

Centrifugal vacuum concentrators:

LACEVAC-1C

LACEVAC4

LACEVAC6

LACEVAC7



COLO.SCIENCE • TECHNICAL SPECIFICATION

LACEVAC4

Vacuum Centrifugal Concentrator • Set Vacuum 0.1 to 100 mbar • RT+5 °C to 100 °C • 800 to 2000 rpm • Without Pump or With Vacuum Pump • 30 Programs

LACEVAC4 Vacuum Centrifugal Concentrator is the model of the line for demanding methods: the vacuum is not only switched on, it is set to a value between 0.1 and 100 mbar and held there automatically. It removes solvent from many small samples at once by combining three things: vacuum lowers the boiling point, heat from RT+5 °C to 100 °C drives the evaporation, and centrifugal force at 800 to 2000 rpm keeps the liquid at the bottom of the tube, so samples do not bump or cross-contaminate. Time and temperature are set in two steps, 30 programs can be stored and four quick keys start the routine ones. The vacuum pump is external. LACEVAC4 is offered in two versions: without a pump, for laboratories that already have one, or with a chemically resistant vacuum pump. The rotor for 90 × 1.5 mL tubes is included; twelve more rotors take tubes and bottles up to 100 mL and microplates.

VACUUM + HEAT + CENTRIFUGATION

SET VACUUM 0.1–100 MBAR

RT+5 °C TO 100 °C

800 TO 2000 RPM

WITHOUT PUMP

WITH VACUUM PUMP

30 PROGRAMS

13 ROTORS

COLD TRAP OPTION

Document type: **Technical Specification Sheet**

Product: **LACEVAC4 Vacuum Centrifugal Concentrator • without pump or with vacuum pump**

SKU: **PRO5861**

Format: **A4 landscape • CORE-TECHSPEC 1.2**

LACEVAC4 PRODUCT PAGE

CONCENTRATION — OVERVIEW

CONCENTRATION CATALOGUE

REQUEST QUOTE

 **HEATING ONLY** RT+5 °C to 100 °C



LACEVAC4 • LCD panel with time, temperature and the set vacuum



LACEVAC4 with the optional cold trap –50 °C, 2 L

MODEL

LACEVAC4 • PRO5861

ADDRESS / HQ

Polje ob Sotli 4
SI-3255, Slovenia

CONTACT

sales@colo.si
+386 70 713 437

LACEVAC4 • technical specification

Vacuum centrifugal concentrator with set vacuum 0.1 to 100 mbar, RT+5 °C to 100 °C, 800 to 2000 rpm, 30 programs, without pump or with vacuum pump, rotor 90 × 1.5 mL included, optional cold trap –50 °C

SET VACUUM 0.1–100 MBAR

RT+5 °C TO 100 °C

800–2000 RPM

WITHOUT PUMP

WITH VACUUM PUMP

COLD TRAP –50 °C

— Two versions, one instrument

Product Overview

Application profile

Proteomics and genomics: concentration of digests, peptides, DNA and RNA.

Methods with a defined vacuum: the pressure is set and repeated from run to run.

HPLC and SPE: recovery of collected fractions and eluates.

Natural products and extracts: tubes, vials and bottles up to 100 mL.

Plates: drying of two 96-well microplates in one run.

Key features

Vacuum control: automatic; the value is set between 0.1 and 100 mbar and held.

Control: LCD panel with time, temperature and vacuum; start and stop with one button each.

Programs: 30 user programs and 4 quick keys.

Two steps: two times and two temperatures in one run.

Speed: 800 to 2000 rpm, adjustable; 530 × g.

Temperature: RT+5 °C to 100 °C, accuracy ±1 °C; pre-heating of the chamber.

End of run: automatic venting and switch-off.

Build: stainless steel chamber with PTFE coating, magnetic drive.

Why vacuum centrifugal concentration

No bumping: centrifugal force holds the liquid down while it boils under vacuum.

No cross-contamination: every sample stays in its own tube.

Gentle: low boiling point under vacuum, heat only as much as needed.

Dry pellet at the bottom: the sample collects where you can dissolve it again.

Many samples: 90 tubes of 1.5 mL per rotor, up to 180 with two rotors stacked.

Core technical summary

Parameter	Specification
Model	LACEVAC4
Product type	Vacuum centrifugal concentrator, vacuum control
Speed	800 to 2000 rpm, 530 × g
Temperature range	RT+5 °C to 100 °C, ±1 °C
Timer	0 to 9999 min
Vacuum control	set value, 0.1 to 100 mbar
Version with vacuum pump	30 L/min · final vacuum 5 mbar
Rotors	90 × 1.5 mL included; 12 optional
Cold trap	option, –50 °C, 2 L

TEMPERATURE

RT+5 °C to 100 °C

SPEED

800–2000 rpm

SET VACUUM

0.1–100 mbar

CAPACITY

up to 180 × 1.5 mL

RT = room temperature. Pressures are absolute. The vacuum that is reached depends on the pump: 5 mbar with the pump offered here; lower set values need a stronger pump. The vacuum pump, the cold trap and the optional rotors are ordered separately. Suitability for a specific solvent and method is confirmed in the COLO.Science quotation.

[LACEVAC4 PRODUCT PAGE](#)
[CONCENTRATION — OVERVIEW](#)
[CONCENTRATION CATALOGUE](#)
[REQUEST QUOTE](#)

Technical Specifications

Parameter	LACEVAC4	Parameter	LACEVAC4
Speed	800 to 2000 rpm, adjustable	Chamber	stainless steel 304, PTFE-coated
Maximum centrifugal force	530 × g	Vacuum display	digital, in mbar
Temperature setting range	RT+5 °C to 100 °C, ±1 °C	Drive	magnetic
Time range	0 to 9999 min; two steps	Rotors	13 types; 90 × 1.5 mL included
Programs	30 user programs, 4 quick keys	Noise	≤ 55 dB(A)
Vacuum control range	0.1 to 100 mbar, automatic	Supply	AC 220 V, 50/60 Hz, 1150 W
Vacuum pump	external; not built in	Dimensions (L × W × H)	481 × 370 × 294 mm
Final vacuum, with pump	5 mbar abs., 30 L/min	Weight	28.5 kg

RT = room temperature; the range starts 5 °C above the temperature of the room the instrument stands in. Dimensions and weight are for the instrument without pump.

Rotors

Tubes	Capacity	Tubes	Capacity
Microtubes • included	90 × 1.5 mL or 2 mL	Conical tubes	18 × 15 mL · 8 × 50 mL
Microtubes, mixed	66 × 1.5 mL + 24 × 5 mL · 54 × 1.5 mL + 48 × 0.6 mL	Sample vials	64 × 2 mL
PCR strips	24 × 8 × 0.2 mL	Glass vials	16 × 20 mL · 10 × 30 or 40 mL
Round-bottom tubes	72 × 5 mL · 40 × 10 mL	Flasks and microplates	6 × 100 mL · 2 × 96-well

One rotor for 90 × 1.5 mL tubes is supplied with the instrument. The other rotors are ordered separately; their product codes are stated in the quotation. Two rotors can be stacked. Tubes stay open during the run.

Two versions

Without pump: PRO5861; connect a vacuum pump you already have. Ask us whether your pump is suitable.

With vacuum pump: PRO5861 + VACUU-CDT30 (PRO3633), diaphragm pump with PTFE heads, 30 L/min, 5 mbar, oil-free.

Cold trap: PRO7173, -50 °C, 2 L; condenses the vapour before it reaches the pump. Recommended with organic solvents.

Not sure? send the solvent and the volume; we will state the version, the pump and the vacuum in the quotation.

Run sequence

1 • Rotor: place the rotor on the drive shaft.

2 • Load: place the open tubes symmetrically and close the lid.

3 • Run: choose a program or set time, temperature and vacuum, and press start; the pump starts after the rotor.

4 • End: at the end of the time the pump switches off, the chamber is vented and the rotor stops.

[LACEVAC4 PRODUCT PAGE](#)
[CONCENTRATION — OVERVIEW](#)
[CONCENTRATION CATALOGUE](#)
[REQUEST QUOTE](#)

The line at a glance • centrifugal vacuum concentrators

Parameter	 LACEVAC-1C compact • external pump	 LACEVAC4 programmable • external pump	 LACEVAC6 all-in-one • built-in pump	 LACEVAC7 touch screen • without or with built-in pump
Vacuum pump	external; without or with pump	external; without or with pump	built-in, 33 L/min	without pump or built-in, 2 L/min; stronger external pump as option
Vacuum	5 mbar with pump	5 mbar with pump	≤ 13 mbar	built-in pump: -80 to -89 kPa in work, -92 kPa final (about 90 mbar); optional external pump: 5 mbar
Vacuum display / control	analogue gauge; on/off	digital; set value 0.1 to 100 mbar	digital gauge; on/off	digital value on the touch screen; on/off
Speed	1800 rpm, fixed	800 to 2000 rpm	800 to 2000 rpm	300 to 2000 rpm
Centrifugal force	380 × g	530 × g	530 × g	—
Temperature	RT+5 °C to 70 °C	RT+5 °C to 100 °C	RT+5 °C to 100 °C	RT+5 °C to 80 °C
Operation	one button, quick temperature keys	LCD, two-step time and temperature	LCD, two-step time and temperature, 30 programs	7-inch touch screen
Rotor in delivery	66 × 1.5 mL	90 × 1.5 mL	90 × 1.5 mL	none; chosen with the order
Largest tube	50 mL	100 mL	50 mL	100 mL
Microplates	—	2 × 96-well	2 × 96-well	2 × 96-well
Dimensions (L × W × H)	350 × 280 × 290 mm	481 × 370 × 294 mm	608 × 370 × 348 mm	580 × 360 × 330 mm
Weight	18 kg	28.5 kg	38 kg	44 kg
Best for	small laboratories, 1.5 mL tubes, limited space	methods that need a set vacuum; high-boiling solvents	one instrument on the bench, no separate pump	water and volatile solvents, large tubes, plates

The column of this document is highlighted. The external pump for all models is VACUU-CDT30, 30 L/min, 5 mbar. Every model can be combined with the cold trap -50 °C. Values are supplier data; rotors other than the one in delivery, pumps and cold trap are ordered separately.

Options for every model



Vacuum pump VACUU-CDT30 • PRO3633

Diaphragm pump with two PTFE heads, oil-free and maintenance-free. 30 L/min, final vacuum 5 mbar, 140 W, 10 kg. For models without a pump, and as a stronger pump for models with a built-in one.



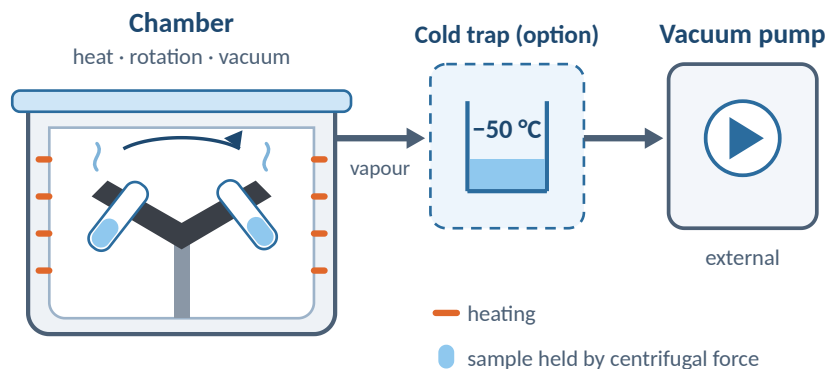
Cold trap -50 °C, 2 L

Stands between the concentrator and the pump, freezes the solvent vapour and protects the pump. Recommended with organic solvents.

[LACEVAC4 PRODUCT PAGE](#)
[CONCENTRATION — OVERVIEW](#)
[CONCENTRATION CATALOGUE](#)
[REQUEST QUOTE](#)

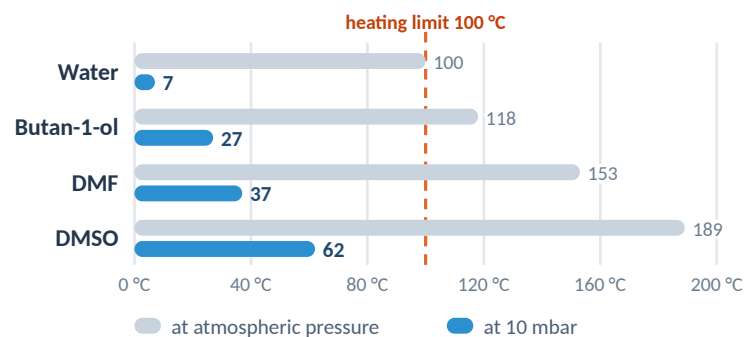
Vacuum Path and Versions

From the chamber to the pump



Schematic. Vapour leaves the heated, rotating chamber, condenses in the cold trap if one is fitted, and the external pump keeps the vacuum at the set value.

Boiling point under vacuum



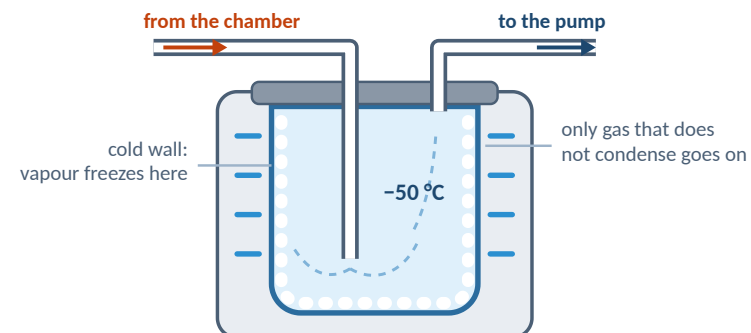
Calculated, rounded values for a set vacuum of 10 mbar. At 10 mbar water boils at about 7 °C instead of 100 °C. Because the value is set, the same solvent boils at the same temperature in every run.

Control panel



Time and temperature in two steps and the vacuum in mbar on one display; four quick keys below.

How the cold trap works



Protects the pump: solvent vapour freezes on the cold wall instead of reaching the pump.

Faster drying: vapour is removed all the time, so the pressure in the chamber stays low.

In use: switch the trap on first and start the run when it is cold; defrost and drain it when ice has built up.

[LACEVAC4 PRODUCT PAGE](#)

[CONCENTRATION — OVERVIEW](#)

[CONCENTRATION CATALOGUE](#)

[REQUEST QUOTE](#)



Optional cold trap -50 °C, 2 L

Ordering information

Item	Value
LACEVAC4 vacuum centrifugal concentrator, without pump	PRO5861
LACEVAC4 with vacuum pump VACUU-CDT30	PRO5861 + PRO3633
Optional rotors	12 types, see quotation
Cold trap -50 °C, 2 L	PRO7173
Delivery	Instrument, rotor 90 × 1.5 mL, mains cable, manual

Configuration checklist

Pump: do you have a vacuum pump, or do you need the version with pump?

Vacuum: which value does the method need? Below 5 mbar a stronger pump is required.

Tubes: type and number per run decide the rotors.

Cold trap: recommended with organic solvents; it protects the pump.

Place of use: 481 × 370 mm footprint, 28.5 kg, plus room for the pump.

SUPPLIER AND SUPPORT

COLO Lab Experts

Polje ob Sotli 4, SI-3255, Slovenia

Selection guidance: Send the solvent, the vacuum the method needs, the tube type, the volume and the number of samples per run. COLO.Science will confirm the version, the pump, the rotors and the delivery time.

QUICK CONTACT

🌐 colo.si

✉ sales@colo.si

☎ +386 70 713 437

COLO.SCIENCE · SAMPLE CONCENTRATION SUPPORT

Which vacuum does your method need?

Send the solvent, the vacuum the method needs, the tube type, the volume and the number of samples per run. COLO.Science will confirm the version, the pump, the rotors and the delivery time.

Web: colo.si

Ask us:

Price and current discount, delivery time, application support and service — write to sales@colo.si or call us.

LACEVAC4 PRODUCT PAGE

CONCENTRATION — OVERVIEW

CONCENTRATION CATALOGUE

REQUEST QUOTE