



**Parallel Evaporation Solutions**  
Automate your workflow



# Parallel Evaporation Solutions

## From market creator to market leader

BUCHI was the first company to commercialize the rotary evaporator in 1957. For over 60 years, we have continued to innovate and deliver market-leading solutions for the evaporation of solvents. We have built a vast user base in this time and developed a strong reputation for reliable instruments, state-of-the-art solutions, and personalized application support. With our automated parallel evaporation instruments, BUCHI continues to improve with the most efficient, sustainable, and safe solutions for parallel solvent evaporation.



### Automated solution

Boost efficiency

We offer advanced automation features for increased productivity and cost-effectiveness. Increase throughput and maximize efficiency with our innovative instruments that allow processing of up to 96 samples in parallel.



### Green solutions

Sustainable and fast

Our parallel evaporation solutions increase analyte and solvent recovery efficiently. This sustainably saves both time and money. Solvent recycling is optimized with zero nitrogen consumption, which protects the environment and enhances sustainability.



### Safe solutions

Highest analytical standards

Improved safety features such as sealing, automated process and cooled appendix will protect you and your analytes. These features help optimize analyte recoveries and safeguard your analyte from heat damage.

# Applications to fit your needs

## Meeting the demands of your industry

Our latest parallel evaporation instruments are truly modern industry solutions. Increased automation and the ability to process multiple samples in parallel increases efficiency, accuracy, safety, and limits repetition. Designed with versatility and reliability in mind, both SyncorePlus and Multivapor™ are parallel evaporation workhorses that can fit into any workflow.

### Environmental Analysis



Concentrate your samples quickly and efficiently in order to accurately monitor pollutant levels in the environment.

### Testing



Achieve the highest sample throughput and increase safety to reduce processing time and costs.

Application

- Concentration
- Solid phase extraction

- Concentration
- Solid phase extraction
- Evaporation to dryness

Sample

Soil, sludge, water, waste

Soil, sludge, water, waste

Analyte

PAH, PFC, TPH, POP PCDD/PCDF, PCB, pesticides, herbicides

SVOC, PCB, PAH, PCDD/PCDF, PCB pesticides

Solution:

**SyncorePlus Analyst «Pre-Analytical»**

**SyncorePlus Polyvap «Throughput»**

**Multivapor™ «Essential»**

Food/Beverage



Use the most advanced parallel evaporation processes for quality assurance and the development of ingredients.

- Concentration
- Solid phase extraction
- Evaporation to dryness

Water, seafood, meat, dairy

PCB, pesticides, ethyl carbamate

Chemical



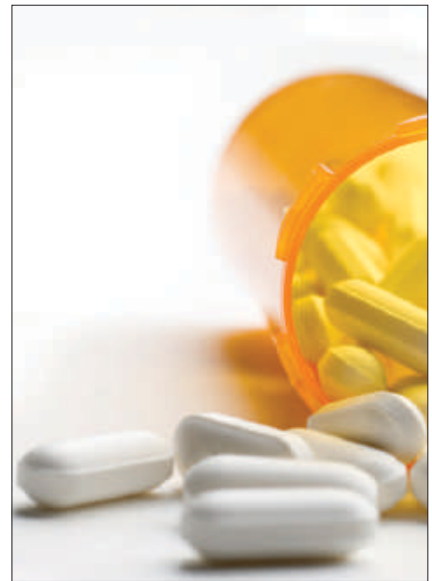
Streamline your quality control and research and development workflows by preparing multiple samples simultaneously.

- Concentration
- Evaporation to dryness

Textiles, plastics, petrochemicals

Azo dyes, plasticizers, oil, grease

Pharmaceutical



Ensure the highest levels of quality control and safety in the development of new compounds.

- Evaporation to dryness

Drugs

API

**SyncorePlus Analyst «Pre-Analytical»**

**SyncorePlus Polyvap «Throughput»**

**Multivapor™ «Essential»**



# Parallel Evaporation Procedure

## Streamline your workflow

Whatever the application, we offer solutions to increase your sample throughput and meet your needs. No matter the amount or volume of your sample or whether you want to concentrate or evaporate to dryness, BUCHI has the appropriate solution at hand.

Steps before evaporation	Sampling, Synthesis, Extraction, Purification or Solid Phase Extraction		
Parallel evaporation step	Parallel Evaporation		
Application	Concentration to a predefined residual volume of 0.3, 1 or 3 mL	Drying or evaporation	Drying or evaporation
Number of samples	Multiple samples 4, 6 or 12	Multiple samples 4 up to 96	Multiple samples 6 up to 12
Sample volume Minimum Maximum	5 mL 500 mL	0.5 mL 500 mL	0.5 mL 240 mL
Degree of automation	•••	•••	•
Evaporation performance	•••	•••	••
Solutions by BUCHI	<b>SyncorePlus Analyst</b> «Pre-Analytical» p. 11	<b>SyncorePlus Polyvap</b> «Throughput» p. 13	<b>Multivapor™</b> «Essential» p. 15
Steps after evaporation	Analysis		Purification





# SyncorePlus

## Synchronized sample solutions

Our SyncorePlus parallel evaporation instrument comes in two configurations; the SyncorePlus Analyst «Pre-Analytical» and the SyncorePlus Polyvap «Throughput».

**Analyst:** specially designed to evaporate samples to a specified volume as a pre-analytical step.

**Polyvap:** explicitly created with increased sample throughput in mind.

Each of our SyncorePlus instruments benefits from advanced automation, gentle evaporation conditions, and enhanced safety features.



### Start and walk away

SyncorePlus is fully automated and easy to use, allowing you to proceed with other tasks while it gets on with the job at hand.

Process automation ensures the highest analytical precision and safety standards.



### Gentle evaporation conditions

Perform a fast and gentle evaporation process with vacuum-vortex evaporation that ensures the protection of volatile and heat-sensitive analytes, even when using high boiling point solvents such as water, DMSO, or DMF. Decreasing pressure to reduce the boiling point improves energy efficiency.



### Safe and environmentally friendly

Our sophisticated condenser system and highly efficient peripheral instruments ensure the safety of users and the environment.

The secondary condenser prevents vapor from leaking into the atmosphere.

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### Full automation with the Interface I-300 Pro

The unique interface for numerous peripheral evaporation instruments from BUCHI.

- Specify evaporation methods
- Predefine specific solvents
- Achieve high analytical precision
- Ensure a safe process
- Simplify your workflow
- Start the process and walk away





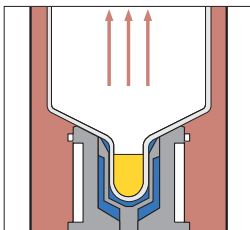
# SyncorePlus Analyst «Pre-Analytical»

## Flexible, sustainable, and efficient



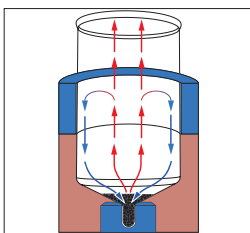
### Flexibility & Adaptability

We designed SyncorePlus Analyst to accommodate your specific workflow and sample requirements. Safely and efficiently concentrate up to 12 samples to a predefined residual volume, ranging from 0.3 mL, 1 mL, to 3 mL per sample. With interchangeable racks and a wide range of accessories, create the perfect system for your needs.



### Intelligent design for sustainability & safety

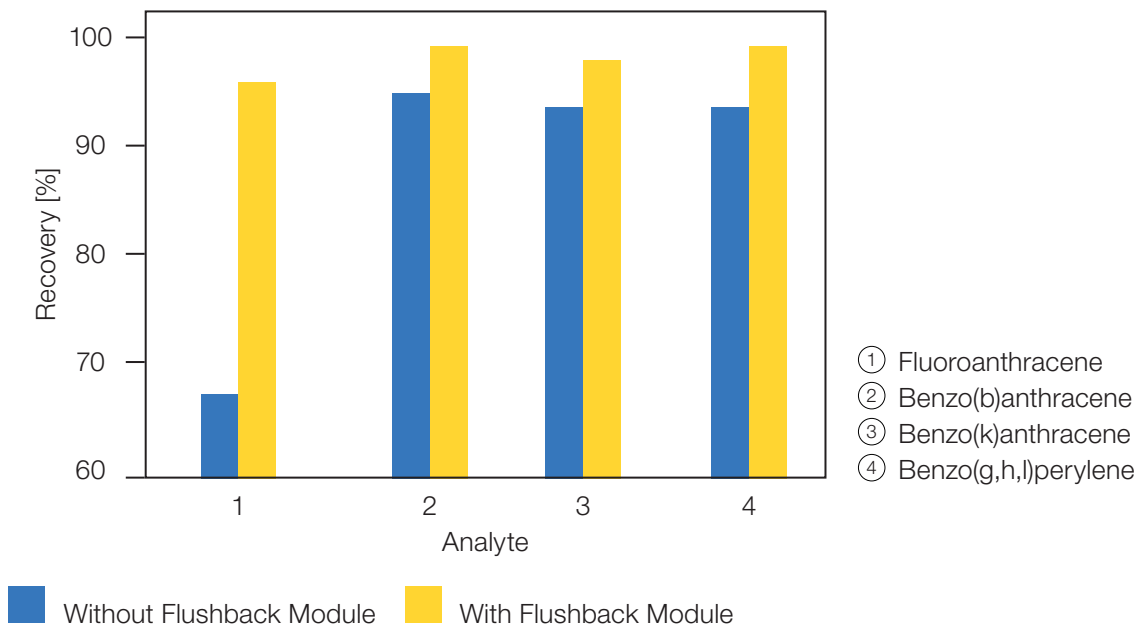
Intelligent design ensures recoveries and enhances sustainability and safety. Individual sample sealing and the use of inert materials inhibit cross-contamination. Additionally, a cooled appendix protects heat-sensitive analytes. This unique design ensures safety, with no loss of volatile compounds.



### Enhance your efficiency

Making use of our Flushback Module will enable you to achieve the highest analyte recoveries and most reliable results. The Flushback Module for the R-6 and R-12 rack improves recovery rates by flushing back analyte that adheres to the glass walls with condensed vapor during the evaporation process. An additional Crystal Rack is available for the R-4 and R-6 racks that make the entire evaporation process completely observable.

## Higher recovery rates achieved with the Flushback Module





## SyncorePlus Polyvap «Throughput» Maximize productivity



### Interchangeable racks

We offer a broad selection of racks to accommodate any workflow or throughput; from our specially designed Crystal Racks that come in four or six positions and provide full visibility of the sample during evaporation; to our EasyFill Racks that come in 12, 24, 48, and 96 positions. Increase productivity, save energy, and reduce costs with our numerous parallel evaporation solutions.



### Volume versatility

Our instruments can accommodate BUCHI's Polyvap glass tubes of all sizes in 4, 6, and 12 rack positions with working volumes ranging from 0.5 mL to 500 mL. Additionally, third party test tubes are compatible with our 24, 48, and 96 position racks. Thanks to its vacuum vortex technology, our SyncorePlus Polyvap «Throughput» significantly improves sample throughput gently and economically.



### Materials matter

All relevant parts of the SyncorePlus take advantage of the highest quality materials. Borosilicate glass was chosen for its low coefficients of thermal expansion. PTFE, for its hydrophobic properties as well as its high density; and EPDM for its resistance to heat. These materials are chemically inert and also resistant to all sorts of aggressive chemicals, most organic solvents, petrochemicals, and oils.

### Example evaporation rates for SyncorePlus Polyvap

SyncorePlus R-12 Polyvap, V-300, F-305, starting volume 100 mL/position (total 1200 mL)  
Conditions: Base = 60°C, Cover = 50°C, F-305 = 10°C, rotation speed 300 rpm

Solvent	Time to dryness [min]	Evaporation rate per position [mL/h]	Rate overall [mL/h]
Acetone	50	121	1452
Dichloromethane (DCM)	52	115	1375
Ethanol	82	73	880
Ethyl acetate	43	138	1656
n-Hexane	31	192	2302
Methanol	101	60	716
Toluene	43	138	1660
Water	273	22	271

## Streamline your workflow



Pressurized solvent extraction with SpeedExtractor



Sample transfer from SpeedExtractor to Multivapor™



Solvent evaporation on Multivapor™

Supports PSE (ASE) collection vessels, pooled or non-pooled samples from chromatography, and Radleys Carousell reaction samples.



## Multivapor™ «Essential»

### Efficient evaporation for multiple samples



#### Optimize your performance

The Multivapor™ requires little training due to its smooth and intuitive operation. Tailored to maximize efficiency and safety as you no longer have to transfer samples between vessels manually.



#### Ready to adapt

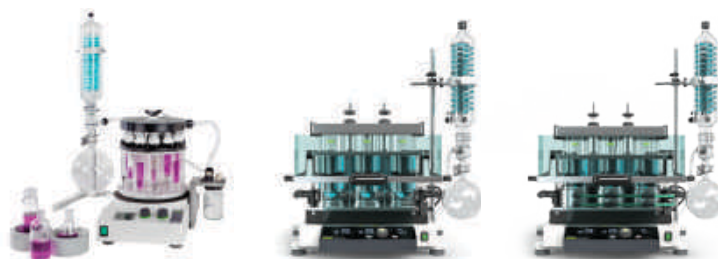
The Multivapor™, designed to fit into any lab, is compatible with a wide range of sample tubes. Save time and minimize steps by using your existing glassware with one of our numerous vessel-specific adapters. For the complete list of adapters, please refer to our adapter guide.

Vessel specification	Multivapor P-6	Multivapor P-12
Number of samples	6	12
Working volume	up to 240 mL	up to 60 mL
Max. outer diameter	14 – 58 mm	14 – 30 mm
Max. length	70 – 150 mm	70 – 150 mm



# Product overview

The best solution for your needs



Needs/Solution	Multivapor™	SyncorePlus	
Application	P-6 / P-12 Essential	Polyvap Throughput	Analyst Pre-Analytical
Evaporation	•	•	•
Drying	•	•	•
Concentration	–	–	•
Solid Phase Extraction (SPE)	–	•	•
<b>Characteristics</b>			
Automation	•	•••	•••
Vessel types	adaptable	fix	fix
Number of samples	6 / 12	4 / 6 / 12 / 24 / 48 / 96	4 / 6 / 12
Temperature range	30 - 100 °C	30 - 100 °C	30 - 100 °C
Working volume	0.5 - 240 mL	0.5 - 500 mL	5 - 500 mL
Flushback module	–	•	•
Inert condition	–	•	•





Available in a bundle	Vacuum Pump		Interface		Chiller	
	V-300	I-300	I-300 Pro	F-305	F-308	
Multivapor™	•	•	•	–	–	
SyncorePlus	•	–	•	•	•	

### Characteristics

Temperature range	–	–	–	-10 - 25 °C	
Cooling capacity @ 15 °C	–	–	–	550 W	900 W
Suction capacity	1.8 m³/h		–	–	–
Final vacuum	< 5 mbar		–	–	–
Solvent library	–	•	•	–	–
Vacuum gradient	–	–	•	–	–

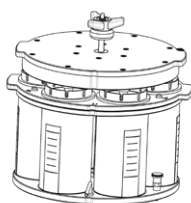


Compatible products	Vacuum Pump	Chiller
	V-600	F-314
Temperature range	–	-10 - 25 °C
Cooling capacity @ 15 °C	–	1400 W
Suction capacity	3.1 m³/h	–
Final vacuum	1.5 mbar	–

# Accessories

## Multivapor™

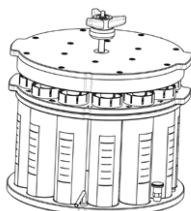
P-6



Evaporation Unit 11058090

Rotavapor® setup 048740

P-12



Evaporation Unit 11058092

Rotavapor® setup 048740

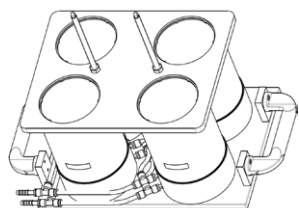
Adapters



See Multivapor™ Adapter Guide

## SyncorePlus Analyst

Crystal Rack R-4



Rack 047794

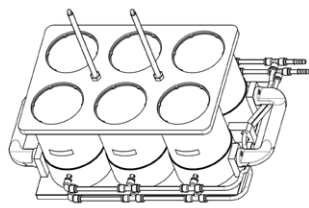
Tubes 3.0 mL 047740

1.0 mL 047741

0.3 mL 047742

Cover 038245

Crystal Rack R-6



Rack 047777

Tubes 3.0 mL 038557

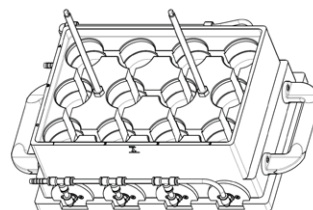
1.0 mL 038575

0.3 mL 038168

Cover 038246

Flushback Module 048654

EasyFill Rack R-12



Rack 046000

Tubes 3.0 mL 046070

1.0 mL 046071

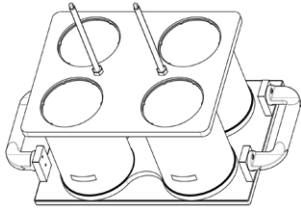
0.3 mL 046072

Cover 040910

Flushback Module 046036

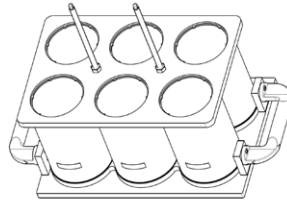
## SyncorePlus Polyvap

Crystal Rack R-4



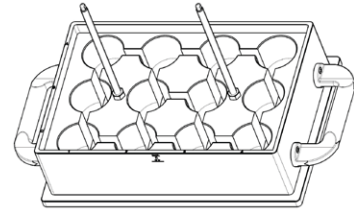
Rack	047790
Tubes	038487
Cover	038245

Crystal Rack R-6



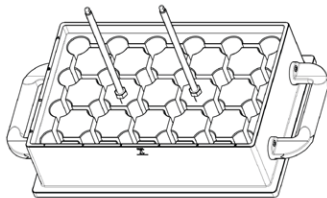
Rack	047770
Tubes	038486
Cover	038246

EasyFill Rack R-12



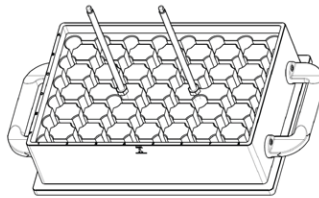
Rack	040900
Tubes	040907
Cover	040910

EasyFill Rack R-24



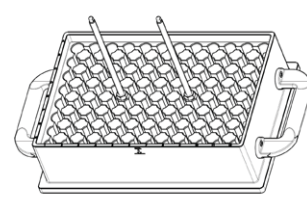
Rack	042660
Tubes	Falcon Tubes third party
	PSE/ASE Vials 049535
Cover	040920

EasyFill Rack R-48



Rack	042855
Tubes	042845
Cover	042850

EasyFill Rack R-96

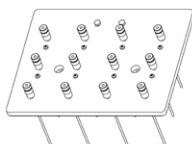


Rack	038277
Tubes	038543
Cover	040930

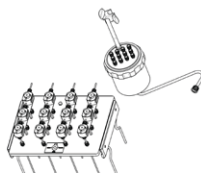
## SyncorePlus SPE

Module

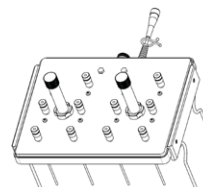
Cover



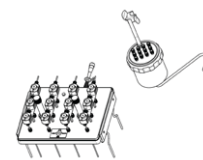
Basic



Advanced



Basic



Advanced

R-6	-	11055465	-	11055466
R-12	051440	051164	051438	051448
R-24	051463	-	051439	11062933



# Service & Training

## BUCHI Service packages

### **BUCHI START - The highest efficiency from the very beginning**

From a professional installation to a carefree agreement that will leave you with full cost predictability and the highest possible system efficiency. [www.buchi.com/start](http://www.buchi.com/start)

#### «Install»

- Product installation and testing
- Hands-on training from a certified technician
- Evaluation of the immediate surroundings of your new product
- Best integration of your new product into the existing infrastructure

#### «IQ/OQ»

- Product or system installation
- Installation and Operational Qualification

### **BUCHI EXACT - Certified accuracy for highest level of confidence**

Receive comprehensive qualifications with all of your BUCHI products. We perform qualification services on a level that can only be achieved by the manufacturer. [www.buchi.com/exact](http://www.buchi.com/exact)

#### «OQ»

- Our one-time OQ service will provide you with all the necessary documents and certificates.
- The service team will remind you about the option for a follow-up OQ before the certificates expire.

#### «OQ Circle»

Buying an OQ package will grant you an additional discount on the documents and offer you priority service with automated visit scheduling.

### **BUCHI CARE - Unbeatable Reliability**

Maintaining a heavily used device requires different parts and inspection frequencies than units that are operated occasionally. Our approach takes factors like these into consideration to provide you with an optimal yet cost-efficient solution. [www.buchi.com/care](http://www.buchi.com/care)

### **BUCHI ACADEMY - Increase your know-how, get the edge over your competition**

Expert know-how is provided by the application chemists in our competence centers in Flawil, Beijing and Mumbai and the locally available experts at our market organizations.

Our scientific support offers pre-sales feasibility studies, tailored solution offers, after sales onsite support, regular basic to advanced courses and on demand customized training.

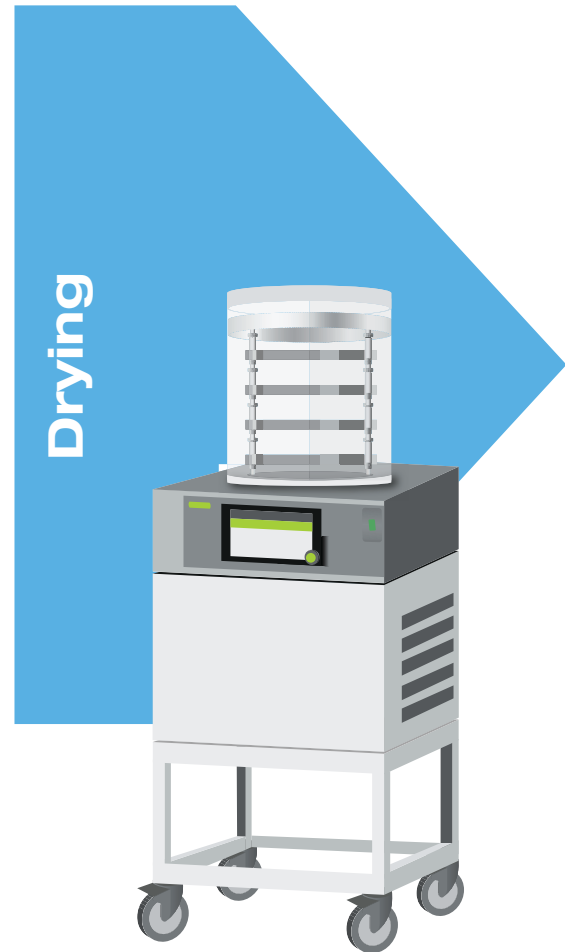
[www.buchi.com/academy](http://www.buchi.com/academy)

## Complete your portfolio



### Mixer

The Mixer B-400 combines optimal homogenization efficiency with simple operation. It is an essential tool for sample preparation within your analysis process chain.



### Freeze Drying

The compact Lyovapor™ L-200 offers high-quality Freeze Drying (-55 °C, 6 kg) with a high level of automation. Infinite-Control™ includes easy method creation, method running, data logging, chart recording in real-time and interruption if needed from anywhere at anytime.

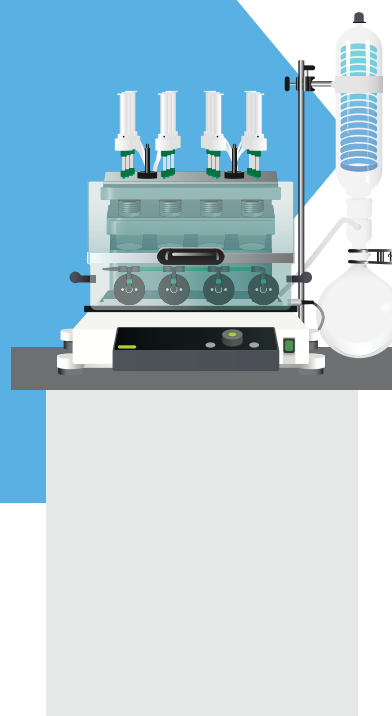
## Extraction



### **Extraction**

The SpeedExtractor is your best solution for fast Pressurized Solvent Extraction (PSE). Increase productivity by processing up to 6 samples in parallel. Streamline the workflow of your sample preparation thanks to ease of sample loading and ready-to-use extract collection.

## Solid Phase Extraction/ Evaporation



### **Parallel Evaporation**

Our SyncorePlus parallel evaporation instruments are specially designed to either evaporate samples to a specified volume (Analyst) or explicitly created with increased sample throughput in mind (Polyvap). The SyncorePlus SPE combines the evaporation and the conventional solid phase extraction (SPE), an essential step in many analytical procedures, in one device.

# Core messages to our customers

## BUCHI creates added value

«Quality in your hands» is the guiding principle that shapes our philosophy and our actions. It challenges us to provide outstanding services that are precisely tailored to your needs. This means that we must stay in close contact with our customers. That is why we keep in touch and continue to work very hard to understand you and your business even better.

We help you by providing high-quality products, systems, solutions, applications and services that offer you added value. This allows you to focus entirely on your processes and your work.



### Competent

We have the technological expertise and decades of experience needed to provide competent support and work with you to continually improve our services.



### Reliable

We guarantee the quality and functionality of our equipment and will continue to help you quickly and efficiently whenever something does not operate to your satisfaction.



### Safe

By collaborating closely with you, we do everything in our power to make our products, systems, solutions, applications and services as safe as possible for people and the environment.



### Cost-effective

We strive to create a high level of economic benefit and maximum added value for you.



### Global

As an international family-owned business with own subsidiaries and qualified distributors, we have a presence wherever you are located.



### Easy

We support you by providing carefully designed solutions as well as instruments and systems that are easy to operate.



### Sustainable

We support environmentally friendly processes and manufacture products that have a long service life. We utilize advanced technologies to leave the smallest environmental footprint possible.

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Quality in your hands

