

Centrifugal vacuum concentrators:

LACEVAC-1C

LACEVAC4

LACEVAC6

LACEVAC7



COLO.SCIENCE • TECHNICAL SPECIFICATION

LACEVAC-1C

Vacuum Centrifugal Concentrator • RT+5 °C to 70 °C • 1800 rpm • Without Pump or With Vacuum Pump • 66 × 1.5 mL Rotor Included

LACEVAC-1C Vacuum Centrifugal Concentrator is the compact model of the line: only 280 mm wide, 18 kg. It removes solvent from many small samples at once by combining three things: vacuum lowers the boiling point, gentle heat from RT+5 °C to 70 °C drives the evaporation, and centrifugal force at 1800 rpm keeps the liquid at the bottom of the tube, so samples do not bump or cross-contaminate. Operation is simple: one button to start, one to stop, and quick keys for room temperature, 30, 45 and 60 °C. The chamber is PTFE-coated and the gas path is PTFE. The vacuum pump is external. LACEVAC-1C is offered in two versions: without a pump, for laboratories that already have one, or with a chemically resistant vacuum pump. The rotor for 66 × 1.5 mL tubes is included; three more rotors take tubes up to 50 mL.

VACUUM + HEAT + CENTRIFUGATION

RT+5 °C TO 70 °C

1800 RPM • 380 × G

ONE-BUTTON START

WITHOUT PUMP

WITH VACUUM PUMP

PTFE-COATED CHAMBER

4 ROTORS

COLD TRAP OPTION

Document type: **Technical Specification Sheet**

Product: **LACEVAC-1C Vacuum Centrifugal Concentrator • without pump or with vacuum pump**

SKU: **PRO6044**

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

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 **HEATING ONLY** RT+5 °C to 70 °C



LACEVAC-1C • transparent lid, vacuum gauge, time and temperature display



LACEVAC-1C in the version with vacuum pump

MODEL

LACEVAC-1C • PRO6044

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LACEVAC-1C • technical specification

Compact vacuum centrifugal concentrator, RT+5 °C to 70 °C, 1800 rpm, without pump or with vacuum pump, rotor 66 × 1.5 mL included, optional cold trap –50 °C

RT+5 °C TO 70 °C

1800 RPM

WITHOUT PUMP

WITH VACUUM PUMP

66 × 1.5 ML INCLUDED

COLD TRAP –50 °C

— Two versions, one instrument

Product Overview

Application profile

DNA and RNA: drying of precipitates and concentration of eluates.

Proteins and peptides: concentration of digests, fractions and synthesis samples.

HPLC and SPE: recovery of collected fractions and eluates.

Drug and metabolite samples: concentration of small volumes before analysis.

Heat-sensitive samples: drying at room temperature or with mild heat.

Key features

Control: one-button start and stop; time and temperature on the display.

Quick temperature keys: room temperature, 30 °C, 45 °C and 60 °C.

Speed: 1800 rpm, fixed; 380 × g.

Temperature: RT+5 °C to 70 °C, set in steps of 1 °C.

Timer: 0 to 9999 min; at 0 the instrument runs continuously.

Pump: the pump starts only after the rotor reaches speed.

End of run: automatic venting; venting also after a power failure.

Build: PTFE-coated chamber, PTFE gas path, inlet air filter.

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: up to 66 tubes of 1.5 mL per run.

Core technical summary

Parameter	Specification
Model	LACEVAC-1C
Product type	Vacuum centrifugal concentrator
Speed	1800 rpm, 380 × g
Temperature range	RT+5 °C to 70 °C
Timer	0 to 9999 min
Version without pump	connect your own vacuum pump
Version with vacuum pump	30 L/min • final vacuum 5 mbar
Rotors	66 × 1.5 mL included; 3 optional
Cold trap	option, –50 °C, 2 L

TEMPERATURE
RT+5 °C to 70 °C

SPEED
1800 rpm

VACUUM, WITH PUMP
5 mbar

CAPACITY
66 × 1.5 mL

RT = room temperature. 5 mbar is absolute pressure, the final vacuum of the pump. The vacuum pump, the cold trap and the optional rotors are ordered separately. Tubes and samples are not part of the instrument. Suitability for a specific solvent and method is confirmed in the COLO.Science quotation.

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Technical Specifications

Parameter	LACEVAC-1C	Parameter	LACEVAC-1C
Speed	1800 rpm, fixed	Chamber	PTFE-coated, corrosion-resistant
Maximum centrifugal force	380 × g	Lid	transparent
Temperature setting range	RT+5 °C to 70 °C, step 1 °C	Drive	magnetic, induction motor
Quick temperature keys	RT, 30 °C, 45 °C, 60 °C	Rotors	4 types; 66 × 1.5 mL included
Time range	0 to 9999 min	Noise	≤ 55 dB(A)
Display	time and temperature; analogue vacuum gauge	Supply	AC 220 V, 50/60 Hz, 1000 W
Vacuum pump	external; not built in	Dimensions (L × W × H)	350 × 280 × 290 mm
Final vacuum, with pump	5 mbar abs., 30 L/min	Net weight	18 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. Not suitable for samples in hydrochloric acid.

Rotors

Rotor	Capacity	Rotor	Capacity
PRO7168 • included	66 × 1.5 mL or 2 mL	PRO7169	10 × 15 mL, conical
PRO7170	24 × 5 mL, round bottom	PRO7171	6 × 50 mL

One rotor for 66 × 1.5 mL tubes is supplied with the instrument. The other rotors are ordered separately. Tubes stay open during the run.

Two versions

Without pump: PRO6044; connect a vacuum pump you already have. Ask us whether your pump is suitable.

With vacuum pump: PRO6044 + 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 so that it sits on the pin.
- 2 • **Load:** place the open tubes symmetrically and close the lid.
- 3 • **Run:** set temperature and time and press start; the pump starts after the rotor.
- 4 • **End:** at the end of the time or on stop the pump switches off, the chamber is vented and the rotor stops.

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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.

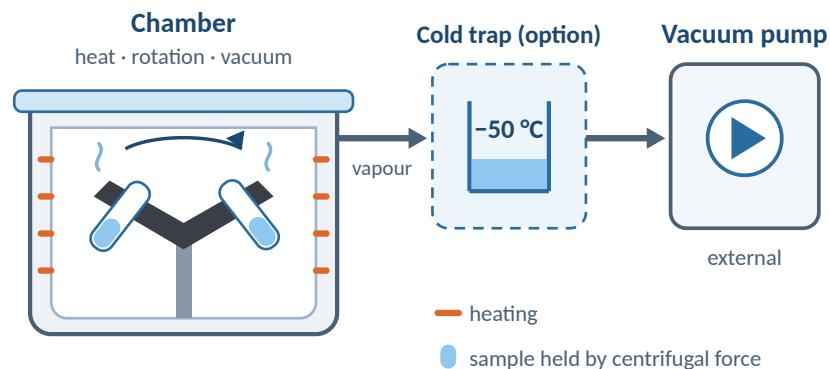


Cold trap -50 °C, 2 L

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

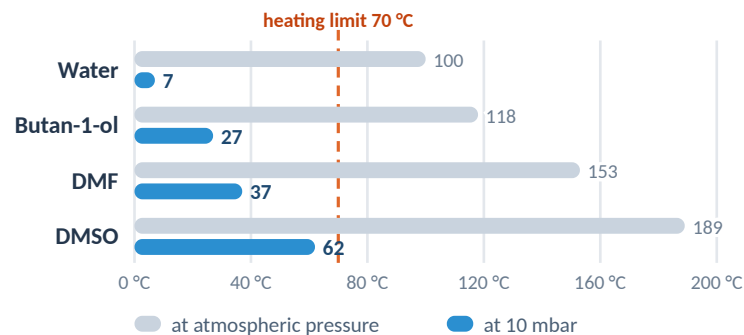
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From the chamber to the pump



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

Boiling point under vacuum



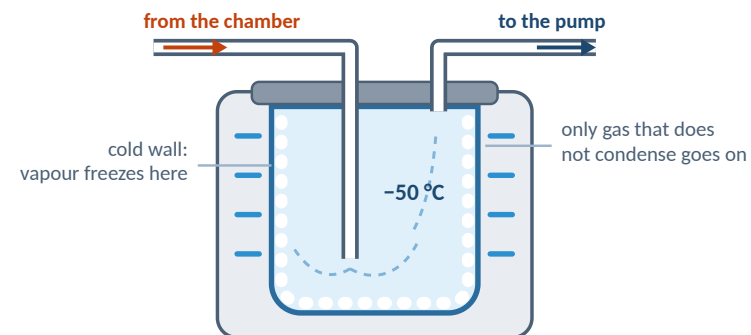
Calculated, rounded values for a working pressure of 10 mbar; the final vacuum of the pump is 5 mbar. At 10 mbar water boils at about 7 °C instead of 100 °C, so water and volatile solvents evaporate with little or no heating.

Lid and chamber



Thick transparent lid over the PTFE-coated chamber; the run can be watched at any time.

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.

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LACEVAC-1C with the optional cold trap -50 °C, 2 L

Ordering information

Item	Value
LACEVAC-1C vacuum centrifugal concentrator, without pump	PRO6044
LACEVAC-1C with vacuum pump VACUU-CDT30	PRO6044 + PRO3633
Optional rotors	PRO7169 · PRO7170 · PRO7171
Cold trap -50 °C, 2 L	PRO7173
Delivery	Instrument, rotor 66 × 1.5 mL, mains cable, manual

Configuration checklist

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

Solvent: water and common organic solvents; not for hydrochloric acid.

Tubes: type and number per run decide the rotor.

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

Place of use: 350 × 280 mm footprint, 18 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 tube type, the volume and the number of samples per run. COLO.Science will confirm the version, the rotors and the delivery time.

QUICK CONTACT

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COLO.SCIENCE · SAMPLE CONCENTRATION SUPPORT

With or without a vacuum pump?

Send the solvent, the tube type, the volume and the number of samples per run. COLO.Science will confirm the version, 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.

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