text{min}</math> per position (nitrogen)



Number sample evaporated : 56

Gas Pressure regulated : 1 bar

Total Gas Consumption : $40\text{L}/\text{min}$ -> $0,7\text{L}/\text{min}$ (per nozzle)

Evaporation from 10mL up to complete dry
16x100mm tubes - Temp.Bath : 40°C - Under N2 gas @1 bar

Ethyl acetate
-> 17min*

Acetonitrile
-> 30min*

Hexane
-> 9min*

Ethanol
-> 40min*

Methanol
-> 28min*

* : evaporation time to complete dry



“Hello,

As discussed this morning, here is a summary of our remarks.

- Advantages with XS-Vap

Needles that go down into the tubes and save time on evaporation.

Gain observed on a method in dev:

1h30 (XS-Vap) against 4h on our apparatus (80/20 ACN/H₂O).

Other tests launched:

10 mL of ME₂OH evaporated in 30 min (XS-Vap) while there was still 5mL to evaporate on our evaporator

10mL of acetonitrile evaporated in 45min (XS-Vap) while there was still 5mL to evaporate on our evaporator

- Gas savings

Practical light colors to see the steps (preheating, end of cycle...)

Homogenization of the evaporation time when we evaporate different volumes all at the same

Agri-food R&D Project Manager – Laboratory based in France”



Thanks to our puriFlash XS-Vap for a volume of 10mL solvent evaporated
Evaporation **time-saving by 50%**

	Competitor	puriFlash XS-Vap	
	Customer results	Interchim Evaporation rate table	Customer results
Methanol Bath Temp.: 35°C	After 30min Remain 5 mL in tube	29 min Complete dry	✓ 30 minutes Complete dry
Acetonitrile Bath Temp.: 35°C	After 45min Remain 5 mL in tube	40 min Complete dry	✓ 45 min Complete dry
ACN/Water 80/20 Bath Temp.: 45°C	4h Complete dry	ACN/Water 70/30 1h10 min Complete dry	✓ 1h30 Complete Dry



> From 1 mL up to 250mL per position

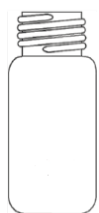
Up to 90 samples
Test tubes & vials



Up to 6 samples
250mL glasswares



2mL
12x32mm



2mL
eppendorf



4mL
15x45mm



8mL
17x60mm



Up to 150mm height tube - 12,13,16 &18mm OD
Up to 25mL



> Up to 250mL

Dry end-point



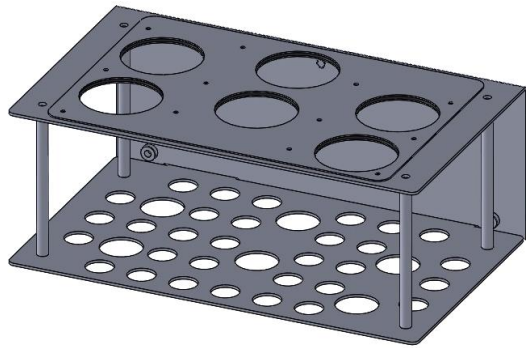
Main application :
Extraction of fats in food

1 mL end-point (option)

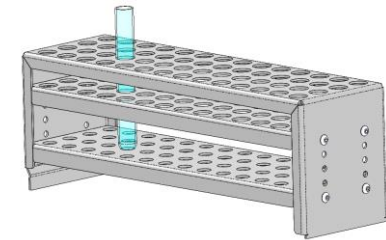
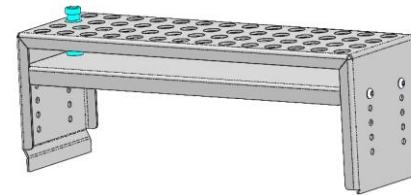


Main application :
Pesticide analysis

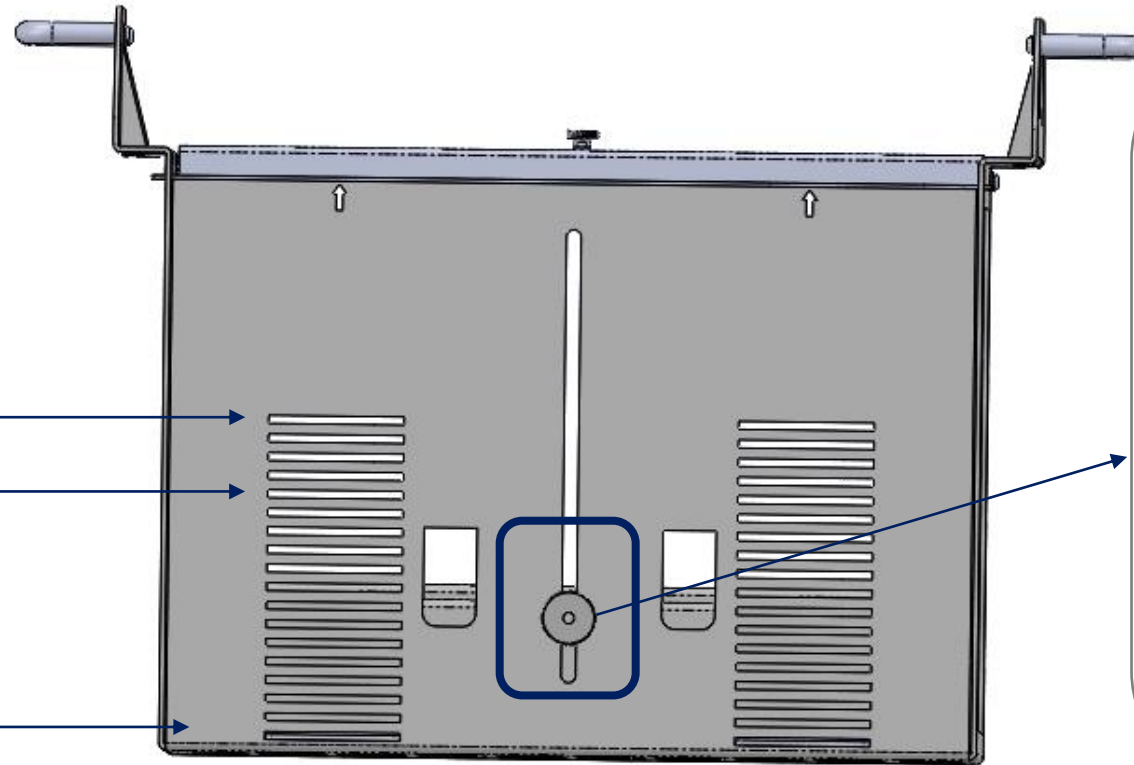
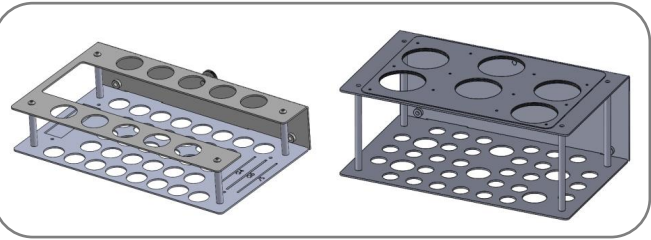
> 6 positions



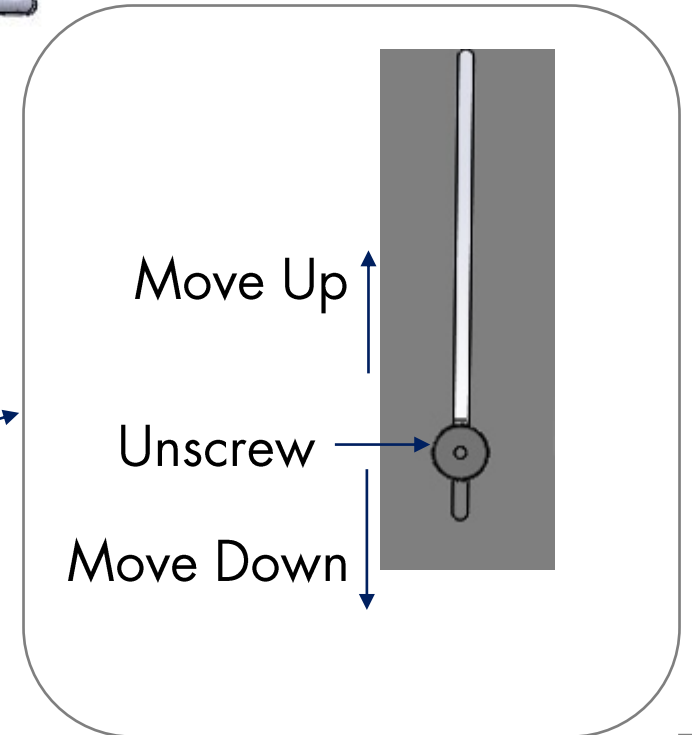
> Up 90 positions



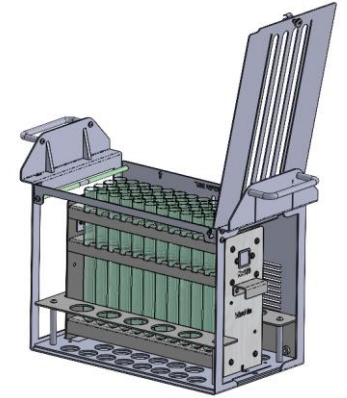
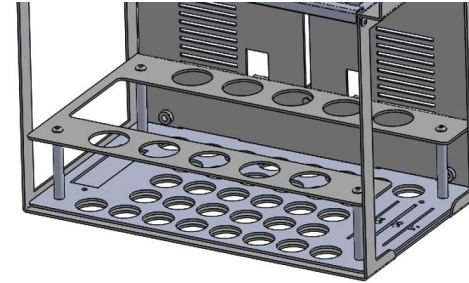
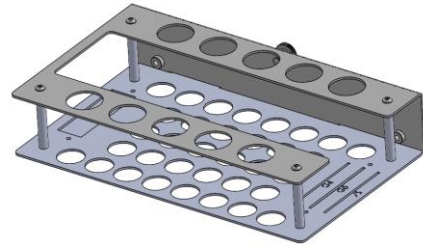
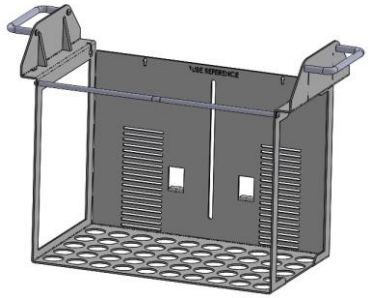
The basket allows to set up the rack position according to the height of sample tubes



2mL vials →
100mm - test tube →
150mm - test tube →

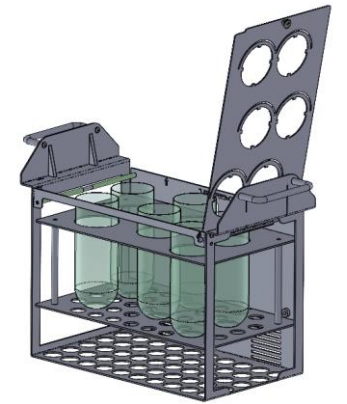
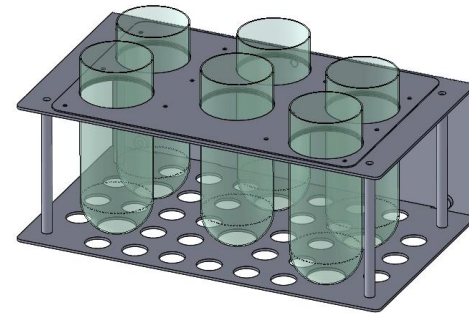
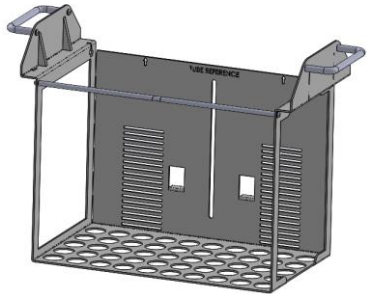


For vials & test tubes



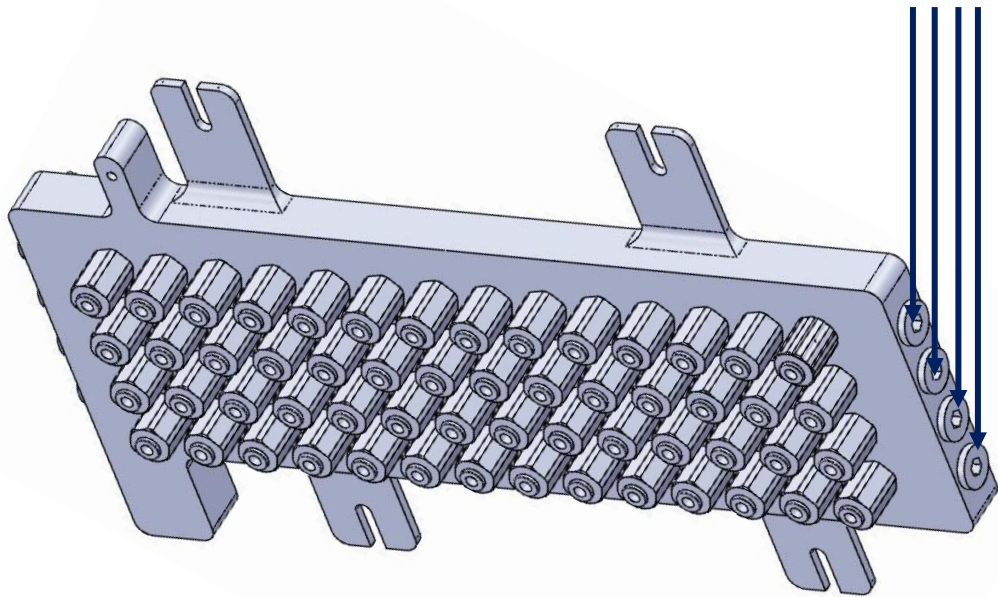
P/N : EVAA10

For 250 glasswares



P/N : EVAB90

Individual gas rows



P/N : EVAA20

Quick connection
with color codes

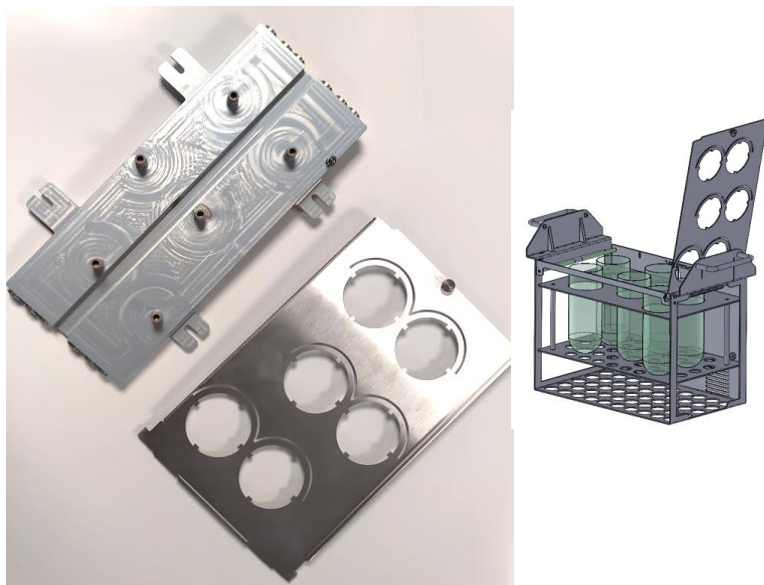


Same color codes
on software



Manifold 6 positions

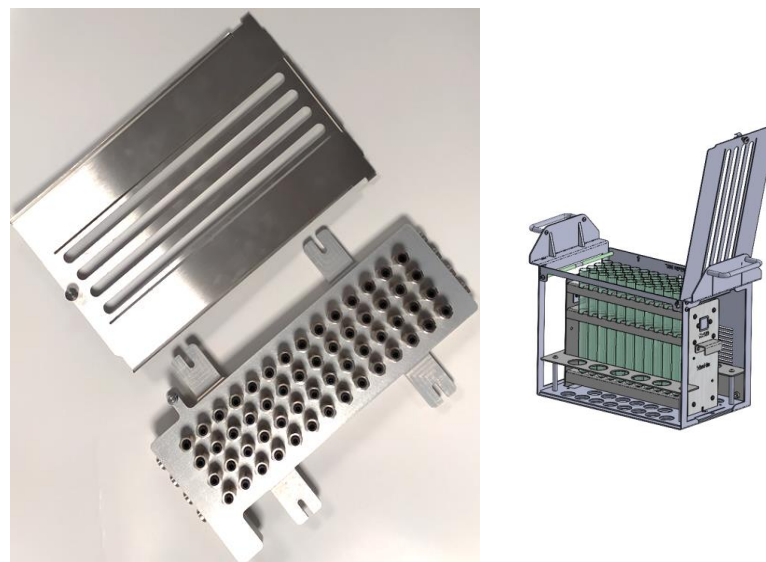
For 250mL glasswares



P/N : EVAA40

Manifold 56 positions

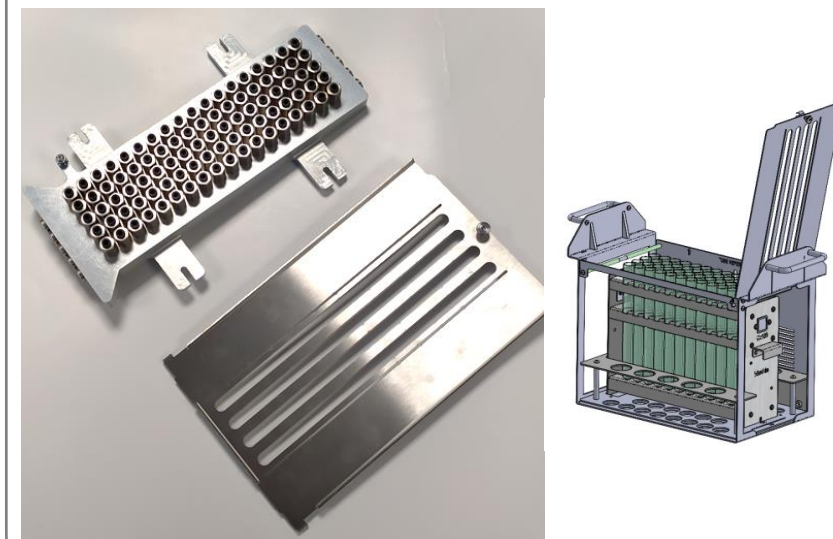
For test tubes & vials
12,13, 16, 18mm OD



P/N : EVAA20

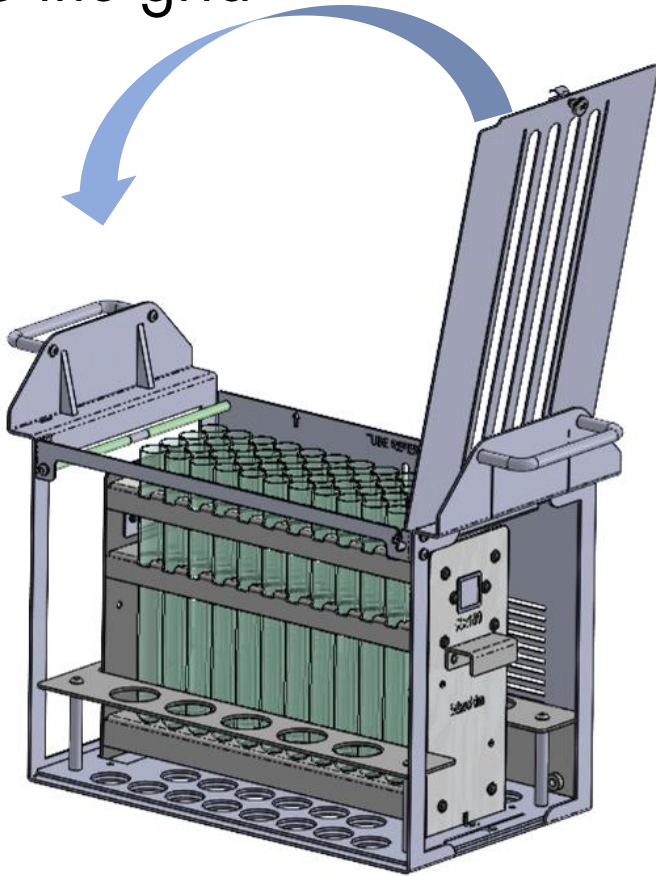
Manifold 90 positions

For test tubes
13mm OD

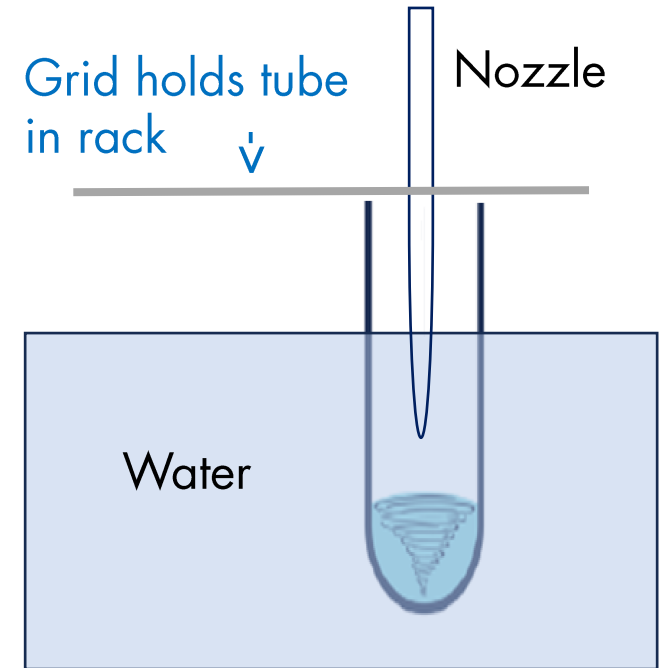
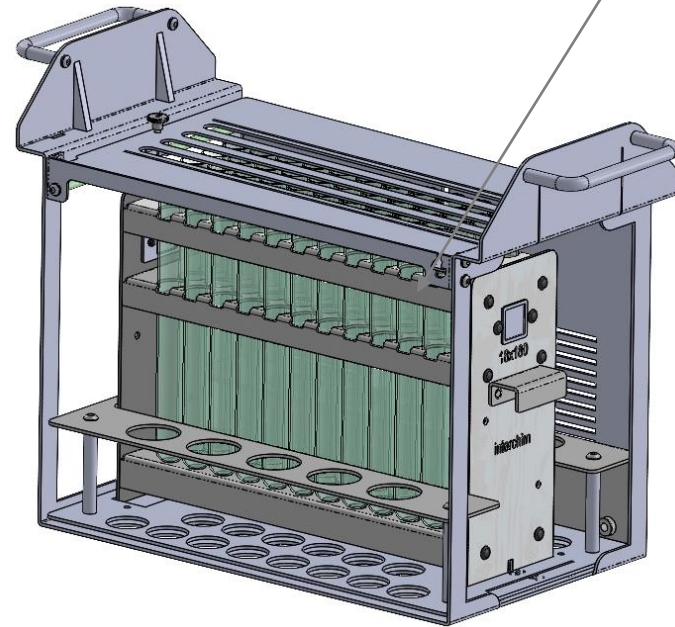


P/N : EVAA30

Close the grid



V



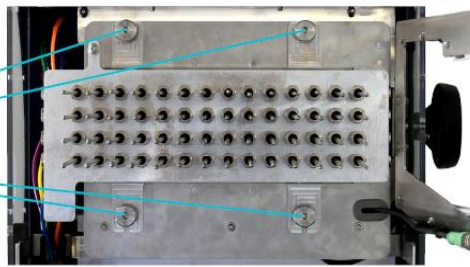
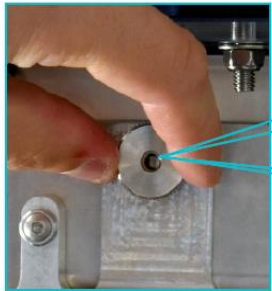
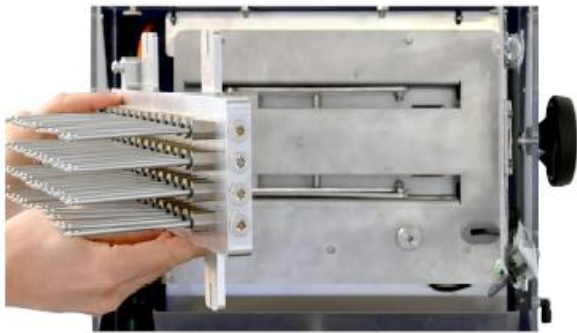
Remove your Sample Tubes

Handle ->



<1 minute

1- Set up
the manifold head



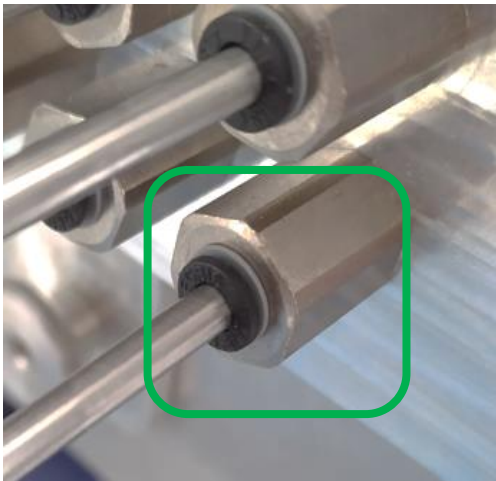
2- Connect the
gas lines



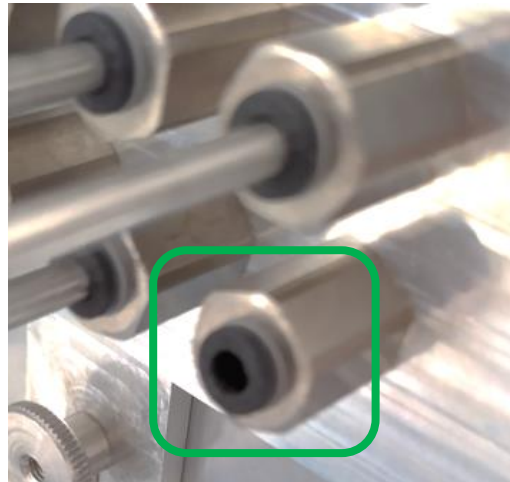
3- System
ready !



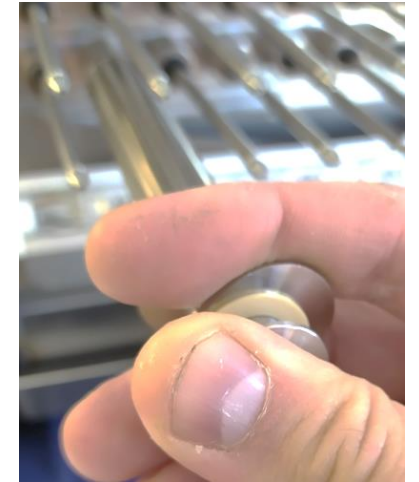
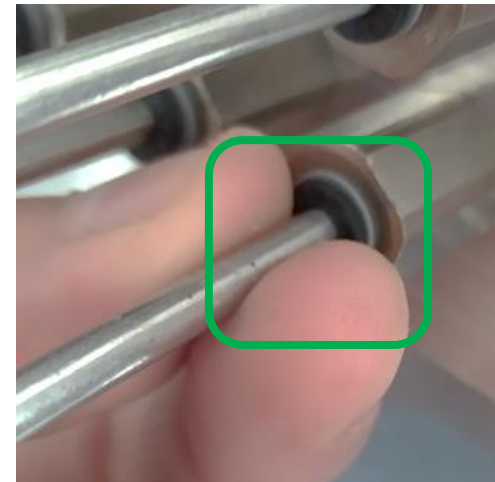
Connected
Nozzle is supplied
with gas



Disconnected
Position is closed



Manual connection or
special tool to connect the
nozzle



P/N : EVAA60

Nozzle Stainless steel - 316L

P/N : EVAA50



puriFlash Gen4 & XS



puriFlash Gen5



puriFlash® XS-Vap compatible with racks :

PF-XS520, PF-XS535, PF5020, PF5050, PF5125, PF5250, PF5250P, PF215 , PF430, PF450 , PF4125, PF425

Software Integrated in Touch Screen

BATH

LIGHT 21.0 °C HEAT

SET TEMP. VALUE 40.0 °C

NOZZLES

Rack test tubes Rack glasswares

5 4 3 2 1

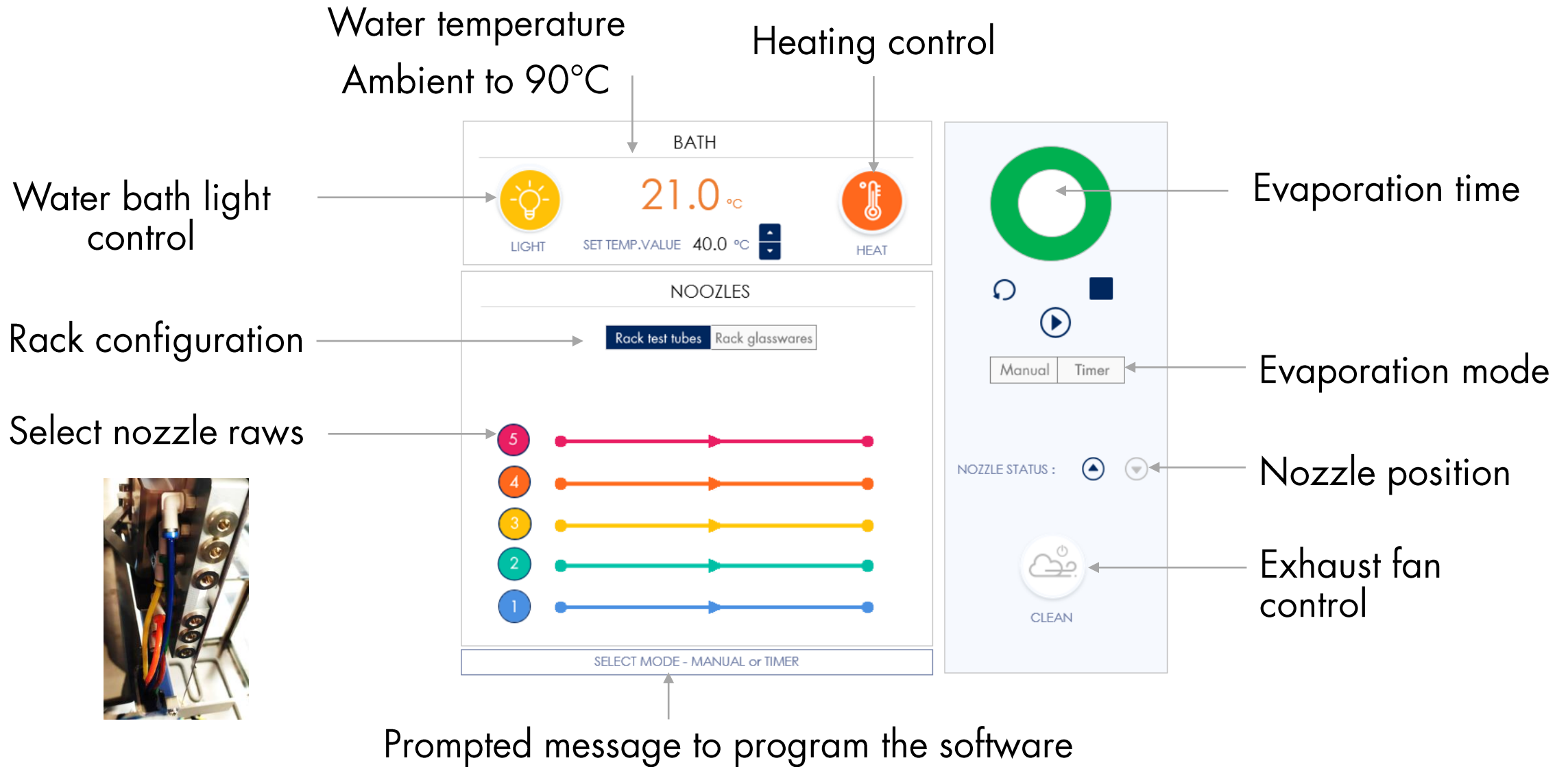
SELECT MODE - MANUAL or TIMER

Manual Timer

NOZZLE STATUS :

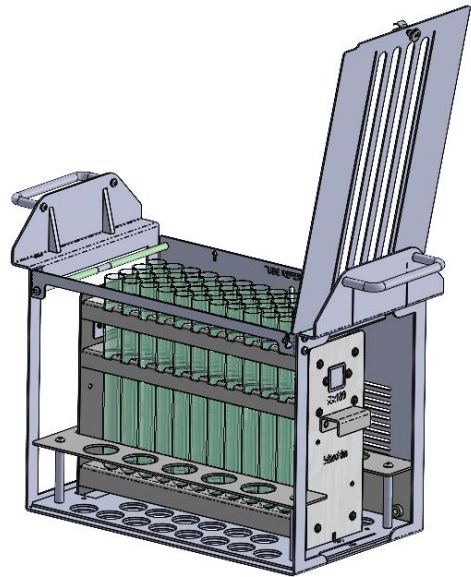
CLEAN





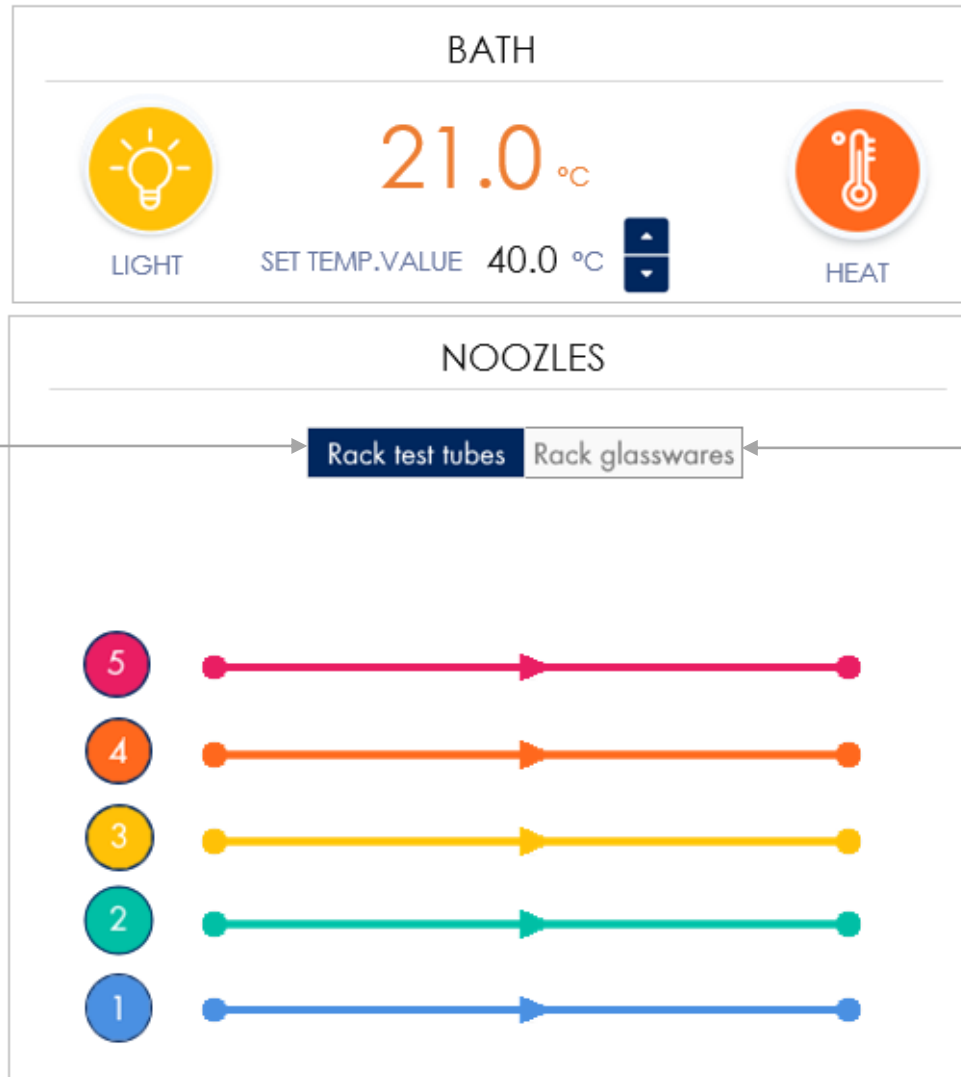
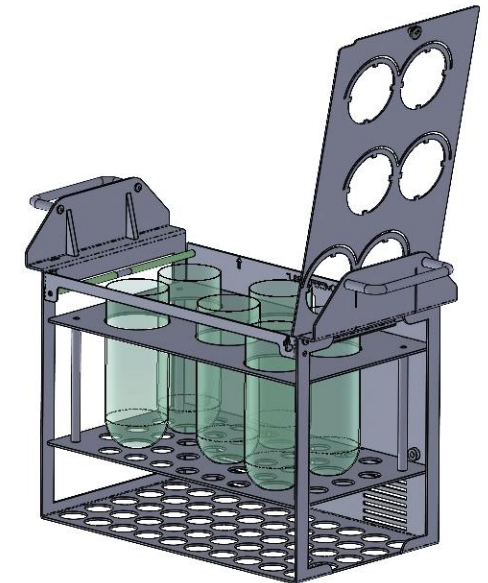
Rack test tubes

For vials & test tubes



Rack glasswares

For 6 glasswares 250mL



Choose your accessories according to your needs

For vials & test tubes

Manifold head

P/N : EVAA20



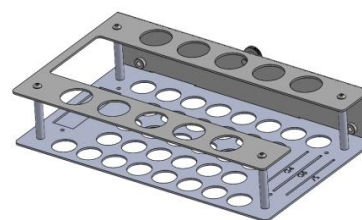
Nozzles

P/N : EVAA50

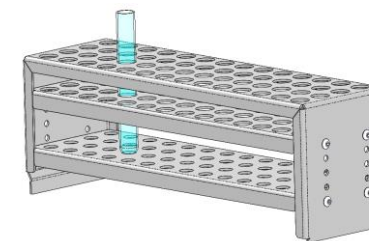


Adapter

P/N : EVAA10



Racks



For 250mL glassware

Manifold head

P/N : EVAA40



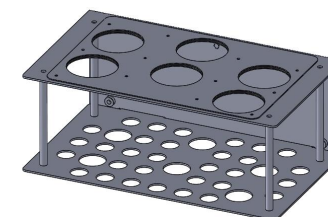
Glassware

P/N : B684D0 or BVLGH0



Racks

P/N : EVAB20

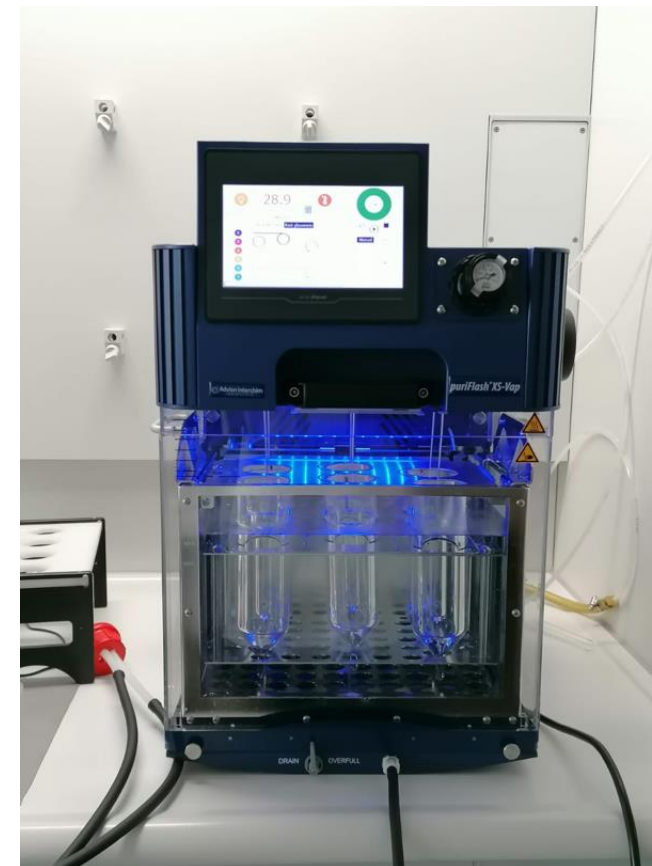


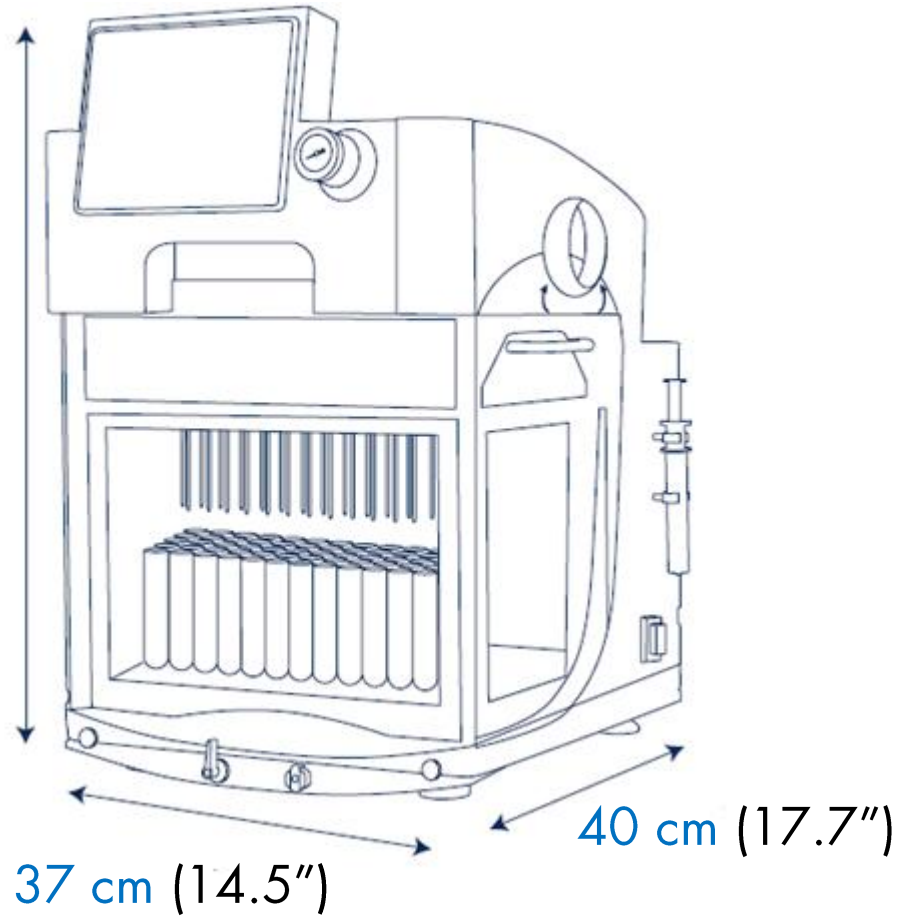
On a bench



Fume enclosure with
exhaust tube - Option
P/N : EVAA70

Under Fume Hood





Installation in few minutes

- Fill the bath with water
- Connect the gas tubing
- Connect the power cord

No technical requirement for the installation

Replace your gas cylinder with our **N₂ generator (30L/min - purity up to 99,5%)**
Supply puriFlash[®] XS-Vap **up to ~25 sample tubes**
(suitable to supply our MS detector)



P/N : C2PKV0

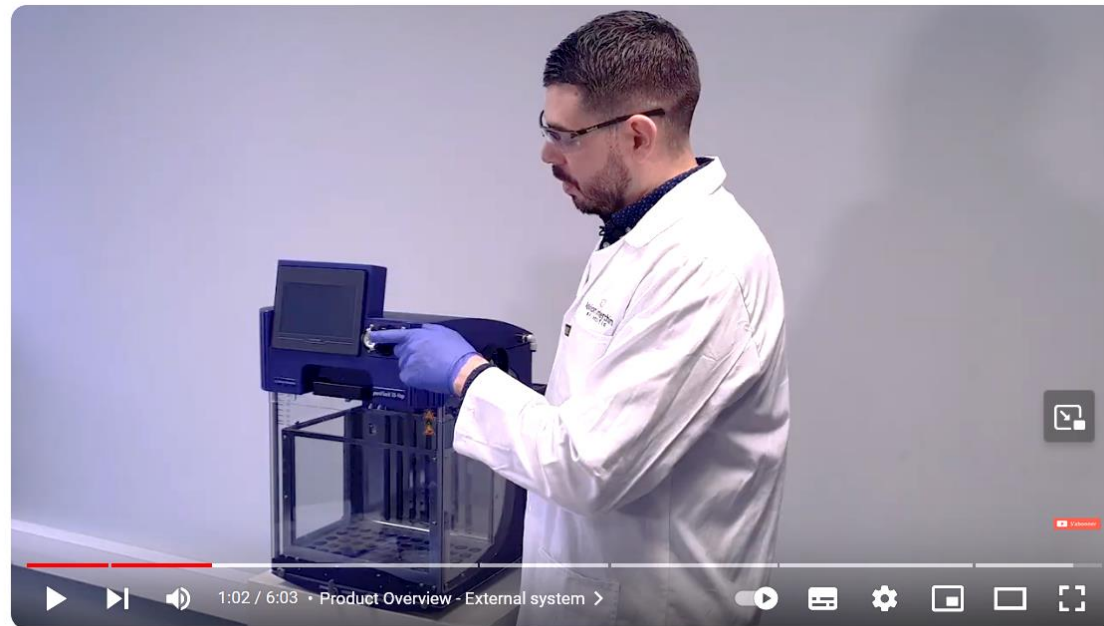


- New technology
- No cross contaminations
- Sample volume from 1 mL to 250mL
- Manual nozzle adjustment
- Reduce evaporation time & gas consumption
- Wide range of racks and accessories
- Easy to use
- Software integrated to control the evaporation
- Compatible with Flash chromatography system Interchim
- Manufacturing - Interchim Montluçon France
- Robust with high quality material
- Certified with internal standards



Click on Youtube link to watch our live presentation

https://youtu.be/_SnpcWyMc2o?feature=shared 



puriFlash® XS-VAP product demonstration | by Advion Interchim Scientific

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How to request more information, a quotation or to place an order

Please see from the list below:



By Area

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