

behrotest® Equipment for the

Leaching behaviour test



www.behr-labor.com

Quality made in Germany 

Elution – A Core Technology for High-Precision Environmental Analytics

In times of increasing environmental requirements, leaching as an analytical method is gaining growing importance.

It enables the targeted extraction of pollutants bound to solid materials and their precise analysis under controlled conditions. Leaching thus provides crucial information about the environmental behavior of materials – forming the basis for well-founded assessments and sustainable decisions.

With the enactment of the new General Administrative Regulation, the standard DIN 19528 has become an integral part of legal requirements. As a result, the leaching method is moving even more into the focus of environmental analytics – along with the proven leaching systems from behr, which are specifically designed for procedures according to DIN 19528 and DIN EN ISO 21268-3.

Our modular percolation systems offer maximum precision and flexibility – whether for chemical or ecotoxicological investigations of soil materials and waste. High-quality glass components, customizable column variants, and well-thought-out technology ensure reproducible results and easy handling in everyday laboratory work.

In light of the stricter requirements of the Substitute Building Materials Ordinance (ErsatzbaustoffV), the Federal Soil Protection and Contaminated Sites Ordinance (BBodSchV), the Landfill Ordinance (DepV), and the Commercial Waste Ordinance, the use of reliable analytical systems is essential. With behr's leaching solutions, you not only meet current standards – you also lay the foundation for responsible environmental assessment and monitoring.

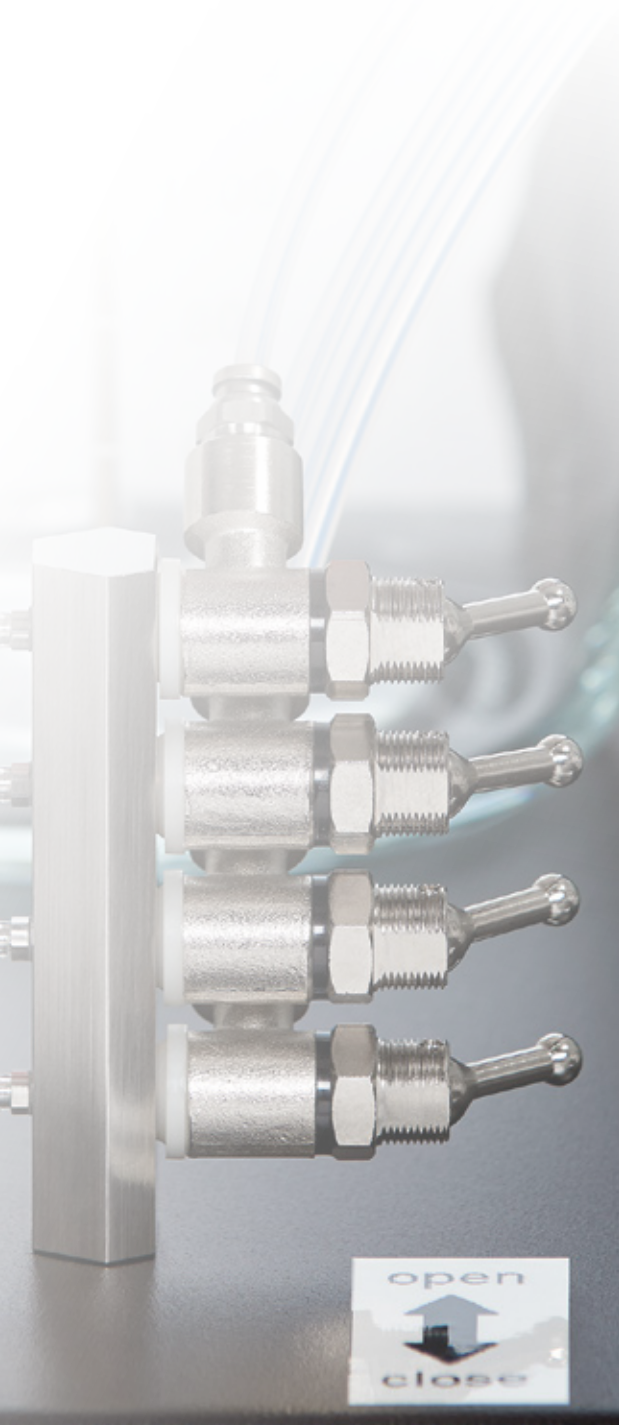


Leaching of Solid Materials

Our complete apparatuses are ideal for the percolation of water through all water-permeable solid materials. They enable detailed investigation of the release of inorganic and organic substances in accordance with DIN 19528. These units are specifically designed for undisturbed sample storage to ensure optimal conditions and reliable results.

Complete apparatuses for undisturbed sample storage, consisting of:

- Percolation columns (GS 101: 100 x 500 mm or GSU 60: 60 x 430 mm) with 2 screw fittings (GL 100 or GL 60, with Teflon inserts) for easy column filling
- Reservoir bottle with cap and lance
- Eluate tubing made of PTFE
- Glass collection vessel, cap with venting cannula
- Including peristaltic pump with 1-, 2-, or 4-channel pump head



Smart water distribution
– up to 4 outlets,
individually adjustable

Type	Product description	Art. No.
KEB601-1	behrotest® complete apparatus according to DIN 19528 for 1 sample, leaching of solids in undisturbed storage with glass column GSU60	B00801656
KEB601-2	behrotest® complete apparatus according to DIN 19528 for 2 samples, leaching of solids in undisturbed storage with glass column GSU60	B00804561
KEB 101-1	behrotest® complete apparatus according to DIN 19528 for 1 sample, leaching of solids in undisturbed storage with glass column GS101	B00801655
KEB101-2	behrotest® complete apparatus according to DIN 19528 for 2 samples, leaching of solids in undisturbed storage with glass column GS101	B00804560
SEB 60	behrotest® complete apparatus, elution of solids for 4 samples with large glass column GSU 60	B00750517
SEB 101	behrotest® complete apparatus, elution of solids for 4 samples with large glass column GS 101	B00745330

Technical Data

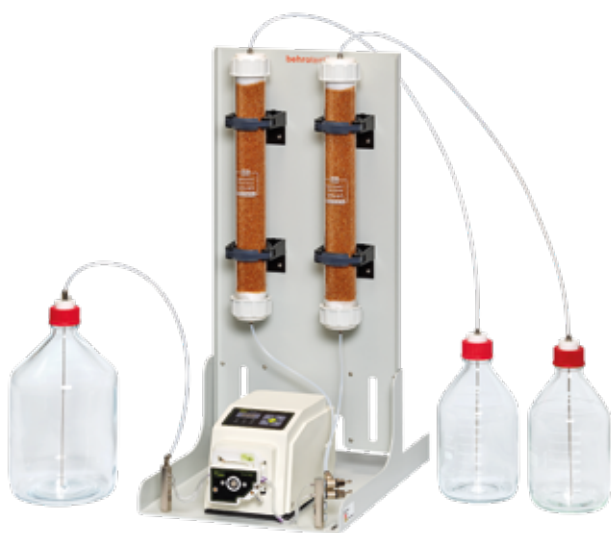
Type	KEB 601-1/ KEB 101-1	KEB 601-2/ KEB 101-2	SEB 60/ SEB 101
Seats	1	2	4
Dimensions in mm (w x h x d)	290 x 770 x 430	350 x 770 x 470	620 x 660 x 350



KEB 601-1



KEB 101-1



KEB 601-2



KEB 101-2



SEB 60



SEB 101

Leaching of Soil Samples



For the analysis of various soil samples, we offer the proven behrotest® column leaching units in accordance with LUA Guideline 20. These units are specifically designed for use with disturbed sample storage and enable precise and reliable analytical results.

Complete apparatus for disturbed sample storage, consisting of:

- Percolation columns (GS 101: 100 × 500 mm or GSU 60: 60 × 430 mm) with 2 screw fittings (GL 100 or GL 60, with PTFE inserts) for easy column filling
- Reservoir bottle with cap and lance
- Eluate tubing made of PTFE
- Glass collection vessel, cap with venting cannula
- Including hose pump with 1-, 2-, or 4-channel pump head

Type	Product description	Art. No.
KEB 950-1	behrotest® complete apparatus according to DIN 19528 for 1 sample, elution of soil samples in disturbed storage with glass column GS950	B00801657
KEB950-2	behrotest® complete apparatus according to DIN 19528 for 2 samples, elution of soil samples in disturbed storage with glass column GS950	B00804562
SEB 32	behrotest® column elution unit LUA data sheet 20, for soil samples in disturbed storage, adjustable peristaltic pump	B00218542

Technical Data

Type	KEB 950-1	KEB 950-2	SEB 32
Seats	1	2	4
Dimensions in mm (w x h x d)	290 x 770 x 430	350 x 770 x 470	620 x 660 x 350

Modular design for
effortless replacement



KEB 950-1



SEB 32



KEB 950-2

The behrotest® Automatic Column Leaching System SEA

The SEA is an innovative solution for analyzing the leaching behavior of inorganic and organic substances from solids in accordance with DIN 19528. It stands out for its efficiency, precision, and ease of use.

Your benefits at a glance

- Save time and costs thanks to automated processes
- Simple analysis of complex substances from soil samples
- Flexible use with three column sizes and four eluate bottle sizes
- Large reservoir container with 25-liter capacity

Technical features

- 7-inch touch display for controlling the hose pump and solenoid valves

Customizable settings for:

- Flow rate
- Valve opening and closing times
- Time control of fraction bottles

Mobile and space-saving

The entire unit is mounted on a lightweight mobile frame, making it ideal for flexible use in laboratories with limited space.



SEA 101

Type	Product description	Art. No.
SEA 60	behrotest® automatic column leaching system according to DIN 19528 for undisturbed storage with glass column GSU 60	B00751254
SEA 101	behrotest® automatic column leaching system according to DIN 19528 for undisturbed storage with glass column GS 101	B00793152
SEA 950	behrotest® automatic column elution system according to DIN 19528 in disturbed storage with glass column GS 950	B00751253

Technical Data

Type	SEA 60 / SEA 101 / SEA 950
Dimensions in mm (W x H x D)	1000 x 1640 x 620
Seats	1

Accessories



VST 50

LGF 2000-SET



VST 100 in
use



QW



QS



GS101-SET



GSU60-SET



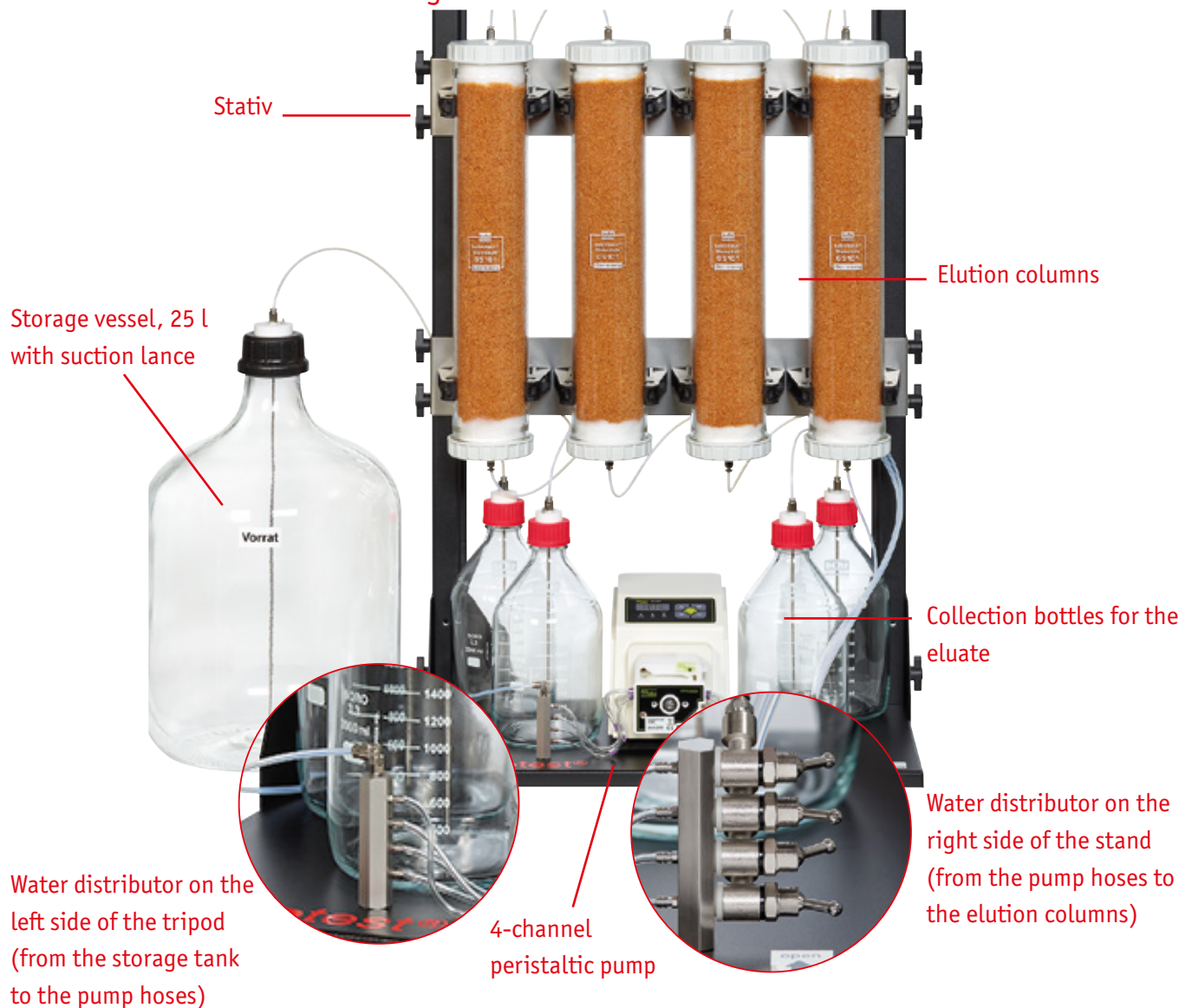
GS950-SET



PLP 381 with PPH 5064

Type	Product description	Art. No.
PLP 381	behrotest® laboratory hose pump 0.00025 .. 380 ml/min, without pump head	B00734903
PPH 5061	behrotest® Pump head 1-channel 0.0025 to 48.0 ml/min, 6 squeeze rollers	B00454747
PPH 5062	behrotest® Pump head 2-channel 0.0025 to 48.0 ml/min, 6 squeeze rollers	B00491218
PPH 5064	behrotest® Pump head 4-channel 0.0025 to 48.0 ml/min, 6 squeeze rollers	B00455177
SVV	Hose package with 4 pump hoses, made of Tygon, flow rate 0.66–33 ml/min	B00218536
LGF 2000-SET	behrotest® laboratory glass bottle with ISO thread, 2000 ml, CRYSTAL CLEAR, with PTFE/PVDF insert and suction lance	B00815220
LGF 5000-SET	behrotest® laboratory glass bottle with ISO thread, 5000 ml, CRYSTAL CLEAR, with PTFE/PVDF insert and suction lance	B00815221
	PTFE tubing, inner diameter 2 mm, outer diameter 4 mm, per meter	B00224992
VF 25	25 l storage bottle with PTFE/PVDF insert and suction lance	B00773464
GSU 60-SET	behrotest® Complete set: GSU60 glass column with brackets, PTFE rotating parts, screw caps, and sealing ring	B00815218
GS101-SET	behrotest® Complete set: GS101 glass column with brackets, PTFE rotating parts, screw caps, and sealing ring	B00815217
GS950-SET	behrotest® Complete set: GS950 glass column with brackets, PTFE rotating parts, screw caps, and sealing ring	B00813357
VST 50	Compaction stamp for elution column GSU 60	B00738463
VST 100	Compaction stamp for elution column GSU 101	B00738462
QW	behrotest® Quartz wool 100 g	B00027716
QS	Quartz sand, annealed, grain diameter 1 to 2 mm, bottle containing 1000 g	B00218522

One system – three versions: Uniform design, variable sample collection – optimized for disturbed and undisturbed storage.



Prepared road construction waste For elution in the trough method

The trough method is a special variant of the eluate test according to DIN EN 1744-3. For example, LAGA (Working Group of the Federal States for Waste) prescribes analytical examinations on the solidified sample object in the trough test in its technical rules for the requirements for recycling mineral residues/wastes. The aim of the examination is the determination of elutriation of PAH and phenols in prepared road construction waste.

Elution of PAHs and phenols



TRO 30

Application areas of the trough test are very general

- The elution of solidified samples with a weight of up to approx. 2.5 kg
- The analysis of unbound samples up to a grain size of max. 33 mm.

The examination material is in a sieve insert and is leached in a trough.

Unlike elution method in the case of the trough procedure, no mechanical load is placed on the examination material as a magnetic stirrer ensures movement of the liquid.

Compliant, user friendly and high performing: Elution in accordance with the trough procedure with behrotest® TRO 30

The behrotest® device TRO 30 for elution in the trough test was developed in collaboration with the Working Group elution for mineral substances.

Pecifically, the equipment has the following characteristics:

- The trough with lid is made of borosilicate glass 3.3 and has a content of 30 l. The elution remove is done by means of a spindle stopcock.
- A stable frame made of powder-coated steel plate for a firm stand and precision centering of the trough above the magnetic stirrer.
- The magnetic stirrer is generously sized for the stirring quantity of 30 l. Its speed is infinitely adjustable.
- A special glass rack with filter insert made of fluoroplastic ensures the thorough and even rinsing of the examination object with de-ionized water.

Technical Data

	TRO 30
Dimensions (w x h x d)	
- Magnetic stirrer	approx. 240 x 380 x 110 mm
- Entire apparatus	approx. 300 x 460 x 600 mm
Nominal voltage	12 V=, 2,5 A power supply 230 V~, 50 Hz
Sample quantities	max. 2,5 kg
Grain size, mm	2 - 33

Concept and material of the behrotest® TRO 30 rule out the ingress of undesired external substances into the eluate and ensure reliable and exact analysis results.

Type	Product description	Art. No.
TRO 30 PP	Equipment with magnetic stirrer for the examination of PAH and phenols in prepared road construction waste	B00218513
TRO 30 RWP	Equipment with agitator for the examination of PAH and phenols in prepared road construction waste	B00218515

Accessories

Type	Product description	Art. No.
GE 30	Elution vessel, 30 l	B00218505
IMR 1	Inductive magnetic stirrer with 230 V~ mains unit and car adapter	B00218351
MS 30	Magnetic stirring bar, egg-shaped	B00218506
	Trough holder rail for the elution vessel	B00218512
	Insertable frame, PP grey	B00230898
QFK 001	behrotest® sieve insert 2000 µm, fluoroplastic	B00218509
TD 30	Trough lid, PP	B00218507
AL 15	Drain tap with PTFE spindle and GL 32 screw connection	B00218338



TRO 30 RWP



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Subject to technical changes and errors.



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