

SACO100-1 • SACO100-2

Nitrogen Sample Concentrator • Dry Block • RT+5 °C to 160 °C • 1 or 2 Blocks • Height-adjustable Needle Head

SACO100 Nitrogen Sample Concentrator evaporates solvent from many tubes at once: an aluminium dry block warms the samples while a stream of nitrogen from stainless steel needles sweeps the vapour off the liquid surface, without oxygen and without a water bath. The block is controlled from RT+5 °C to 160 °C with an accuracy of $\leq \pm 0.5$ °C at 40 °C, the needle head travels 200 mm on a rack-and-pinion stand, and the needles are placed only where there are tubes. **SACO100-1** takes one block, **SACO100-2** two; twelve interchangeable blocks cover tubes from $\varnothing$ 10 mm to $\varnothing$ 40 mm and 1.5 ml and 2.0 ml micro tubes.

NITROGEN BLOW-DOWN

DRY BLOCK, NO WATER

RT+5 °C TO 160 °C

$\leq \pm 0.5$ °C AT 40 °C

1 OR 2 BLOCKS

UP TO 48 TUBES

200 MM HEAD TRAVEL

TIMER

OVER-TEMPERATURE PROTECTION

Document type: **Technical Specification Sheet**

Product: **SACO100 Nitrogen Sample Concentrator • SACO100-1 and SACO100-2**

SKU: **PRO4583 • PRO4584**

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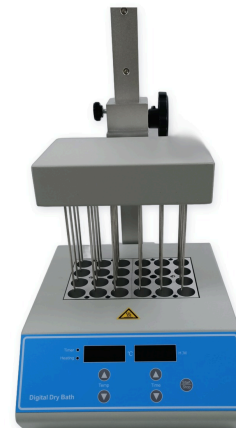
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 **HEATING ONLY** RT+5 °C to 160 °C



SACO100-2 • two blocks, needle head lowered over the tubes



SACO100-1 • one block, gas hose connected to the needle head

MODELS

SACO100-1 • PRO4583

SACO100-2 • PRO4584

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SACO100 • technical specification

Nitrogen sample concentrator with dry block, RT+5 °C to 160 °C, one block (SACO100-1) or two blocks (SACO100-2), height-adjustable needle head, 12 interchangeable blocks

RT+5 °C TO 160 °C

≤ ±0.5 °C AT 40 °C

1 OR 2 BLOCKS

UP TO 48 TUBES

 N₂ UP TO 15 L/MIN

300 W • 500 W

— Many samples concentrated at once

Product Overview

Application profile

Residue analysis: pesticides, mycotoxins and veterinary drugs before GC and LC.

SPE eluates: concentration of fractions after solid-phase extraction.

Food and environment: extracts of food, water and soil samples.

Pharmaceutical and biological: solvent removal from extracts and reaction mixtures.

Solvent exchange: evaporation to dryness and reconstitution in another solvent.

Key features

Control: microprocessor with PID control; separate temperature and time displays.

Temperature: RT+5 °C to 160 °C, resolution 0.1 °C.

Heating: 25 °C to 160 °C in ≤ 15 min.

Timer: 1 min to 99 min 59 s, or continuous.

Needle head: stainless steel needles, rack-and-pinion height adjustment.

Blocks: 12 interchangeable aluminium blocks.

Calibration: temperature deviation calibration.

Safety: automatic fault detection with alarm; over-temperature protection.

Why nitrogen blow-down

Many samples at once: up to 24 tubes per block, 48 with two blocks.

Gentle: evaporation below the boiling point, under inert gas.

Dry heat: an aluminium block instead of a water bath.

Any tube length: the needle head is raised and lowered over 200 mm.

Gas where it is needed: needles are fitted only at the positions in use.

Core technical summary

Parameter	Specification
Models	SACO100-1 • SACO100-2
Product type	Nitrogen sample concentrator, dry block
Temperature control range	RT+5 °C to 160 °C
Accuracy	≤ ±0.5 °C at 40 °C • ≤ ±1 °C at 120 °C
Uniformity	≤ ±0.5 °C
Heating 25 °C to 160 °C	≤ 15 min
Blocks	1 (SACO100-1) • 2 (SACO100-2)
Head travel	200 mm
Nitrogen flow	up to 15 L/min

TEMP. CONTROL
RT+5 °C to 160 °C

ACCURACY AT 40 °C
≤ ±0.5 °C

BLOCKS
1 or 2

HEAD TRAVEL
200 mm

RT = room temperature. The instrument is supplied without a block; blocks are ordered separately. Nitrogen supply, pressure regulator, tubes and samples are not part of the instrument. Use in a fume hood. Suitability for a specific method is confirmed in the COLO.Science quotation.

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Technical Specifications

Parameter	SACO100-1 · SACO100-2	Parameter	SACO100-1 · SACO100-2
Temperature setting range	0 °C to 160 °C	Nitrogen flow rate	up to 15 L/min
Temperature control range	RT+5 °C to 160 °C	Nitrogen pressure, up to 16 needles	0.02 MPa
Temperature accuracy	≤ ±0.5 °C at 40 °C · ≤ ±1 °C at 120 °C	Nitrogen pressure, more than 16 needles	0.05 MPa
Temperature uniformity	≤ ±0.5 °C	Number of blocks	SACO100-1: 1 · SACO100-2: 2
Display resolution	0.1 °C	Power	SACO100-1: 300 W · SACO100-2: 500 W
Heating time	≤ 15 min, 25 °C to 160 °C	Voltage	AC 220 V, 50/60 Hz (AC 110 V on request)
Time range	1 min to 99 min 59 s, or continuous	Dimensions (W × D × H)	260 × 220 × 450 mm
Maximum vertical travel	200 mm	Weight	SACO100-1: 7.0 kg · SACO100-2: 7.5 kg

RT = room temperature; the control range starts 5 °C above the temperature of the room the instrument stands in. Accuracy, uniformity and heating time are supplier data.

Interchangeable blocks

SKU	Tubes	SKU	Tubes
PRO4585	24 × Ø 10 mm	PRO4523	12 × Ø 20 mm
PRO4518	24 × Ø 12 mm	PRO4524	8 × Ø 26 mm
PRO4519	24 × Ø 13 mm	PRO4525	4 × Ø 28 mm
PRO4520	16 × Ø 15 mm	PRO4526	3 × Ø 40 mm
PRO4521	16 × Ø 16 mm	PRO4529	24 × 1.5 ml micro tubes
PRO4522	12 × Ø 19 mm	PRO4530	24 × 2.0 ml micro tubes

SACO100-1 takes one block, SACO100-2 two blocks, which may be of different formats.

Needle head and nitrogen

Needles: pushed into the head at the positions that match the block; unused positions stay closed.

Height: the head is lowered until the needle tips are just above the liquid, and lowered further as the level drops.

Nitrogen: dry, oil-free gas through a pressure regulator; 0.02 MPa up to 16 needles, 0.05 MPa above.

Flow: set so that the surface dimples without splashing; up to 15 L/min in total.

Run sequence

1 • Block: fit the block for your tubes and set the temperature; the block heats up.

2 • Load: place the tubes, fit needles at the used positions and lower the head.

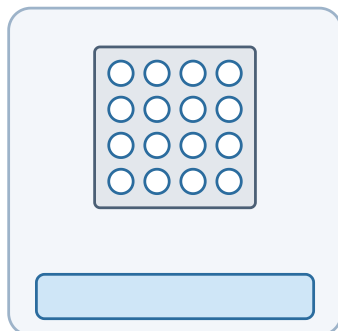
3 • Blow: open the nitrogen, set the flow and start the timer.

4 • End: close the gas, raise the head and take the tubes out.

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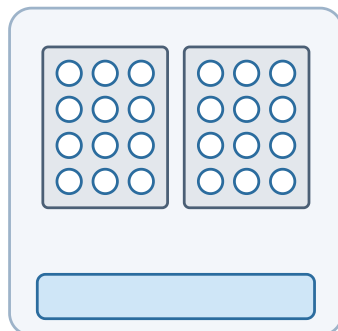
One block or two

SACO100-1



1 block

SACO100-2



2 blocks

Schematic top view. SACO100-1 heats one block, SACO100-2 two blocks side by side under a wider needle head.

Accessories supplied



Gas hose with quick coupling, needle head, stand with height adjustment, stainless steel needles, silicone pad, spare fuses and mounting screws.

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SACO100-2 · side view, stand with rack-and-pinion height adjustment

Ordering information

Item	Value
SACO100-1 nitrogen sample concentrator, 1 block, without block	PRO4583
SACO100-2 nitrogen sample concentrator, 2 blocks, without blocks	PRO4584
Blocks	see table of interchangeable blocks
Flow control valve	PRO4597
Supply	AC 220 V, 50/60 Hz
Delivery	Instrument, stand, needle head, needles, gas hose, mains cable, manual

Configuration checklist

Tubes: outer diameter and number per run decide the block and the model.

Temperature: evaporation temperature within RT+5 °C to 160 °C.

Nitrogen: cylinder or generator with regulator, 0.02 to 0.05 MPa, up to 15 L/min.

Each tube adjusted separately? SACO200 has a valve on every needle.

Place of use: fume hood; 260 × 220 mm footprint, 450 mm high.

SUPPLIER AND SUPPORT

COLO Lab Experts
Polje ob Sotli 4, SI-3255, Slovenia

Selection guidance: Send the tube diameter, the number of samples per run, the solvent and the temperature. COLO.Science will confirm the model, the blocks and the delivery time.

QUICK CONTACT

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COLO.SCIENCE · SAMPLE CONCENTRATION SUPPORT

One block or two for your samples?

Send the tube diameter, the number of samples per run, the solvent and the temperature. COLO.Science will confirm the model, the blocks 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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