



Solutions for Environmental Analysis

Enhancing productivity & quality in lab routine



Ingenious solutions for your matrices

Covering a wide variety of analytes

A clean and safe environment is a prerequisite for health and quality of life. BUCHI contributes to this by providing market-leading solutions for sample preparation and analysis to a wide range of industrial companies, environmental testing labs, consultants, and government authorities.

Soil, sludge, sediment



Analyte:

PCDD/PCDF, PAH, PCB, flame retardants (BFR, PBDE), TPH, pesticides, Total Kjeldahl Nitrogen (TKN), trace and heavy metals, ammonia

Matrix:

soil, sediments, sludge, brownfields

Compliant with e.g.:

- | | |
|-----------|---------------|
| EPA 1613B | ISO 10382 |
| EPA 1664 | ISO 11261 |
| EPA 1668B | ISO 11466 |
| EPA 3540C | ISO 13859 |
| EPA 3541 | ISO 16703 |
| EPA 3545A | ISO 18287 |
| EPA 8082A | DIN ISO 11261 |
| EPA 8290A | EN 13342 |
| EPA 8270 | DIN 13346 |
| EPA 9071 | DIN 38414 |

Waste



Analyte:

Restriction of hazard substances (RoHS): PBDE and PBB, phthalate esters (eg. DEHP, BBP, DBP, DIBP) lead and cadmium from electrical and electronic products, trace and heavy metals

Matrix:

e-waste, recycled material, polymer waste, bio waste

Compliant with e.g.:

- EPA 8270
- IEC 62321
- Directive 2002/95/EC
- EN 14039
- EN 15308
- DIN EN 13657
- ISO 16797

Our solutions comprise sample preparation and testing of air, soil, sediment, sewage sludge, waste and waste water to assess their quality with impact on health and the environment.

Water, waste water



Analyte:

PAH, PCB, TPH, flame retardants (BFR, PBDE), Total Kjeldahl Nitrogen (TKN), phenol, cyanide, formaldehyde, chemical oxygen demand (COD), ammonia, nitrate and nitrites, phosphate

Matrix:

municipal and industrial water discharges, water from sanitation, surface water, runoff from fertilized lawns, animal manure and storage areas

Compliant with e.g.:

EPA 608	
EPA 8081	ISO 5663
EPA 8082A	ISO 9377-2 (DIN H53)
EPA 9010C	DIN 38406-E5-2
EN 38414-20	DIN 38409
AOAC 973.48	NEMI D6303

Air



Analyte:

PCDD/PCDF, PCB, nitrate, nitrite, ammonia

Matrix:

ambient air, stack gas, incineration, car exhaust and fly ash

Compliant with e.g.:

EPA 3542A
EPA TO-4A
EPA TO-9A
EPA TO-10A
EPA TO-13
EN 1948

Find your solutions at:

www.buchi.com/knowledge/industries/environmental



Dedicated solutions along your value chain

Covering the most important analytes in today's analysis

Our portfolio for environmental testing comprises of five sample preparation methods and supplementary application tools. They allow you to perform classical Soxhlet and hot extraction, pressurized solvent extraction, solid phase extraction, acid digestion and steam distillation.

Solutions by BUCHI	Page	Analytes and parameter groups	Soil Sludge Sediment	Waste	Water / Waste Water	Air
«Extraction Throughput»	8	Pesticides, PAH, PFC, TPH, phthalates, POPs as flame retardants (BFR), PCDD/PCDF, PCB	●	●		●
«Extraction Universal»	10	Pesticides, PAH, PFC, TPH, phthalates, POPs as flame retardants (BFR), PCDD/PCDF, PCB	●	●		●
«Digestion & Distillation»	12	TKN, urea, ammonia, nitrate, nitrite, cyanide, formaldehyde, phosphate	●		●	●
«Reflux Digestion»	16	Trace and heavy metals, COD	●	●	●	
«Parallel Evaporation Pre-Analytical»	18	Pesticides, PAH, PFC, TPH, phthalates, hydro-carbon oil index, PCB, DDT, POPs as flame retardants (BFR), PCDD/PCDF	●	●	●	●



Soil,
sludge,
sediment



Water /
waste water



Waste



Air

Sampling	Homogenization Grinding Sieving	Digestion Separation Extraction	Evaporation Concentration Distillation	Clean-up	Analysis
•	•	Extraction	Concentration	(•)	GC/MS HR-GC/HR-MS LC/MS
•	•	Extraction	Concentration	(•)	GC/MS HR-GC/HR-MS LC/MS
•	•	Digestion	Distillation		Titration
•	•	Digestion			ICP (metals) Titration (COD)
			Concentration	(•)	GC/MS HR-GC/HR-MS LC/MS

• inherent step (•) optional

Find your solutions at:
www.buchi.com/knowledge/industries/environmental



Solution «Extraction Throughput»

Extraction, evaporation and concentration



You want to analyze various pollutants contained by byproducts of processes and materials contaminating our environment. We offer sample preparation solutions by pressurized solvent extraction for the analysis of persistent organic pollutants (POPs) and other contaminants.

Air sample on
polyurethane foam (PUF)



SpeedExtractor E-916

SyncorePlus Analyst R-12
with Flushback Module



Vacuum Pump V-300



Recirculating Chiller F-308



Custom glassware

Alternative solution: «Extraction Universal», page 8

UniversalExtractor E-800
Five compliant and versatile
extraction methods

SyncorePlus Analyst R-12 / R-6
Parallel evaporation and
concentration to defined volume

Recirculating Chiller F-308
The efficient and water saving
way of cooling

Your most important benefits

Safe and reliable

- No contamination of samples since components in contact are inert
- No cross-contamination of adjacent positions due to individual valves and pathways
- Reliable analysis of low polluted samples with large cell volumes (up to 120 mL)
- No loss of analyte due to concerted workflow of extraction and concentration

Speed and throughput

- Up to 6 times faster than other PSE instruments thanks to parallel extraction concept
- Extraction of up to 96 samples in an 8 hour shift
- Acceleration of the extraction process, thus facilitate final results within one working day
- Reduced number of replicates due to identical extraction conditions for up to 6 samples

Low running costs

- Reduced solvent consumption for pre-cleaning cartridges / PUF and the extraction step
- Minimal need for consumables give lower running costs
- Save energy and costs with «ECO» mode for automated heater control
- Complementary workflow and synergy with parallel evaporation and concentration

Your solution «Extraction Throughput»



- PSE: SpeedExtractor E-916
- Concentration: SyncorePlus Analyst R-12 with Flushback Module
- Vacuum Pump V-300
- Cooling: Recirculating Chiller F-308

Options:

- PSE: SpeedExtractor E-914
- Parallel evaporation: SyncorePlus Analyst R-6, Multivapor™ P-12 / P-6
- Evaporation: Rotavapor® R-300
- Solid Phase Extraction (SPE)



- Comprehensive list of reference applications
- Customized application support
- Authorized IQ/OQ documentation
- Practical workshops, trainings and seminars
- Preventive maintenance including IQ/OQ
- Minimize downtime thanks to our service hotline

“The parallel extraction operation of the SpeedExtractor saves us time whilst maintaining accuracy demanded by our customers”

Karl Pettit, Marchwood Scientific Services, Southampton, United Kingdom

Solution «Extraction Universal»

Extraction, evaporation and concentration



You need a most flexible solution for the sample preparation step. We offer automated Soxhlet extraction and complementary evaporation solutions which are proven preparation techniques for the determination of pollutants like PCBs. For enhanced speed and throughput use pressurized solvent extraction with BUCHI's SpeedExtractor.

Recirculating Chiller F-308



UniversalExtractor E-800



SyncorePlus Analyst R-12 with Flushback Module



Vacuum Pump V-300



Alternative solution: «Extraction Throughput», page 6

SpeedExtractor E-916 / E-914
Pressurized solvent extraction

SyncorePlus Analyst R-12 / R-6
Parallel evaporation and concentration to defined volume

Recirculating Chiller F-308
The efficient and water saving way of cooling

Your most important benefits

Flexible applications

- Profit from five different extraction methods in one universal glass assembly. Choose the optimal extraction method to achieve the highest analyte recovery with the lowest variation of results
- For low analyte concentration, the Large Sample Volume (LSV) glass assembly can increase the sample volume by 60 %
- Fast and equal heating, even for high boiling solvents such as water or toluene

Fully inert conditions and maximized safety for the analyte

- All components in the UniversalExtractor E-800 that are in contact with the sample and the solvents are made of inert material
- Eliminates sample contamination and any memory effects from leaching materials
- The inert gas supply is selectable through-out all stages of the process
- Inert gas is automatically switched on if the analyte protection sensor is triggered

Multitasking

- Six distinct extraction positions enable individual process control and simultaneous operation of different extraction methods
- Different extraction tasks can be carried out in parallel
- Faster method development and higher sample throughput

Your solution «Extraction Universal»



- Extraction: UniversalExtractor E-800
- Concentration: SyncorePlus Analyst R-12
- Vacuum Pump V-300
- Cooling: Recirculating Chiller F-308

Options

- UniversalExtractor E-800 LSV for large sample volumes
- Parallel evaporation: SyncorePlus Analyst R-6 Multivapor™ P-12 / P-6
- Evaporation: Rotary Evaporator® R-300
- Solid Phase Extraction (SPE)



- Comprehensive list of reference applications
- Customized application support
- Authorized IQ/OQ documentation
- Practical workshops, training and seminars
- Preventive maintenance including IQ/OQ
- Minimize downtime thanks to our service hotline

Solution «Digestion & Distillation»

Digestion, steam distillation and titration



You have to deal with various applications for monitoring or determining environmental parameters such as nitrogen, ammonia or other steam volatile compounds. BUCHI's versatile solutions for digestion and steam distillation cover a broad range of applications in solids, waste water, fly ash and air.



Your most important benefits

Highly flexible and convenient

- One solution for nitrogen determination, direct distillation or Kjeldahl applications
- Highest flexibility combining dedicated accessories and varying sample tube sizes
- Convenient operation thanks to automated procedures and enhanced visualization:
 - programmable digestion temperature profiles
 - distillation parameters like automated dilution, alkalization or acidification, aspiration of chemicals
 - automated titration with linked external titrators
- Ready-to-use pre-programmed methods for various sample matrices

Fast

- Time savings of up to 135 minutes thanks to fast heating and cooling of the SpeedDigester
- Accelerated digestion process by optional continuous addition of H₂O₂
- Concerted online titration with dedicated titrators while the sample is still being distilled (MultiDist / Eco Titrator)
- Automated calculation and result transfer

Safe and secure

- Maximum safety thanks to perfectly sealing joints and the ultimate four stage Scrubber K-415 (QuadScrub^{ECO})
- Prohibition of unauthorized process or data manipulation with password protection (MultiDist)

Your solution «Digestion & Distillation»



- Distillation: MultiDist
 - Digestion: SpeedDigester K-439
 - Neutralization: Scrubber K-415 (TripleScrub^{ECO})
 - Recirculating Chiller F-308
 - Mixer B-400
 - External third party titrators
- Options:
- KjelMaster System K-375 / K-376 / K-377
 - KjelDigester K-446 / K-449



- Comprehensive list of reference applications
- Customized application support
- Authorized IQ, OQ and PQ documentation
- Useful tools for application development
- Practical workshops, trainings and seminars
- Preventive maintenance including IQ/OQ/PQ
- Minimize downtime thanks to our service hotline

“BUCHI is considered as the key supplier for nitrogen determination application for the SDL. The training and support from BUCHI was in every way excellent and we look forward to future collaboration.”

Barry Daniel Nourice, Principal Laboratory Officer, Seychelles Agricultural Agency, Seychelles

Solution «Reflux Digestion»

Determination of trace and heavy metals, and COD



You need to analyze heavy metals in soil, sewage sludge or electronic waste. With BUCHI's solution "Reflux Digestion" you digest up to 12 samples simultaneously at homogeneous conditions to transfer the analyte into the measurable property for final ICP analysis or titration. The modular system configuration allows for various other applications like Kjeldahl and COD digestion.

Recirculating Chiller F-308



Scrubber K-415
QuadScrub^{ECO}



Water reflux
setup



SpeedDigester K-439

COD setup for air
reflux digestion



Alternative solution for «Reflux Digestion»

Wet Digester B-440

Pre-incineration unit for ash
determination

Your most important benefits

Range of applications

- Aqua regia, HNO₃ or HCl digestion under reflux (with water condensers) for heavy metal analyses, e.g. soils, sludge, sediments and electronic waste
- COD determination to evaluate the water quality using air condensers according to ISO 6060.
- Fast IR digestion for nitrogen determination according to Kjeldahl.

Flexible and fast

- Quick and easy switch between Kjeldahl and trace metal or COD digestion without laborious conversions.
- 20 ready-to-use pre-programmed methods for various sample matrices
- Storage of 30 personal methods

Safe and reliable operation

- No harmful fumes with the ultimate four stage Scrubber K-415 QuadScrub^{ECO}
- Safe and reproducible aqua regia digestion thanks to tight water reflux setup with efficient and water saving cooling (F-308)
- Excellent reproducibility thanks to superb thermal homogeneity and process supervision

Your solution «Reflux Digestion»



- Digestion: SpeedDigester K-439
- Setup: water or air reflux condenser setup
- Neutralization: Scrubber K-415 (QuadScrub^{ECO})
- Cooling: Recirculating Chiller F-308

Options:

- SpeedDigester K-425 / K-436



- Comprehensive list of reference applications
- Customized application support
- Useful tools for application development
- Practical workshops, trainings and seminars
- Preventive maintenance including IQ/OQ/PQ

“The SpeedDigester is the ideal tool for dealing with medium sample loads for both TKN and heavy metal determinations.”

Municipal Sewage Plant, France

Solution «Parallel Evaporation Pre-Analytical» For concentration to a pre-defined volume



You are looking for the most efficient and sustainable way of parallel sample evaporation. Environmental soil, water, air and waste samples are usually extracted with an organic solvent which is subsequently concentrated before final analysis to overcome detection limits. Our time saving, flexible and highly efficient solution «Parallel Evaporation Pre-Analytical» guarantees maximum reproducibility and highest recovery rates.



Alternative solution for «Parallel Evaporation Pre-Analytical»

Vacuum Pump V-300
The economic and silent vacuum source

Interface I-300 Pro
Central control of all process parameters

Multivapor™ P-6 / P-12
Efficient evaporation for multiple samples

Your most important benefits

Reliable

- No contamination thanks to inert materials
- No cross contamination due to individual sample sealing
- Highest analyte recoveries in combination with the Flushback Module
- No loss of volatile compounds due to cooled appendix

Cost-efficient

- Increased productivity by concentrating up to 12 samples to a pre-defined residual volume in parallel
- Low operating cost due to independence of nitrogen
- Improved efficiency by combining SPE (Solid Phase Extraction) and concentration

Sustainable

- Environmental-friendly due to high solvent recovery
- No solvent emission
- No water consumption and disposal while using the eco friendly BUCHI chiller

Your solution «Evaporation Pre-Analytical»



- SyncorePlus Analyst with stand-alone condenser
- Recirculating Chiller F-308
- Vacuum Pump V-300 with Interface I-300 Pro
- Flushback Module for 12 samples
- Solid Phase Extraction (SPE)

Options:

- Rack sizes (4, 6, 12 samples)
- SPE: Accessories for parallel SPE



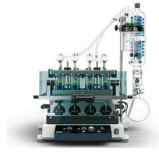
- Customized application support
- Application booklet
- Workshops and trainings
- Minimize downtime thanks to our service hotline
- Preventive maintenance
- Service and documentation (IQ/OQ)

The best solutions for your need

Comparison by customer need, application and characteristics



		Speed-Extractor E-914 / E-916	Universal-Extractor E-800	R-300 «Dynamic»	SyncorePlus Analyst R-12, R-6, R-4	Multivapor™ P-12 / P-6
Workflow steps		Extraction		Evaporation, concentration & drying		
«Pressurized Solvent Extraction»		•			•	
«Solvent Extraction»			•		•	
«Pre-analytical Evaporation»					•	
«Reflux Digestion»						
«Digestion & Distillation»						
Soils / Sediments / Sewage sludge						
Matrices / Analyte	Pesticides, PAH, PFC, TPH	•	•	•	•	•
	POPs as flame retardants, PCDD/PCDF, PCBs	•	•	•	•	•
	Nitrogen (TKN), urea					
	Nitrate, nitrite, ammonia					
	Trace and heavy metals					
Waste / Hazardous waste						
Matrices / Analyte	PAH, PCBs	•	•	•	•	•
	Phthalates	•	•	•	•	•
	RoHS: trace metals, heavy metals					
	RoHS: flame retardants	•	•	•	•	•
Waste / Wastewater						
Matrices / Analyte	Pesticides, PAH, PCB, TPH			•	•	•
	Hydro-carbon oil index				•	
	Nitrogen (TKN), urea					
	Nitrate, nitrite, ammonia					
	COD, phosphate					
	Phenol, cyanide, formaldehyde					
Oil and grease		•				
Air / Fly ash						
Matrices / Analyte	Dioxins/furans and other POPs	•	•	•	•	•
	Nitrate, nitrite, ammonia					
Characteristics						
No. of samples per run		6 / 4	6	1	12 / 6 / 4	12 / 6
Tube size [mL]		10 – 120	65 / 120	20 – 3000	0.5 – 500	5 – 180



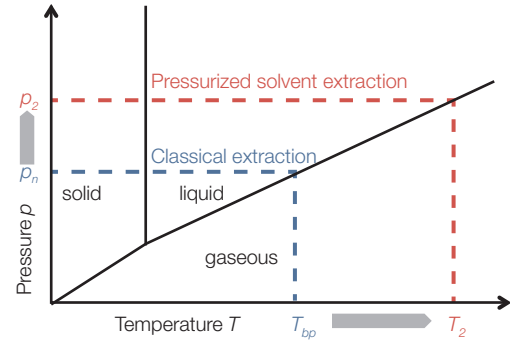
	SPE Module SyncorePlus Analyst	SpeedDigester K-425 / K-436 / K-439	KjelDigester K-446 / K-449	MultiDist	KjelMaster System K-375 / K-376 / K-377	Sample per day
	SPE	Digestion			Distillation	72 – 96
						24 – 48
	•					10 – 40
		•				6 – 36
		•		•		72 – 96
	•					
	•					
		•	•	•	•	
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		•				
				•		
					•	
				•	•	
	12 / 6	6 or 12	20	1	1 / 24 / 48	
	5 – 120	100 / 300 / 500	300			

Benefit from over 50 years of experience

Frequently asked questions

Does high pressure increase the extraction efficiency?

Yes, the combination of elevated temperature and pressure results in faster extraction compared to other extraction technologies. This is the result of an improved mass transfer because of higher analyte solubility and enhanced penetration. An increase from normal pressure p_n to p_2 is thereby necessary to keep the sample in the liquid state at T_2 .

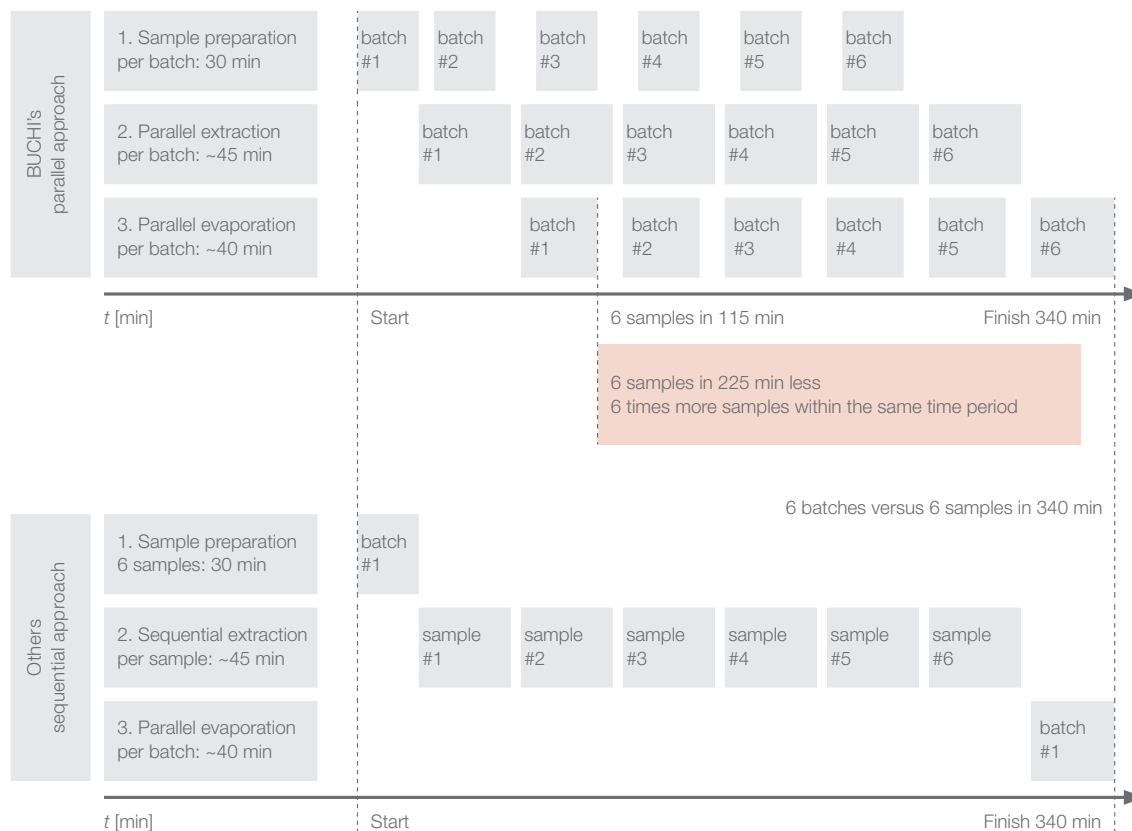


Isn't there any risk of cross-contamination for adjacent positions in the SpeedExtractor?

No, each position has its own inlet and outlet valve as well as individual pressure sensors. Even in case of blockage of one position, cross-contamination is excluded as an integrated troubleshooting wizard automatically relieves the pressure. All other positions will be finished while the faulty position is deactivated.

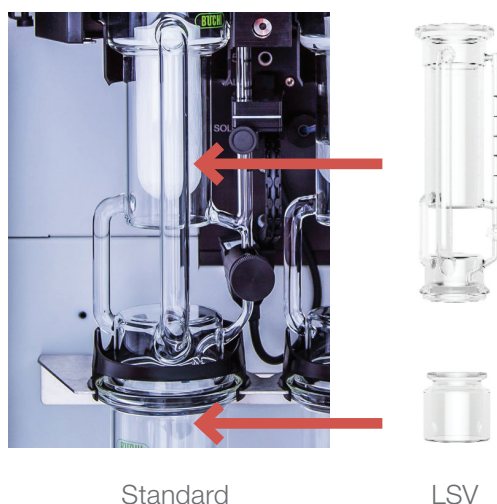
What is the benefit of a parallel extraction/evaporation approach?

Concerted parallel pressurized solvent extraction/parallel evaporation as opposed to a sequential approach increases the sample throughput. Additionally, it reduces the time to analysis significantly. An incoming batch of six samples is ready for the analysis after 115 minutes.



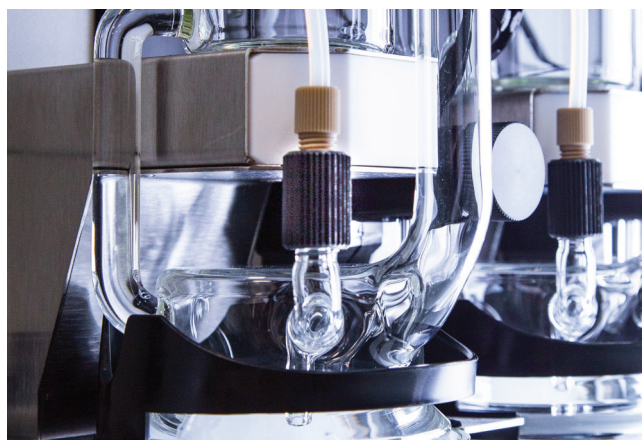
How can I apply higher sample quantities for extraction?

The E-800 LSV with the larger sample volume allows for higher quantities to reach the required detection limit of the analyte. The main glass parts are expanded to 60 %.



What does “inert” mean for the UniversalExtractor E-800?

In the UniversalExtractor E-800, all components in contact with the sample are inert. Contamination of the sample is prevented as leaching of additives from sealing membranes is eliminated. Additionally the extraction and drying process can be performed in an inert gas atmosphere.



When is it recommended to work with a recirculating chiller?

When you perform extraction or evaporation with a solvent like petroleum ether, a recirculating chiller (e.g. Recirculating Chiller F-308) should be implemented, especially if the tap water is warmer than 15 °C. The temperature difference between the boiling point of the solvent and the cooling water temperature should be 20 – 25 °C in order to achieve complete condensation of the solvent and to maintain an excellent solvent recovery.



Benefit from over 50 years of experience

Frequently asked questions

Is it possible to use the same digester for Kjeldahl, COD and aqua regia digestion?

Yes, the flexible SpeedDigester models can be adapted to several applications just by exchanging the accessories.

Can the COD sample tubes directly be transferred into an auto sampler for automated titration?

Yes, the same sample tubes can be used for sample preparation, digestion and automated titration.



Why is it important to use a K-415 QuadScrub^{ECO} (Sccrubber with 4 cleaning stages) for aqua regia digestion?

Yes, only the fourth cleaning stage (D) reliably absorbs the toxic NO_x fumes arising due to the reaction of aqua regia.

A Condensation step

- ① Fumes in
- ② Condenser
- ③ Condensate vessel
- ④ Cooling water inlet
- ⑤ Cooling water outlet

B Neutralization step

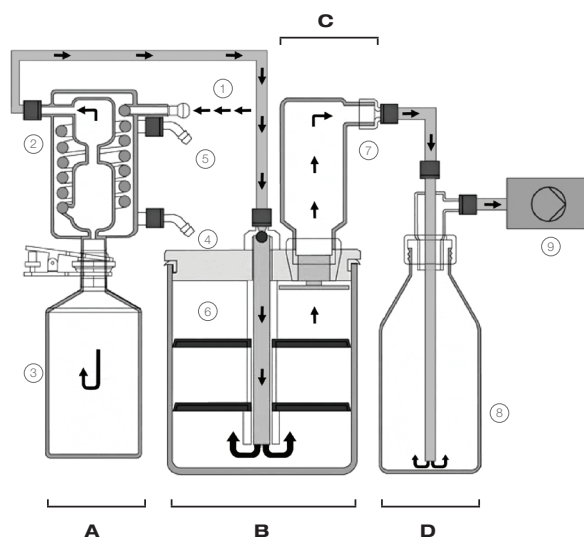
- ⑥ Neutralization vessel

C Adsorption step

- ⑦ Adsorption vessel

D Reaction step

- ⑧ Reaction vessel
- ⑨ Pump



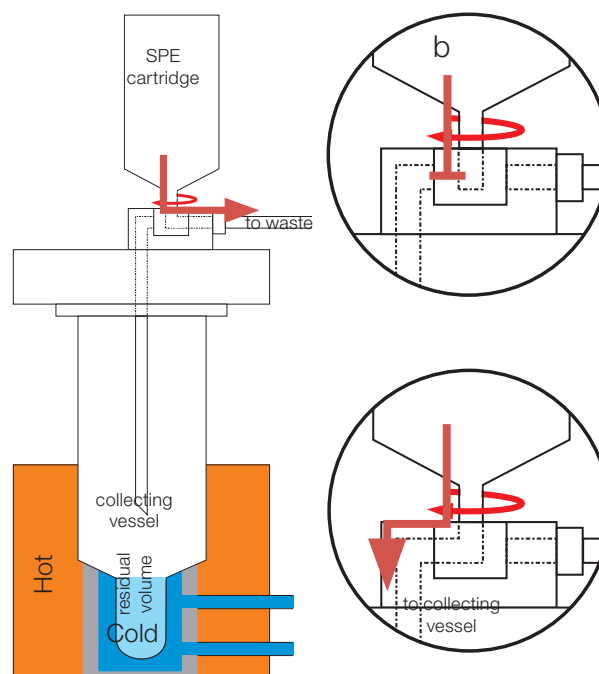
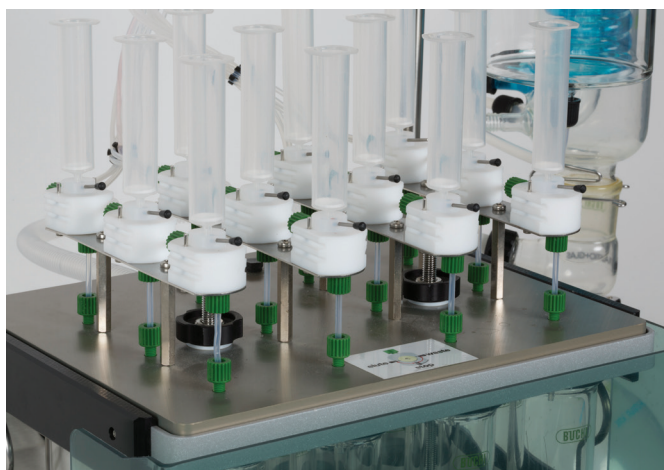
Which titrator types can be connected to the MultiDist?

The MultiDist can be connected to different third party titrators of suppliers like Metrohm, Mettler Toledo and SI Analytics.



How does the BUCHI SPE solution work?

By just simply adding the SPE cover accessory, the parallel evaporation device SyncorePlus is upgraded to a fully functional parallel SPE/filtration device. Individual sample sealing, accurate vacuum control and vortex evaporation make the apparatus a highly efficient and comprehensive solution for modern sample preparation.



What type of SPE cartridges/disks can be used?

The SPE platform can be used with any SPE or filtration cartridge or disk that has a standardized *Luer* adapter. This open design allows for using the best cartridge/disk possible for any given application, without limitation of proprietary consumables.

Does the BUCHI SPE module allow for a 3-way-flow control?

Yes, the SPE advanced cover has up to 24 manually controllable 3-way valves that allow for conditioning into a waste container and consequent elution into the evaporation vessel at once. This combined functionality saves manual labor, costs and time, and reduces the risk of sample loss, spillage and contamination of the analyte.



Voice of the customer

Case studies



PCB, dioxins and furans from soil and fly ash

Marchwood Scientific Services, United Kingdom

Customer: independent laboratory. They are the leading laboratory for dioxin analysis in the UK receiving samples from all over the world.

Application: determination of PCBs, dioxins and furans in soil and fly ash.

Equipment: SpeedExtractor E-916 with Rotavapor®



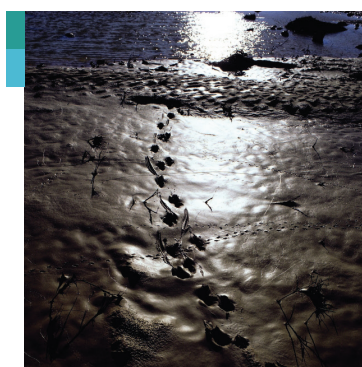
Organic contaminants in soil

Ecological Institute of Binzhou University, China

Customer: key ecological-environmental laboratory in the Yellow River Delta, soil research for protecting the ecosystem and the environment.

Application: determination of TPH, PCBs, and POPs in different soils.

Equipment: SpeedExtractor E-916 with SpeedExtractorRecord™



Sample preparation for trace analysis of PAHs in soil and groundwater using Syncore Analyst

Ecological Environmental Laboratory BECEWA, Nazareth, Belgium

Customer: BECEWA belongs to Eurofins which is a group of laboratories active in 39 countries and represents more than 225 laboratories and 22,000 employees.

Application: determination of TPH, PCBs, and POPs in different soil samples.

Equipment: Syncore Analyst R-12 for parallel evaporation of 12 samples to a pre-defined residual volume of 1 mL.

Explore more than 100 comprehensive case studies
www.buchi.com/en/support/downloads?case-studies





TKN according to NEN-ISO 5663 AQUON, Netherlands

Customer: institute for water research, consultancy and analysis service for surface, ground water and waste water samples.

Application: determination of TKN in waste water according to NEN-ISO 5663

Equipment: KjellMaster System K-375 / K-377, KjellDigester K-449 and Scrubber K-415



EPA method 8082

Phoenix Environmental Laboratories, USA

Customer: offers high quality testing of soils, water, sludge, and solids meeting EPA, state DEP and DOH requirements.

Application: determination of concentrations of polychlorinated biphenyls (PCBs) in extracts from solid and aqueous matrices.

Equipment: The Syncore Analyst R-12 with Flushback Module, Vacuum Pump V-300, Vacuum Controller V-855 and Recirculating Chiller F-305, Interface I-300



Water analysis

Laboratory of Metropole Européenne de Lille, France (Veolia Group)

Customer: Veolia designs and delivers services that are vital to human development and sustainable performance through three complementary business activities: water management, waste management and energy services. The company provides innovative, sustainable solutions to improve people's everyday lives and protect future resources.

Application: determination of trace metals by aqua regia digestion

Equipment: SpeedDigester K-439 with water-reflux setup

Complete your extraction portfolio

Complementary and related products

Pressurized Extraction



The SpeedExtractor E-914 / E-916 excels in pressurized solvent extraction (PSE) for the determination of residues, contaminants and additives.

Parallel Evaporation



The Multivapor™ is a compact 6 or 12 position parallel vortex evaporator that is designed to optimize existing personal process workflows.

UniversalExtractor E-800



The UniversalExtractor E-800 is perfectly suited to any demanding extraction task. Six distinct extraction positions enable individual process control and simultaneous operation of different extraction methods.

KjelMaster K-375



The KjelMaster K-375 meets the highest demands in usability, automation, user administration and sophisticated data management.

MultiDist



Perform Kjeldahl nitrogen or protein determinations compliant to officially approved methods in the most cost effective way. Expand your range of applications with the additional features.

KjelDigester K-446 / K-449



The manual K-446 is an entry level block digester with effortless manual control and rack handling of up to 20 samples. The fully automated model K-449 offers a convenient automatic lift for raising and lowering the sample tube rack.

Recirculating Chiller



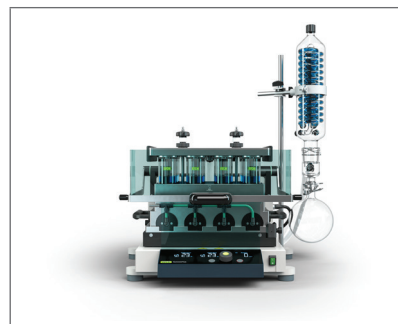
Sustainable cooling in accordance with economical and ecological needs is achieved with the Recirculating Chillers F-308 and F-314.

Chemicals for Extraction



Use the BUCHI approved extraction sand Celite® and diatomaceous earth for reliable operation and effective drying.

Parallel evaporation



The SyncorePlus Analyst R-6 / R-12 evaporates extracts to pre-defined residual volumes. Optionally, it combines SPE clean-up with concentration of the elutes.

Scrubber



The Scrubber K-415 with up to four cleaning steps provides maximum safety for operator and environment.

Kjeldahl Sample Tubes



BUCHI precision sample tubes stand for extended lifetime, trouble-free operation even with foamy or splashy samples, and safe processing.

Kjeldahl Tablets



Our high quality Kjeldahl Tablets guarantee reproducible digestion and consider ecological and economical aspects.

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.

We are represented by more than 100 distribution partners worldwide.
Find your local representative at:

www.buchi.com

Quality in your hands

