

IR CONCENTRATORS

- MICRO-CENVAC
- DNA-VAC
- MAX-UP
- GAS BLOWING SYSTEM

MICRO-CENVAC

NB-503CIR



DNA-VAC

NB-502CIR



MAX-UP

NB-504CIR



GAS BLOWING SYSTEM

NB-503GB



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MICRO-CENVAC (NB-503CIR)

- Most Compact Vacuum Centrifugal Concentrator in its class. Special Infrared Glass Lid spread Heat & IR to accelerate evaporation of liquid faster in vacuumed chamber.
- this compact equipment is ideal in molecular biology(especially DNA), proteomics,genomics, genetics, cell biology and drug discovery labs.



Special Lid Heater with IR radiation.
With Infrared radiation, the Lid directly heat to Sample which helps evaporation even faster.



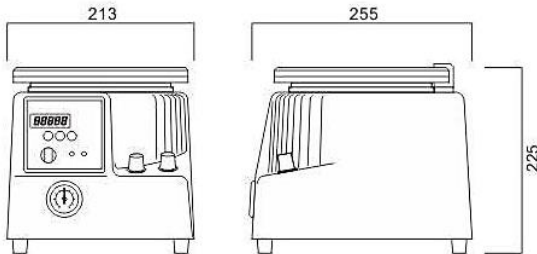
Real Scope(Standard)
Easy view of sample volume while it is spinning fast. It looks like sample tube is not spinning.



Built in Diaphragm vacuum pump
High performance pump (NB-503CIR: MAX 100 mbar
Connectable with other booster pump for higher vacuum rate.



Vacuum port
Vacuuming port (Exhalation hole) is on center of shaft for low contamination.



Accessories



RO-1.5/24



RO-30/08



RO-15/12



RO-10/16



Real Scope



MICRO-CENVEC

Features

- **Compact but, All built-in**
Despite smallest footprint, vacuum pump and glass trap are all built-in.
- **Fast Evaporation Time**
With using special infrared lid heater, liquid in sample is heated faster even in vacuumed chamber.
- **Stable Spinning and Quiet Operation**
Using Brush Less DC motor, the spinning sample is conducted stably and quiet.
- **Easy Sample Check**
Real Scope allows user to view sample or its volume remaining in tubes without stopping spin.
- **Teflon-Coated chamber & Diaphragm pump**
Minimize corrosion by acid solvent and the pump is oil-free
- **Selectable RPM**
Selectable a RPM mode among 1700 or 2500 or 5000 RPM even while it's spinning
- **LED Display**
Shows Temperature & Timer count.
- **CE Marked & ROHS compliance**
- **Cold Trap(Optional)**
2Liter capacity cold trap or Peltier Trap(-20℃) for small Glass Trap available with Micro Cenvac.



Specification

Items	Unit	NB-503CIR
Temperature		
range	℃	35℃ to 65℃
control		Microprocessor digital PID
increment	℃	0.1℃
standby		Pre-heat
Operating panel		Touch button
Function		IR, IR & Heat, Heat
Display		5 digit LED
Timer		99Hour 59Min
Capacity	ml,ea	1.5mlx24ea, 10mlx16ea, 0.5mlx53ea, 15mlx12ea, 30mlx8ea
Speed		
range	rpm	1700, 2500 and 5000rpm
control		Selector
Vacuum		
pump	mbar	Diaphragm Vacuum Pump (PTFE Coating)
ultimate		100mbars/abs
oper. pressure		1.5bar/g
atm. pressure		
Dimensions	mm	6.5lit/min
Power	V/Hz	213(W)x255(D)x225(H)mm
Weight	kg	110/220V, 50/60Hz, 200W 9.5kg



DNA-VAC (NB-502CIR)

- DNA-VAC can be used in various experiment for micro-protein or molecular structure.
- The required substances are extracted by concentrating DNA or RNA, Amino acids, Hormones, Enzymes, Protein in a short time by using vacuum pump and infrared ray.
- DNA Pellet is collected into the top of tube evenly in the experiment to blend Ethanol with the samples in Microgram units in a very short time.



Vacuum port is on the center of rotor to make contamination to be minimized.



IR-emitting<InfraRed> glass lid shortens the time of concentration.



Chemical-proof Diaphragm vacuum pump is built in the equipment

Accessories

RO-96 WELL	RO-1.5/60	RO-1.5/132	RO-15/12	RO-50/08	



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Singapore Sales Office

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DNA-VEC

Features

- **New IR-emitting plate Glass Lid**
With the use of infrared ray, the sample can be concentrated efficiently in a vacuumed chamber in a short time. The special glass has the endurance against chemicals.
- **Brushless D.C motor**
Induction motor makes almost no noise & vibration. Also, maintenance is not required because it is not necessary to replace brush.
- **No cross-contamination, No sample loss**
The contamination and sample loss is minimized because the exhalation hole for vacuum is located on the top of the shaft.
- **Wide selection rotor**
Few micro-liters up to 50ml tube hold at once and plate rotor holds two 96 well micro-titer plate, simply interchangeable.
- **Compact, bench-top model**
Built-in chemical free diaphragm vacuum pump is suitable for individual researchers with limited space.
- **Integrated Evaporation System**
(8Mbar Diaphragm Vacuum Pump + -20°C Cold Trap + Chamber & Lid Heater)

Specification



Items	Unit	DNA-VAC(NB-502CIR)
Temperature		
range	°C	Ambient +5°C to 80°C
control		Microprocessor digital PID
increment	°C	0.1°C
standby		Pre-heat
Operating panel		Touch button
Heating mode		Selectable 3 mode IR/IR & Heat/Heat
Display		5 digit LEDx2ea
Timer		99Hour 59Min
Capacity	ml,ea	1.5ml micro-tubex132ea 15ml tubex12ea, 50ml tubex8ea, 96 well micro-titer platex2ea
Speed		
range	rpm	Max. up to 2,000rpm
Vacuum		
pump		Chemical resistant PTFE coated Diaphragm pump
ultimate pressure	mbar	8mbar
gauge		Analog vacuum gauge
Dimensions	mm	670(W)x685(D)x480(H)mm
Power	V/Hz	110/220V, 50/60Hz, 400W



MAX-UP (NB-504CIR)

- IR CONCENTRATOR is high efficient concentration equipment to study micro-protein or molecular structure, extracted DNA or RNA.
- The required samples are extracted by concentrating DNA or RNA, Amino acids, Hormones, Enzymes, Protein in a short time by using vacuum pump and far Infrared ray.



Vacuum port is located at the center of rotor for minimal contamination.



IR-emitting<InfraRed> glass lid reduces the time contamination of concentration.



Cold trap chamber
<-20°C, 2liters>



Chemical-proof
Diaphragm vacuum
pump is built in the
equipment.

Accessories



RO-96 WELL



RO-1.5/60



RO-1.5/132



RO-15/12



RO-50/08



RO-250/04



MAX-UP

Features

- **IR-emitting Plate Glass lid (Patent No.10-0616063)**
With the use of infrared ray, the sample can be concentrated efficiently in a vacuumed chamber in a short time. The special IR glass lid protect liquid sample having high boiling point from condensation.
- **Designed for heat-sensitive sample**
It is available for the wide range of heat sensitive materials such as proteins and other organic substances.
- **Two-point Temperature Sensors**
Two temperature sensors in the chamber and bucket provide efficient concentration.
- **Detector to check unbalance of rotor**
The detector checks the unbalance of rotor caused by the different quantities of remaining samples during concentrating. The function ensures the environment of experiment is in a safety.
- **Pre-heating mode**
Pre-heating function allows to shorten experiment time by setting the temperature prior to use.
- **No cross-contamination, No sample loss**
The contamination and sample loss is minimized because the exhalation hole for the vacuum is located on the center of the shaft.
- **Compact & Mobile System**
Chemical free diaphragm vacuum pump and Cold trap is built-in the equipment.
It's suitable for individual researchers with limited space.



Specification



Items	Unit	MAX-UP (NB-504CIR)
Temperature		
range	°C	+4°C to 80°C
control		Microprocessor digital PID
increment	°C	0.1°C
standby		Pre-heat
Operating panel		Touch button
Heating mode		Selectable 3 mode IR/IR & Heat/Heat
Display		5 digit LEDx2ea
Capacity	ml,ea	1.5ml micro-tubex132ea 15ml tubex12ea, 50ml tubex8ea, 250ml tubex4ea 96 well micro-titer platex2ea
Speed range	rpm	Max. up to 1,500rpm
Vacuum pump		
ultimate pressure	mbar	Chemical resistant PTFE coated Diaphragm pump 2 mbar
Cold trap		Analogue vacuum gauge
Dimensions	mm	-20°C , 2 liter collector
Power	V/Hz	600(W)x630(D)x1085(H)mm
Weight	kg	220V/60Hz 138kg





GAS BLOWING SYSTEM (NB-503GB)

- GAS blowing system allows the experimenters to get the required materials from the mixed samples having different boiling points.
- Efficient evaporation is done by simultaneous or separate delivery of non-reactive pressurized gas to samples.
- Nitrogen gas provides better concentration without oxidation.



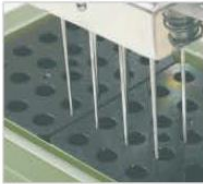
STAND
Individual nozzle is adjustable by stop-screw and pinion motion stand.



GAS INLET
Hole to input GAS to Manifold



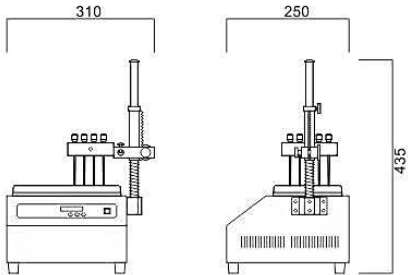
MANIFOLD & KNOB
To adjust the amount of GAS



MANIFOLD GAS OUTLET
Nozzle to discharge the exhausted gas

Accessories

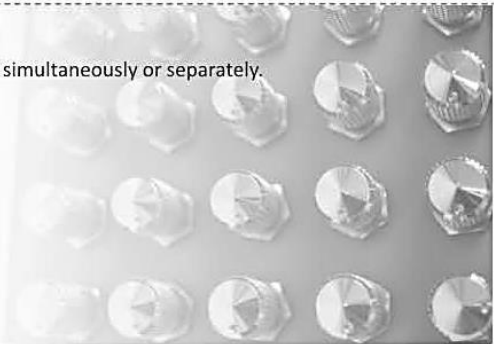
BK-1.5/20	BK-10/20	BK-15/20	



GAS BLOWING SYSTEM

Features

- **Adjustable blowing GAS**
Each nozzle can be adjusted to blow the adequate amount of Nitrogen to sample simultaneously or separately.
- **Precision temperature stability**
Temperature is controlled precisely by Microprocessor PID control
- **Wide range of modular blocks**
Various Modular blocks for 1.5ml micro-tube and 13mm in diameter tube.



Tube size	Holes	Diameter of hole
1.5ml micro-tube	20	11mm
10ml tube	20	13mm
15ml tube	20	16.5mm



Specification

Items	Unit	NB-503GB
Temperature range	℃	Ambient +5℃ to 120℃
control		Microprocessor digital PID
increment	℃	0.1℃
Temperature method		Heater
Operating panel		Touch button
Display		5 digit LED
Manifold size		130(W)x110(D)x30(H)mm
Nozzle		Each nozzle control (20ea) flow rate
Stand		Pinion motion stand
Block dimensions	mm	110(W)x90(D)x45(H)mmx2
capacity		1.5ml or 10ml-tubex20x2
Connecting port		Flow control valve
Overall dimensions		310(W)x250(D)x435(H)mm
Power	V/Hz	110/220V, 50/60Hz, 150W
Weight	kg	6kg
Exhaust system		Contamination free (Each nozzle)



IR CONCENTRATOR

Accessories

RO-1.5/24  1.5ml micro-tube x 24 Application Model: NB-503CIR	RO-1.5/60  1.5ml micro-tube x 60 Application Model: NB-502CIR NB-504CIR	RO-1.5/132  1.5ml micro-tube x 132 Application Model: NB-504CIR NB-502CIR
RO-30/08  30ml (ø30 x 73mm) tube x 08 Application Model: NB-503CIR	RO-15/12  15ml (ø20 x 70mm) tube x 12 Application Model: NB-503CIR	RO-10/16  10ml (ø18 x 65mm) tube x 16 Application Model: NB-503CIR
RO-15/12  15ml (ø20 x 87mm) tube x 12 Application Model: NB-504CIR NB-502CIR	RO-50/08  50ml (ø34 x 75mm) tube x 8 Application Model: NB-504CIR NB-502CIR	RO-250/04  250ml (ø65 x 100mm) tube x 4 Application Model: NB-504CIR
Gas blowing Block  1.5ml x 20 hole 10ml x 20 hole 15ml x 20 hole Application Model: NB-503GB	Real Scope  Application Model: NB-503CIR	RO-96 WELL  96 well plate x 2 Application Model: NB-504CIR NB-502CIR