



Advanced Concentration Solutions

Your Reliable Laboratory Solution Provider

Your **Lab** Our **Tech**

LabTech Group

M12

AUTOMATED CONCENTRATION SOLUTION

The M12 quantitative parallel concentrator provides rapid and convenient sample concentration solution. With this system it is possible to concentrate into a fixed end-point volume or dry samples. While saving the precious fume hood resources in the laboratory, it is easy to operate, unattended, and automatically prompts when the concentration is completed, and has a short evaporation time. It is the ideal substitution of conventional rotary evaporators and ordinary nitrogen evaporators.

VISIBLE PARALLEL CONCENTRATOR



TECHNICAL FEATURES:

- Upto 12 sample positions work simultaneously or be combined flexibly, start and stop at any time, samples to be added or removed at any time
- 12 infrared sensors for single cup volume control
- Support 200ml and 50ml concentration cups simultaneously
- Vortex nitrogen purge to get the highest concentration efficiency. The location and direction of nitrogen purge can be adjusted according to the concentration cup size and sample volume (Be patented)
- User friendly design: Auto stop the nitrogen purge when opening the cover. After closing the cover, the nitrogen purge recovers automatically
- Nitrogen pipe is free of welding to avoid corrosion and can be disassembled and cleaned manually
- Concentration process is visible through the front window and top window, illuminated by the internal light
- Enclosed system with built-in highly efficient vapor exhausting system. fume hood space can be saved
- Automatic detection of the liquid endpoint 1ml, 0.5ml, and nearly dry 0ml
- 4 working modes including Sensor, Time, Sensor & Time, and Manual can meet various evaporation demands
- Intelligent pressure control in 3 modes including Constant, Step, and Ramp
- Adjustable alarm sound level: Mute, Low, Medium, and High
- Liquid bath with temperature control range from ambient to 100°C
- Low liquid level alarm, it will automatically stop heating for safety protection
- Gas over-pressure alarm, it will automatically cut-off the gas for safety protection
- Real-time display of temperature, pressure, and residual time
- Intuitively touch screen control interface
- Possibility to place the concentration cups in LabTech HPSE, GPC and SPE directly, samples can be directly concentrated without transfer.
- Dimension: open:77cm (L)x45cm(W)x62cm(H) closed:77cm (L)x45cm(W)x35cm(H)



PRODUCT INTRODUCTION

Intuitive control interface

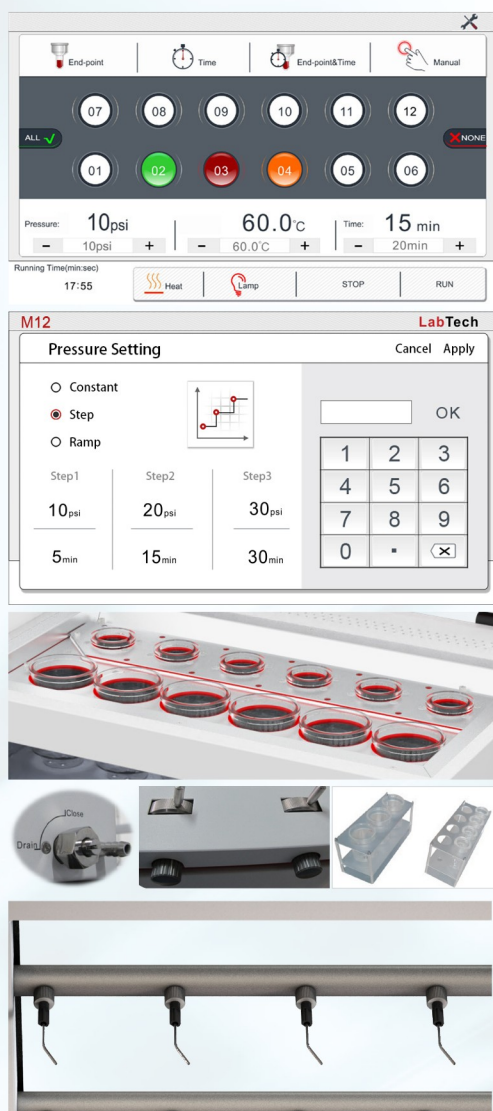
- Touch screen control with intuitive and user-friendly interface
- 4 working modes including Sensor, Time, Sensor &Time, and Manual
- Pressure control in 3 modes including Constant, Step, and Ramp
- Adjustable alarm sound level: Mute, Low, Medium, and High

Efficient Nitrogen Purge

- Vortex nitrogen purge with adjustable flowrate. The position and direction of nitrogen purge is adjustable
- Nitrogen pipe is free of welding to avoid corrosion and can be disassembled and cleaned manually.
- The nitrogen purge automatically stops when the cover is opened and resumes to its previous state once the cover is closed

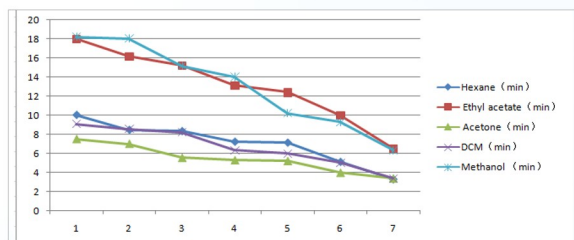
High flexibility and easy operation

- Visible window with backlit, allowing you to observe the samples in the concentration cups at any time.
- 12 sample positions work simultaneously or be combined flexibly
- Start and stop of any channel, and samples to be added or removed at any time
- 200ml&50ml concentration cups can be concentrated simultaneously
- Possibility to place the concentration cups in the HPSE, GPC, and SPE directly, Samples can be directly concentrated without the need for transfer



APPLICATION

The effects of nitrogen purge direction on the concentration rate



X-Angle of nitrogen purge Y-Concentration time

Concentration rate of common solvents (at 60°C)

Solvents	Original Volume (ml)	Time to 1ml(min)
Dichloromethane	180	25
Ethyl acetate	180	20
Cyclohexane	180	18
Methanol	180	65
Acetonitrile	180	40
Acetone	180	21
N- hexane	180	15
Petroleum ether	180	13

Recovery rate of different samples

Sample	Concentration	Solvent	Temp	Recovery Rate %	Comment
Imidacloprid	4 mg/L	Acetonitrile	40°C	105	pH5-11 Stable
Bensulfuron-Methyl	2 mg/L	Acetonitrile	40°C	96	Alkalescency (pH=8) broken down slowly in acidic solution
Methamidophos	2 mg/L	Methanol	40°C	89	Easy to hydrolyze in strong alkaline solution. Speed up the decomposition with the temperature rise over 100°C . Completely decomposition over 150°C
			25°C	84	
Metronidazole	2mg/L	Methanol	40°C	88	White or milk white crystalline powder. Melting point at 160 celcius degree
Fenpropathrin	2 mg/L	乙腈	40°C	101	Slow hydrolysis in weak acid and weak alkaline solution, easy hydrolysis in strong alkaline solution. Speed up the decomposition with the temperature rise over 100 °C . Completely decomposition over 150 °C . Light and heat makes it easy to Decompose.
Cyhalothrin	2 mg/L	Acetonitrile	40°C	103	
Deltamethrin	2 mg/L	Acetonitrile	40°C	104	
Fenvalerate	2 mg/L	Acetonitrile	40°C	102	
Permethrin	2 mg/L	Acetonitrile	40°C	102	
Sulfadiazine	0.4 mg/L	Acetonitrile	40°C	101	Perishable under light. Keep it in dark
Sulfamonomethoxine	0.4 mg/L	Acetonitrile	40°C	89	
Sulfamethazine	0.4 mg/L	Acetonitrile	40°C	100	
Sulfamethoxazole	0.4 mg/L	Acetonitrile	40°C	100	
Sulfaquinoxaline	0.4 mg/L	Acetonitrile	40°C	108	

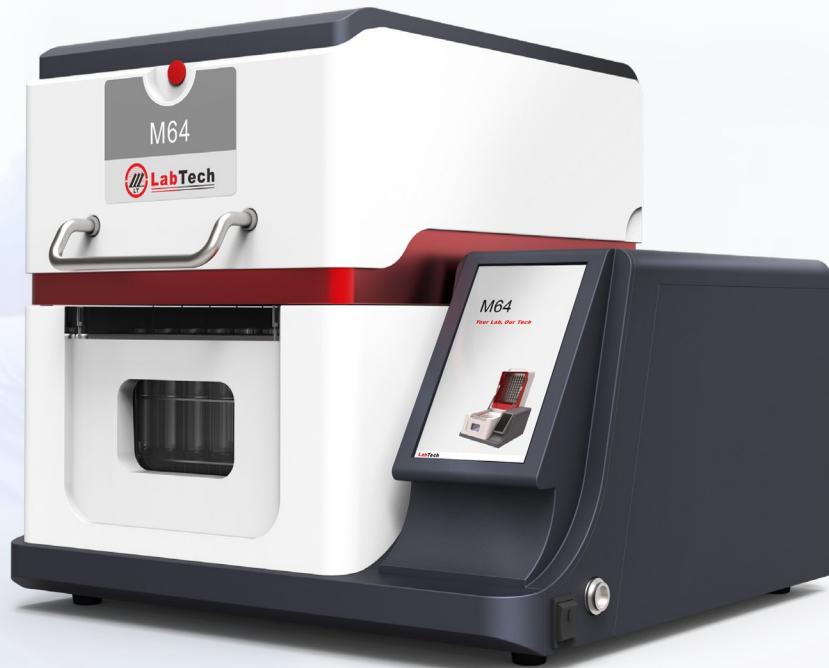
M64

AUTOMATED CONCENTRATION SOLUTION

The M64 (also called "THE GAME CHANGER") is the latest multi-channel and multifunctional parallel instrument designed by LabTech, including all accessories and functions to ensure the highest standard of efficiency, speed, reliability, throughput, and safety of any concentration process.

Nitrogen sweeping, needle level adjustment, and visible concentration process are just a few of the advantages offered by the M64.





APPLICATION



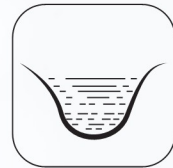
Water quality or
sewage discharge
monitoring



Raw water and drinking
water monitoring e.g. water
supply departments or
companies



Food, beverages,
infusion related
commodities and
medicines inspection



Water quality
monitoring of rivers,
lakes etc

TECHNICAL FEATURES

8 channels with 8 needles each (for a total of 64 samples
of 10 mL) able to work either individually or simultaneously

Automatic up/down movement of nitrogen needles
according to the sample volume reduction

Safety protections including low-level liquid alarm,
over-pressure alarm, overloaded alarm etc.

Quick-change design of nitrogen channel pipes
enables rapid and convenient change for different
channels/positions. nitrogen needles of empty
positions can be easily blocked by a plug to save
nitrogen gas.

Compatible with various vials from minimum 2
mL to maximum 200 mL

Customized racks are available

Visible concentration process is made possible
by the front window and internal lights

7" easy touch-screen control panel with real-time display
Dimensions: (LxWxH cm) 50x53x67 (open) 50x53x45
(closed)

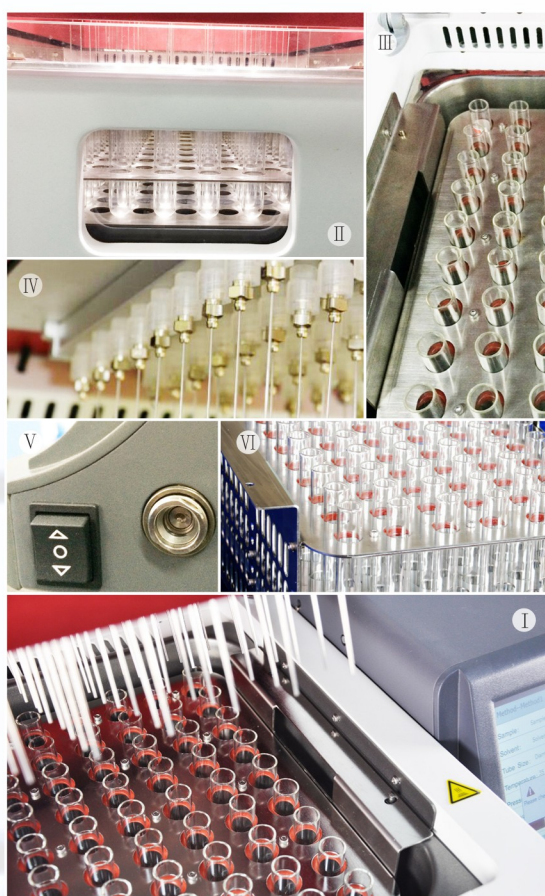
PRODUCT INTRODUCTION

During concentration, the top cover is automatically locked for safety protection. The visible front window with light inside is convenient for process observation at any time.

Touch screen control with intuitive and user-friendly interface.

Nitrogen pressure is auto-regulated and kept stable when changing the working channels qty.

According to the sample volume reduction, nitrogen needles automatically move up/down to ensure high efficiency but low nitrogen gas consumption.



- I ■ Automatic control for heating temperature and gas flowrate in the whole process to ensure the most optimized concentration condition
- II ■ Visible front window with internal lights, the whole concentration process can be observed without opening the cover
- III ■ Up to 64 samples can be processed simultaneously, featuring a Separate rack design that accommodates for different vials or centrifuge
- IV ■ Quick-change design of nitrogen channel pipes enables rapid and convenient change for different channels/positions
- V ■ Fast-plug of bath drain outlet for easy cleaning
- VI ■ Separate rack design support easy change of different racks

Concentration and drying time for common solvents

Solvent	Tube Size	Start Volume	Nitrogen Pressure	Waterbath Temp(°C)	Interval of Nitrogen needle decreasing (min)	Total Time(min)
Acetone	1.5×10cm	7ml	12psi	50°C	0.7	9.5
Dichloromethane				40°C	1.0	11.0
N-hexane				60°C	0.3	4.5
Methanol				60°C	1.0	12.8
Ethyl acetate				65°C	0.6	7.6
Acetonitrile				65°C	1.0	14.2

Optional racks and tubes

Item	Option Vials	Volume	Position
1	GC/LC Vial	2ml	64
2	Test tube	10ml	64
3	Plastic centrifuge tube	15ml	64
4	Collection vial	20ml	64
5	Collection vial	40ml	48
6	Plastic centrifuge tube	50ml	48
7	Collection vial	60ml	48
8	Concentration cup with end point	50ml	8
9	Concentration cup with end point	200ml	8

Method -- Method 2

Sample: *TOCI*

Solvent: *N-hexane*

Tube Size: Diameter:1.0cm Depth:12cm

Temperature: 35 40 45 40.0 °C

Pressure: 2 3 4 3 psi

Interval: 1.9 2.0 2.1 20.0min

Timer: 30.0 10.0min

Channel:

CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8

RUN PAUSE STOP

Software Home Page

The Home interface clearly displays the method information and the status of each channel, real-time display of temperature, pressure, remaining time etc. Parameters can be adjusted during the evaporation process.

Method Edition and View

Unlimited number of methods can be stored. New method can be created to explore the experiment condition or directly load the stored method. It is convenient for methods management for laboratory users.

Method List

Method 1
Method 2
Method 3
Method 4
Method 5

Method:
Method 2

Sample:
TOCI

Solvent:
N-hexane

Tube Size:
Diameter 1.0cm
Depth 12cm

Temperature (°C) :
40.0

Pressure (psi) :
3

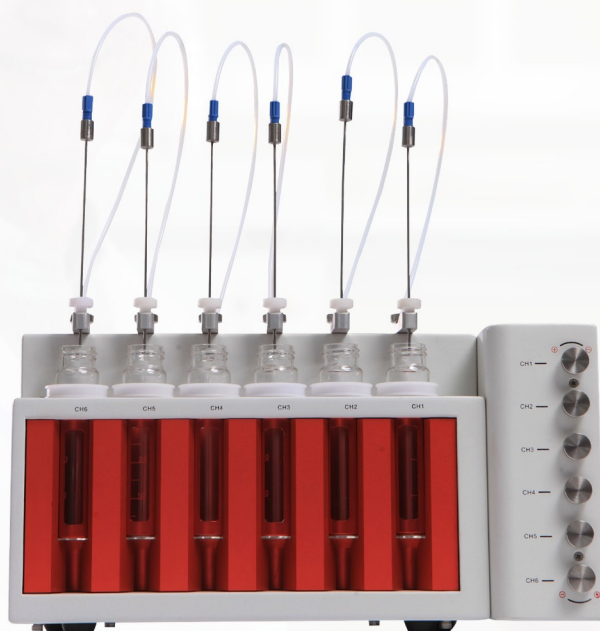
Interval: (Time for needle moving down 5mm) :
2.0

SAVE LOAD

M6

CONCENTRATOR BASIC SOLUTION

The M6 is a basic, cost-effective sample preparation instrument featuring 6 independent channels. Without transferring, samples are directly concentrated in the vial thereby reducing the risk of transfer loss, improving recovery, and saving precious time. The nitrogen flow rate of each channel can be adjusted independently as well as the needles that can be adjusted up and down. The aluminum alloy heating block guarantees temperature uniformity for all samples.



TECHNICAL FEATURES:

- Possibility to run up to 6 samples of 40 mL
- Parallel concentration model
- Possibility to simultaneously or separately work with six channels
- Nitrogen blow in combination with heating concentration mode
- Dry block heating technology to avoid potential water vapor interference
- P.I.D. temperature control with digital display
- Possibility to choose the best position of nitrogen needles to ensure the most efficient evaporation
- Dedicated nitrogen flow regulator for each sample channel
- Compatibility with collection vials of Sepaths UP
- Unique “open view” to control the sample volume level during the evaporation process
- Temperature range: ambient to 120° C
- Dimensions: (LxWxH cm) 35x13x20

M96

SOLUTION FOR MICROPLATES

M96 nitrogen evaporator for microplates features simple operation along with practical and reliable performance. It is designed for sample concentration with high throughput e.g. sample preparation in drug screening, hormone analysis, liquid chromatography, and mass spectrometry. The operation interface is equipped with intuitive LCD touch screen for functions of temperature and time setting, real-time display and method program setting.



TECHNICAL FEATURES:

- Possibility to run up to 96 positions
- Advanced direct nitrogen heating technique with higher efficiency than the bottom dry block heating mode. Heating uniformity is greatly improved, and heating time is faster.
- Touch display with intuitive operation interface for fast control of temperature, time, and flowrate
- 4 program methods can be saved and loaded easily
- Adjustable height of the 96- well plate holder
- Auto-lift up/down of the 96- well plate ensures convenient and practical operation
- The nitrogen needles are removable for easy cleaning
- Nitrogen purge pressure and flowrate can be adjusted according to the requirements of different samples
- Timer range: 1 ~ 9999min
- Gas flowrate: 0 ~ 20l/min
- Temperature range: ambient to 80° C
- Temperature control accuracy: $\pm 3^{\circ}$ C
- Weight: 11kg
- Dimensions: (LxWxH cm) 16,9x33,8x37,1

MAIN APPLICATIONS:

- | | |
|----------------------------------|--------------------------------|
| ■ Chemistry | ■ Geochemistry |
| ■ Environmental organic analysis | ■ Organic analysis |
| ■ Food | ■ Organic analytical chemistry |
| ■ Forensic medicine | ■ Petroleum analysis |



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