

# PRODUCT CATALOG





## DIRECTOR'S NOTE

### **SALAM HANGAT,**

PT. INDOTECH merupakan perusahaan yang senantiasa memberikan dukungan bagi para peneliti, analis laboratorium, dan berbagai pihak yang terjun di laboratorium sains dan teknologi bagi terciptanya kualitas analisa dan hasil riset yang mumpuni dengan cara menyediakan instrumentasi laboratorium yang dapat memberikan hasil pengukuran yang berkuatitas dan terpercaya.

Bidang utama kami adalah distribusi instrumentasi analisis, life science, dan general. Produk kami banyak digunakan pada lembaga riset, laboratorium quality control dan quality assurance, laboratorium servis, universitas, dan industri swasta maupun pemerintah. Selain itu kami juga memberikan pelayanan laboratorium kalibrasi, desain, pembangunan, pengembangan, dan perawatan serta kalibrasi Laboratorium Bersih (Clean Room), dan Laboratorium Biosafety (BSL 2/3).

Layanan kami meliputi dukungan teknis pra-pembelian dan pasca pembelian dengan menyediakan tim aplikasi dan teknisi yang handal dan berpengalaman. Dalam memberikan dukungan yang cepat dan tepat, kami menyiapkan stok dalam jumlah yang cukup untuk instrumen; seperti AAS, UV-Vis Spektrofotometer, HPLC, dan lain-lain, serta suku cadang lainnya.

Sebagai perusahaan yang terus konsisten dan inovatif dalam memberikan pelayanan yang prima kepada pelanggan dan selalu berusaha untuk hadir dalam setiap diskusi serta mendengar mendengarkan keluhan konsumen, kami hadir melalui website dan sosial media yang mudah diakses oleh pelanggan kami.

Semoga hadirnya katalog ini dapat memberikan tambahan informasi untuk anda.

*Indotech, Berkah, Sukses, Luar Biasa!*

**Direksi**



## CUSTOMER SERVICE

PT. INDOTECH berkomitmen untuk selalu memberikan pelayanan terbaik bagi para pengguna produk laboratorium dalam hal pemeliharaan dan perbaikan, untuk menjamin hasil yang memuaskan di lingkungan laboratorium Anda.



***Easy Payment Plan***



***Trade In***



***Bundling Package***



## CUSTOMER SUPPORT

**01** Garansi Produk



**02** Kalibrasi, Perbaikan,  
dan Pemeliharaan



**03** Kontrak layanan Satu Tahun



**04** Aksesori dan  
*Consumable Parts*



# BRIEF TIMELINE

2008

Appointed by Techcom (HK) to represent  
HITACHI in Indonesia

**HITACHI**

2010

Exclusive distributor of **ATS** (Automation  
Tooling Systems, Inc.),



2013

Starts Cleanroom and Biosafety Laboratory  
business

2014

Exclusive distributor of **TOSOH**



2020

Established a representative in Semarang



2025

Accredited as Calibration Laboratory in  
accordance to **ISO17025:2017**



**Stated as Holding**

Start and developed  
Indotech Sains Inti and EasyLab

Distributors of:

- SPT Labtech
- Jeio Tech
- Finetech
- GBC
- Hooke Instrument

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## HITACHI



**UV-VIS-NIR Spectrophotometer**  
Model UH-4150

- ✓ For solid, liquid, and large sample
- ✓ Low stray light and low polarization
- ✓ Prism grating optical system
- ✓ Setting wavelength range 175~3300 nm
- ✓ Wavelength accuracy: UV-VIS region
- ✓  $\pm 0.2$  nm and NIR  $\pm 0.1$  nm; repeatability  $\pm 0.1$  nm (UV-VIS) and
- ✓ Cooled PbS detector (NIR)
- ✓ Light source D2 (UV) and W1 (VIS and NIR)



**FL Spectrophotometer**  
Model F-2700/F-2710

- ✓ Compact with standard operating panel
- ✓ Accurate zero-point correction function
- ✓ Highest detection sensitivity (S/N 800 or above)
- ✓ Wavelength measurement range 220~730 nm
- ✓ Wavelength accuracy  $\pm 3$  nm
- ✓ Light source Xenon lamp



**FL Spectrophotometer**  
Model F-7000/7100

- ✓ "Best in class" analytical signal-to-noise
- ✓ Highest detection sensitivity  
F-7000 - S/N  $\geq 800$  (RMS); S/N  $\geq 250$   
F-7000 - S/N  $\geq 1200$  (RMS); S/N  $\geq 360$
- ✓ Wavelength measurement range 200~750 nm
- ✓ Wavelength accuracy 1 nm
- ✓ Light source Xenon lamp



**UV-VIS/NIR Spectrophotometer**  
Model UH-5700

- ✓ Use Czerny-Turner monochromator Single monochromator
- ✓ Double beam optics
- ✓ Wavelength measurement range 190~3300 nm
- ✓ Use of a continuously variable slit
- ✓ Low stray light
- ✓ Measurement throughput improvements
- ✓ Control of detector switching level difference
- ✓ Common utilization of accessories



**UV-VIS Spectrophotometer**  
Model U-2900/2910

- ✓ 26.4 cm color LCD
- ✓ Wavelength range 190~1100 nm
- ✓ Baseline stability 0.0003 Abs/h (500 nm 2 hrs after power on)
- ✓ W1 and D2 lamps
- ✓ Diverse optional accessories for specific application



**UV-VIS Spectrophotometer**  
Model U-3900/3900H

- ✓ Low stray light and low noise
- ✓ Seya-Namioka mount; diffraction grating single (U-3900) or double (U-3900H) monochromator
- ✓ Wavelength range 190~900 nm
- ✓ Baseline stability 0.0002 Abs/h (50 nm 2 hrs after power on)
- ✓ Broad range of accessories to facilitate any application



**Double Beam Spectrophotometer**  
Model UH-5300

- ✓ Operation by iPad®
- ✓ Wavelength range 190~1100 nm
- ✓ Baseline stability 0.0005 Abs/h (260 nm after 2 hrs warm up period)
- ✓ Longlife Xenon flash lamp with 7 years warranty
- ✓ Automatic 6-cell turret
- ✓ Wide range of accessories to support various application



**Ratio Beam Spectrophotometer**  
Model U-5100

- ✓ Wavelength range 190~1100 nm
- ✓ Baseline stability 0.007 Abs/h (260 nm, 2 hrs after power on)
- ✓ Longlife Xenon flash lamp
- ✓ Equipped automatic 6-cell turret

## HITACHI



**HPLC Chromaster**

- ✓ GUI controller with touch panel
- ✓ New pump with pressure up to 60 MPa
- ✓ Carryover  $\leq 0.003\%$  (Cut method)
- ✓ Unique preheat column oven system
- ✓ Detector
  - UV/UV-VIS ( $\lambda$  190~600/900 nm; accuracy  $\pm 1$  nm)
  - Diode Array ( $\lambda$  190~200 nm; accuracy  $\pm 1$  nm)
  - Fluorescence ( $\lambda$  Ex 200~850nm Em 250~900 nm; accuracy  $\pm 3$  nm)
  - RI (RI range 1~1.75)



**Ultra HPLC  
ChromasterUltra Rs**

- ✓ Highest pressure system 140 MPa, 1400 Bar
- ✓ Achieve 90% reduction in analysis time
- ✓ Detector
  - UV-VIS ( $\lambda$  190-900 nm; accuracy  $\pm 1$  nm)
  - Fluorescence ( $\lambda$  Ex 200~850nm Em 250~900 nm; accuracy  $\pm 3$  nm)
  - Diode Array ( $\lambda$  190~650 nm; accuracy 1 nm)



**HPLC Primaide**

- ✓ Simple design and user friendly layout
- ✓ Leak sensors in all modules
- ✓ Detector
  - UV ( $\lambda$  190~600 nm; accuracy  $\pm 1$  nm)
  - Diode Array ( $\lambda$  190~900 nm; accuracy  $\pm 1$  nm)



**High Speed Amino  
Acid Analyzer  
LA-8080 Amino SAAYA**

- ✓ Benchtop or Floorstanding design
- ✓ Use of highly reliable and stable post-column ninhydrin method
- ✓ Detection limit of 2.5 pmol (S/N 2, Asp)
- ✓ 30 min of analysis time
- ✓ Spectrophotometer wavelength 570 nm, 440 nm



**HPLC Chromaster 5610  
MS Detector**

- ✓ Higher reliability for analytical results through mass detection
- ✓ Measurement mass range 20~1000 m/z
- ✓ Ion source electrospray ionization



**Volumetric Titrator**  
AQV-300 Karl Fischer

- ✓ Simple structure titration cell for easy maintenance
- ✓ Buret capacity 10mL;  
Reproducibility  $\pm 0.01$  mL  
(full discharge, SD for N=5)
- ✓ Measuring range:  
0.1mg~500mgH<sub>2</sub>O
- ✓ Titration cell capacity 150 mL



**Volumetric Titrator**  
MOIVO-A19 Karl Fischer

- ✓ Karl Fischer capacity titration method
- ✓ Moisture (coulometric method / volume method) and titration, up to 4 types of simultaneous measurement are possible
- ✓ Measurement range:  
0.1mgH<sub>2</sub>O~500mgH<sub>2</sub>O (10ppm~100%)
- ✓ Measurement accuracy within  $\pm 0.1\%$   
(20 mL burette full capacity discharge)
- ✓ Repeat accuracy: 0.01 mL or less  
(20 mL burette full capacity discharge, standard deviation of n = 6)  
water-in-methanol measured 10x)
- ✓ GLP compliant functions: Reagent management related, Measurement accuracy test, Burette accuracy test,
- ✓ User management function



**Coulometric Titrator**  
AQ-300 Karl Fischer

- ✓ Simple structure of electrolytic cell for easy maintenance
- ✓ Measurement range:  
10g~99mgH<sub>2</sub>O
- ✓ Measurement accuracy within CV of 0.3% (1g of 1mgH<sub>2</sub>O/mL water-in-methanol measured 10x)
- ✓ Electrolytic cell capacity 150 mL



**Coulometric Titrator**  
MOICO-A19S Karl Fischer

- ✓ Coulometric Karl Fischer Titration method
- ✓ Measuring range 5 $\mu$ gH<sub>2</sub>O~300mgH<sub>2</sub>O
- ✓ Measurement accuracy within CV of 0.3% (1g of 1 mgH<sub>2</sub>O/mL water-in-methanol measured 10 times)
- ✓ Electrolytic cell capacity 150 mL (min.usage: approx. 100 mL)
- ✓ GLP compliant functions: Electrolytic cell maintenance, Measurement Accuracy test



**Potentiometric Titrator**  
COM-300A

- ✓ Compact design with large capacity
- ✓ Titration method  
Potentiometric titration  
(acid/base, redox, precipitation titration, non aqueous titration)  
Polarization titration  
(for volumetric Karl Fischer Titration)
- ✓ Measuring range pH: 0 to 14,  
Resolution 0.01 pH,  
mV: -2000 to +2000mV,  
Resolution 0.1mV



**Automatic Titrator**  
COM-A19

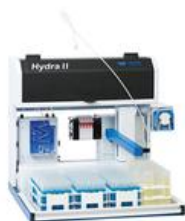
- ✓ Up to 4 titration stations are connectable (with optional titration station (and stirrer))
- ✓ Measuring pH: 0 to 14,  
mV: -2000 to +2000 mV
- ✓ GP compliant functions: Buret precision check, Electrode check,
- ✓ Buret use frequency (display/print), Electrode maintenance (display/print), Reagent level display and alarm



**Mercury Analyzer**  
HG-400

- ✓ Low pressure mercury lamp
- ✓ Detection range 0 - 500ng / 5mL (0 - 100ppb)
- ✓ Lower detection limit 0.5 ppt of Hg

# Mercury Analyzer / ICP-OES Spectrometers TOC Analyzer



**Hydra IIAA**

- ✓ Chemical reduction followed by cold vapor atomic absorption (CVAA) analytical technique
- ✓ Aqueous sample; Hg measured from low ng/L to mg/L levels
- ✓  $\leq 5.0$  ng/L instrument detection limits
- ✓ Short term precision @20 ng/L  $\leq 3.3$
- ✓ Usable ranges 5 ng/L~1 mg/L



**Hydra IIC**

- ✓ Thermal decomposition followed by amalgamation and atomic absorption
- ✓ Solid, semi-solid, and aqueous matrices
- ✓  $\leq 0.0001$  ng instrument detection limit
- ✓ Short term precision @10 ng  $\leq 4$
- ✓ Usable ranges 0.001ng – 1500ng



**Quick Trace  
M-7600**

- ✓ CVAA analytical technique
- ✓ Aqueous sample; Hg measured from sub ng/L to high  $\mu\text{g/L}$  levels
- ✓  $\leq 0.5$  ng/L instrument detection limit
- ✓ Short term precision @20ng/L  $\leq 1.2$
- ✓ Usable ranges 0.5ng/L – 500 $\mu\text{g/L}$



**Quick Trace  
M-8000**

- ✓ Chemical reduction with or without Hg pre-concentration followed by cold vapor atomic fluorescence (CVAF)
- ✓ Aqueous samples
- ✓  $\leq 0.05$  ng/L instrument detection limits
- ✓ Short term precision @5 ng/L  $\leq 2.5$
- ✓ Usable ranges <0.05ng/L – 400 $\mu\text{g/L}$



**Lotix**  
Automated Combustion  
TOC Analyzer

- ✓ TOC detector: Non-Dispersive Infrared (NDIR)
- ✓ Concentration range 0-20,000 ppm without dilution
- ✓ Limit of Detection: 50 ppb
- ✓ Sample Size: 0.5 mL (0.3 ml for high concentration, difficult or salt samples)
- ✓ Precision:  $\leq 2\%$  RSD
- ✓ No syringe drives or 7-port valves
- ✓ Average run time for triplicate TOC is 13-15 minutes



**Torch**  
Combustion TOC Analyzer

- ✓ TOC detector: Nondispersive Infrared (NDIR) with Static Pressure Concentration (SPC)
- ✓ TN detector: PMT Chemiluminescence
- ✓ Limit of Detection: 50 ppb
- ✓ Maximum Measurable Concentration: 30,000 ppm
- ✓ Sample Size: 100  $\mu\text{L}$  to 2.0 m
- ✓ Mass Flow Controller



**Fusion**  
UV/Persulfate TOC Analyzer

- ✓ TOC detector: Nondispersive Infrared (NDIR) with Static Pressure Concentration (SPC)
- ✓ Limit of Detection: 0.2 ppb
- ✓ Maximum Measurable Concentration: 4,000 ppm
- ✓ Precision: 1.0% RSD, +/- 2 ppb or +/- 0.02  $\mu\text{gC}$
- ✓ Exportable reports in user-definable formats
- Pre-programmed method features for pharmaceutical, drinking water and waste water
- Self-diagnostic capabilities including leak check



**HLC-8420GPC EcoSEC Elite**

- ✓ Pump
  - Temperature-controlled
  - Flow rate 0.10 ~ 2.0 mL/min
  - Pump accuracy  $\pm$  2%; precision 0.2%
- ✓ Autosampler
  - Measure type : syringe loop
  - Sample loop : 100, 500  $\mu$ L
  - Injection vol : 1~500  $\mu$ L
  - Precision : CV 0.5%
  - Numb of sample : 100
- ✓ Column Oven
  - Temp 40 ~ 60°C; 30 cm columns x 8, guardcolumn x 1, inlinefilter x 1
- ✓ Detector
  - RI - Dual flow, dynamic range 100 x 10<sup>-6</sup> RIU/V
  - UV (optional) - Dual beam, wavelength range 195~350 nm



**IC-8100**

- ✓ High-throughput and high-speed multi-samples treatments (5 min/sample; up to 250 samples)
- ✓ Liquid feed flow rate range 0.1~2.0 mL/min
- ✓ Colum Oven temp range 25 ~ 45°C
- ✓ Detector
  - CM - Detection range 50, 500, 5000 $\mu$ S/cm
  - UV (optional) - Wavelength range 195 ~ 350nm, Range 0.5, 1, 2, 4 ABU/1V



**Chromatography Columns**

- ✓ The main criterion in choosing between the TSKgel SW, PW, Alpha and SuperAW SEC columns is the molecular weight of the sample and its solubility. The fact that the TSKgel SW columns are based on silica and the TSKgel PW, Alpha and SuperAW columns are derived from a hydrophilic polymer network has less impact on the separation than the particle and pore size differences.



**miVac Duo Concentrator**

- ✓ Compact modular units
- ✓ Accept a two-swing position microplate rotor or disc rotors for tubes
- ✓ Vacuum level (max) 10 mbar
- ✓ Flow rate 38 l/min



**miVac Quatro Concentrator**

- ✓ Compact modular units
- ✓ Able to use a four-swing position microplate rotor and much higher capacity disc rotors
- ✓ Vacuum level (max) <2 mbar
- ✓ Flow rate 33 l/min



**miVac DNA Concentrator**

- ✓ Suitable for simple organic solvents
- ✓ Built in high performance vacuum pump
- ✓ Fixed angle aluminium rotor for 1.5 ml or 2 ml micro-centrifuge tubes



**miVac SpeedTrap**

- ✓ Require small bench space
- ✓ High power cold trap
- ✓ Minimum temperature -50°C; nominal operating temperature -35°C



**Rocket Synergy**

- ✓ Max rotor speed 1800 rpm
- ✓ Autostop
- ✓ Unique Rocket low pressure steam heat transfer technology
- ✓ DriPure anti bumping
- ✓ Sample volumes from 50ml to 5 litres
- ✓ Autodraining condenser



**Rocket Synergy 4D**

- ✓ Max rotor speed 1800 rpm
- ✓ High volume evaporation - Sample volumes from 50ml to 100 liters
- ✓ Autofeed
- ✓ Autostop
- ✓ Unique Rocket low pressure steam heat transfer technology
- ✓ DriPure anti bumping
- ✓ Autodraining condenser



**HT Series 3**

- ✓ Max rotor speed 1415 rpm
- ✓ Max load per swing 1.5 kg
- ✓ High speed evaporation
- ✓ Integrated condenser
- ✓ Front opening for easy access
- ✓ DriPure anti-bumping



**EZ - 2 4.0**

- ✓ Dri-Pure® anti-bumping technology – protect samples from foaming and cross-contamination
- ✓ Touchscreen interface – simple set-up for even the most inexperienced user
- ✓ Fast lyophilization and crystallization capability with certain EZ-2 models
- ✓ Compact design – saves valuable lab space without compromising on quality

# Bench Top Lyophilizer, Floor Model Tray / Pilot Lyophilizer Floor Model Manifold & General Purpose Freeze Dryer



## Advantage ProFreeze Dryer/Lyophilizer with Intellitronics Controller

- ✓ Convenience of a tray dryer in a benchtop unit Intellitronics™ controller
- ✓ Maximum condenser capacity 6 L
- ✓ Available with up to 3 usable product drying shelves
- ✓ Shelf temperature control range  
-40~60°C (XL model)  
-55~60°C (EL model)
- ✓ Optional pneumatic stoppering system available

## Advantage 2.0 Bench Top Freeze Dryer/Lyophilizer

- ✓ Compact, bench top design
- ✓ Maximum condenser capacity 3.5 L
- ✓ Offers the capabilities of a pilot-scale freeze dryer
- ✓ Includes the easy-to-use, microprocessor-based Wizard 2.0 controller
- ✓ Accommodate a wide array of products with shelf temperatures to -55°C and condensers to -85°C

## Benchmark Production Freeze Dryer

- ✓ Industrial-grade 316L SS commercial construction – built to last Shelf area available from 2m<sup>2</sup> to 20m<sup>2</sup>
- ✓ Either bulk fixed-shelves, or, stoppering configuration option Shelf Temperature Uniformity of +/-1°C
- ✓ 316L Stainless Steel Construction
- ✓ Lyos-2.0 SCADA Controls - Additional Options

## SP Hull LyoStar 4.0 R&D/Process Development Freeze Dryer

- ✓ Unparalleled uniformity - superior shelf temperature mapping and rapid shelf freezing
- ✓ Ecologically sound - reduced carbon footprint with eco-friendlier refrigerant gas



## Freezemobile Freeze Dryer

- ✓ Compact, freestanding, mobile design
- ✓ Includes microprocessor-based Sentry 2.0 controller
- ✓ Total condenser capacity 25 or 35 L
- ✓ Refrigeration systems with temperatures of -85°C
- ✓ Smooth wall condenser for quick defrost turnaround time
- ✓ Pressure control to provide heat transfer for sublimation as required



## Freezemobile Shell Bath Freezer

- ✓ Compact, bench top design
- ✓ Dual bath
- ✓ Maximum low bath temperature -70°C
- ✓ Accommodates variety of flasks  
8 x 40 ml, 8 x 75 ml, 8 x 150 ml  
4 x 300 ml, 4 x 600 ml  
2 x 1200 ml



## General Purpose Freeze Dryer

- ✓ Mobile, free standing design
- ✓ Intellitronics™ Controller to monitor your cycle from anywhere
- ✓ Total condenser capacity 25 or 35 L 2 to 5 shelves
- ✓ Choice of refrigeration systems with temperatures of -53 or -85°C



## Genesis Pilot Lyophilizer

- ✓ Compact, freestanding mobile design
- ✓ Ability to backfill with inert gas
- ✓ 25 liter or 35 liter capacity
- ✓ Choice of condenser temperatures to -85°C
- ✓ Hot gas defrost and smooth wall for quick turn around



## Ultra Pilot and Small Production Lyophilizer

- ✓ Max rotor speed 1415 rpm
- ✓ Max load per swing 1.5 kg
- ✓ High speed evaporation
- ✓ Integrated condenser
- ✓ Front opening for easy access
- ✓ DriPure anti-bumping



## VirTual Small Production Lyophilizer

- ✓ Max rotor speed 1800 rpm
- ✓ High volume evaporation - Sample volumes from 50ml to 100 liters
- ✓ Autofeed
- ✓ Autostop
- ✓ Unique Rocket low pressure steam heat transfer technology
- ✓ DriPure anti bumping
- ✓ Autodraining condenser

# EYELA



## Incubators

- ✓ Air jacket natural convection incubator (SLI series)
  - Temp control RT+5~60°C
  - Timer and alarm function
  - Independent overheat protector
- ✓ Environmental chamber (KCL series)
  - 140L capacity
  - Temp control -15~85°C



## Ovens

- ✓ Natural convection with max temp 300°C (NDO series)
- ✓ Timer and alarm function
- ✓ Shelf type vacuum oven with dual heating system:
  - Bath heating and blowing controlled hot air (PVO series)



## Spray Dryer SD-1010

- ✓ 40~200°C temp range
- ✓ 1500mL/h capacity
- ✓ Short drying time
- ✓ Uniform dried powder sample solvents



## Shakers

- ✓ Waterbath shaker (NTS series)
  - Highly durable and silent shaking
  - Three heater output available (300/700/1300W)
- ✓ Multi shaker (MMS series)
  - 8-shaped, reciprocating, or orbital shaking
  - Selectable speed and container



## Dry Block Bath

- ✓ Heating by aluminum block without contamination
- ✓ Accurate temperature control through temperature sensor inserted directly into bath block
- ✓ Temp. Control Range
  - MG-1200: 4 ~ 100°C
  - MG-2200·MG-2300: RT + 5~200°C
- ✓ Temp. Control Accuracy of  $\pm 0.1^{\circ}\text{C}$  ~  $0.2^{\circ}\text{C}$
- ✓ Dimensions (mm) and Weight
  - MG-1200: 235W x 355D x 205H 9.5kg
  - MG-2200·MG-2300: 200W x 310D x 125H 5kg



## Compact Water Bath NTT-2000

- ✓ Mild stirring realizes low water level incubation as low as 40mm water surface level
- ✓ Compact (200W x 325D mm) and low power consumption (4A)
- ✓ Temp. Control Range of RT + 5~70°C
- ✓ Temp. Control Accuracy of  $\pm 0.07^{\circ}\text{C}$
- ✓ Microprocessor P.I.D control, SSR output



## Fermentor M-1000A M-1000B

- ✓ Strong stirring force provides stable stirring for samples with variable viscosity
- ✓ Cooled water temp. +5~60°C
- ✓ Temp. Control Accuracy of  $\pm 0.2^{\circ}\text{C}$  (with external cooling device)
- ✓ Bath capacity of 1.5L (A) and 2.5L (B)
- ✓ Stirring motor of 40W

# EYELA



## Vacuum Pump

- ✓ Compact, space saving with carrying handle
- ✓ Evacuation Speed 20, 30, 40 L/min
- ✓ Ultimate Vacuum 10hPa (7.5Torr), 2hPa (1.5Torr)
- ✓ Motor 90W



## Aspirator A-1000S

- ✓ Transparent lid makes it easier to check water level
- ✓ Pressurized circulation by water pump
- ✓ Displacement of 16/19L/min. (50/60Hz) with 6°C water
- ✓ Induction motor 150W
- ✓ Check valve, Thermal protector



## Magnetic Stirrer

- ✓ Strong upwards magnetic force, stable stirring
- ✓ Rotation Speed of 50 ~ 1600rpm
- ✓ Stirring Capacity of 10mL ~ 20L (water)
- Dimension (mm)  
200W x 204D x 80H  
200W x 200D SUS 304  
(Stirring Plate)



## Low Temperature Bath PFR 1000 + PFP-1000

- ✓ PFR-1000 is a low temperature multi use bath at -45°C
- ✓ Adding circulation pump PFP-1000, unit can be used as low temperature circulator from -40°C ~ -20°C
- ✓ Cooling Capacity of 360W at -20°C, 310W at -30°C
- ✓ Large capacity bath (14L) in compact size (mm)  
180W x 330D x 180H



## Small Amount Evaporators

- ✓ Compact design
- ✓ Centrifugal evaporators (CVE series)  
Rotation speed 1400/1700 rpm (CVE-2100) or 100~2000 rpm (CVE-3000/3110)  
Built-in vacuum pump (CVE-2200)  
Built-in cooling coil (CVE-3000)  
Teflon-coated chamber (CVE-3110)
- ✓ Test tube evaporators (TVE series)  
Rotation speed 100~1100 rpm  
Hood type small concentration unit  
Rapid mixing of samples  
Up to 8 vessels



## Rotary Evaporators

- ✓ Evaporation capacity of 20 or 30 ml/min (water)
- ✓ Rotation speed 5~280/20~180 rpm
- ✓ Auto jack type with vertical double helix condenser (N-1210BV)
- ✓ Auto jack type with diagonal double helix condenser (N-1210BS)
- ✓ Auto jack type with dewar type condenser (N-1210BT)



## Large Amount Rotary Evaporators

- ✓ 20L sample flask (N-4000 series) or 20/50/100L capacity (N-22/52/102)
- ✓ Large volume sample can be condensed, evaporated, dried, and recovered quickly at a low temperature



## Thin Film Evaporators

- ✓ For concentrating thermal denature, foamy and highly viscous materials
- ✓ Compact design available (MF-1000)

## CRYSTE

Laboratory & Biomedical Technology



**Puricell**

- ✓ **Puricell**
  - Forced convection
  - Temp range from ambient +5~70°C
- ✓ **Puricell CO2**
  - Digital PID control
  - Accurate CO2 control through NDIR
  - 0~20%
  - Air jacket type; temp range ambient +5~50°C
- ✓ **Puricell Low**
  - Forced convection
  - Temp range 0~65°C



**Puriven**

- ✓ **Puriven**
  - Forced convection
  - Temp range from ambient +5~250°C
  - Overheating protector
- ✓ **Puriven Vacuum**
  - Stainless steel 304 interior
  - Aluminium shelves
  - Temp range from ambient +5~200°C



**Puribath**  
11L / 22L

- ✓ Natural convection
- ✓ Stainless steel interior
- ✓ Temp range from ambient +5~98°C



**Centrifuge**  
Varispin 4 / 6 / 12 / 15

- ✓ Max. RPM (Angle Rotor): 4,000 / 6,000 / 12,000 / 15,000
- ✓ Max. Capacity: 15ml x 24 / 50ml x 8 / 85ml x 6 / 85ml x 6
- ✓ Noise level ≤ 60 dB
- ✓ Wide range of application
- ✓ CRYSTE Flip Touch Controller



**Puricube Biosafety Cabinet**  
Puricube Neo

- ✓ Biosafety cabinet class II type A2
- ✓ 70% recirculated
- ✓ Inflow velocity 0.4 ~ 0.5 m/s
- ✓ 99.99% efficient HEPA filter
- ✓ Seamless stainless steel work top



**Purifume Fume Hood**

- ✓ **Purifume type**
  - Bypass type fume hood
  - Base cabinet included
- ✓ **Purifume Ductless type**
  - Portable ductless fume hood
  - Up to 3 filters installable



**Puricircul Reagent Safety Cabinet**

- ✓ **Puricircul Air**
  - Personnel and environmental protection
  - 100% recirculated
- ✓ **Puricircul Duct**
  - Personnel protection
  - 100% exhausted



## Kjeldahl Digestion Unit

- ✓ Conformity with multiple standards protocols (AOAC, ISO, EPA, DIN etc.)
- ✓ Aluminum heating block
- ✓ Maximum working temperature 450 °C
- ✓ Fully automatic unit TEMS™ technology-DKL series



## N/P Determination (Dumas Method)

- ✓ Conformity with multiple standards protocols (AOAC, ISO, DIN, AACC, AOCS, ASBC etc.)
- ✓ Carbon and nitrogen analysis (CN 802)
- ✓ Dumas Protein/Nitrogen Analyzer with He as carrier gas (NDA 701)
- ✓ Dumas Protein/Nitrogen Analyzer with He/Ar as carrier gas (NDA 702)



## AREC Hotplate Stirrer

- ✓ Aluminum top, Ceramic Top or CerAltop™ heating plate
- ✓ Connection with external temperature control for precise thermoregulation
- ✓ Heating plates/hotplates are also available in RC and REC model



## Kjeldahl Distillation Unit

- ✓ Entry-level distillation unit (auto NaOH addition) with 5 min analysis time (UDK 129)
- ✓ Semi-automatic distillation unit (auto NaOH, H<sub>2</sub>O) with 4 min analysis time (UDK 149)
- ✓ Automatic distillation unit (auto NaOH, H<sub>2</sub>O, H<sub>3</sub>BO<sub>3</sub>) with 3 min analysis time and ability of distillation in series (UDK 139)



## Dietary Fiber Analysis

- ✓ FIWE Fiber Analyzer-use pre-heated reagents for fiber analysis
- ✓ COEX Cold Extractor-performs rapid fat extraction directly in the same glass crucibles used by FIWE Series for raw fiber analysis



## Magnetic Stirrers

- ✓ High volume models are available in MSL series (8, 25, 30 L)
- ✓ Multiposition models are available in MULTISTIRRER (6 or 15 positions)



## Automatic Kjeldahl Analyzer

- ✓ Fully-automatic distillation unit with integrated colorimetric titrator (UDK 159)
- ✓ Fully-automatic distillation unit with integrated colorimetric titrator and connection to autosampler (UDK 169)



## Raw Fiber Analyzer

- ✓ Confirms to enzymatic method 985.29 by AOAC
- ✓ Enzymatic digestion for dietary fiber analysis by enzymes heating-GDE
- ✓ Enzymatic Digester
- ✓ Filtration unit for the final filtration and washing phase-CSF6 Filtration Unit



## OV5 Homogenizer

- ✓ Stirring volume up to 8 L (water, as homogenizer) or 40 L (water, as high speed mixer)
- ✓ Handles fluid up to 10.000 mPa\*s
- ✓ Speed varies from 10.000 to 30.000 rpm



## OHS Overhead Stirrer

- ✓ Brushless rotor ensuring constant torque
- ✓ IP54 protection to resist the toughest environment
- ✓ Torque speed 0, 40, 60, 100, or 200 Ncm



## VTF EVO Digital Thermoregulator

- ✓ Suitable for many application where an accurate temperature is required
- ✓ Ensure control accuracy of  $\pm 0.5^{\circ}\text{C}$
- ✓ Thermoregulation range from  $-10$  to  $400^{\circ}\text{C}$



## Vortex Mixer

- ✓ Infrared sensor available in selected model
- ✓ Variable speed operation, electronically controlled up to 3000 rpm



## Incubators and Refrigerated Thermostats

- ✓ Auto-Tuning thermoregulation system
- ✓ Total volume 120 or 215 L
- ✓ Total volume  $20^{\circ}\text{C}$  (constant) or from 3 to  $50^{\circ}\text{C}$
- ✓ Also suitable for BOD analysis



## Flocculator

- ✓ Portable design and powered by dedicated battery or from car cigarette lighter (FP4)
- ✓ Selectable identical speed (10 to 300 rpm) and time for all positions for comparable results (JLT series)
- ✓ Independently selectable speeds (10-15-30-45-60-90-120-150-200 rpm) (FC S series)



## COD Analysis (ECO Thermoreactors)

- ✓ Determine both metallic and non-metallic elements in organic and inorganic materials 6, 8, 14, or 25 positions
- ✓ Temperature from ambient to  $160$  or  $200^{\circ}\text{C}$
- ✓ Aluminum heating block



## BOD Analysis

- ✓ Measure BOD according to Standard Methods 5210 D
- ✓ BOD scale 90, 250, 600, and 999 ppm
- ✓ Data storage every 24 hours for a 5-day test



## Radiation Detector

- ✓ Standard  $\pm 15\%$  of the full scale relative to Cesium-137
- ✓ Results in milliroentgens/hour and counts/minute (cpm) in 3 periods
- ✓ Detects  $\alpha$ ,  $\beta$ ,  $\gamma$  and x-rays



## Overhead Mixer

- ✓ Electronic speed regulation up to 30 rpm
- ✓ Complies with UNI 10802 and DIN 38414 standards
- ✓ Rotation stops automatically if blocked
- ✓ Strong resistance to chemical and mechanical corrosion



## Turbidimeter

- ✓ Premium results provided in seconds
- ✓ NIST traceable standards
- ✓ Measurement to ISO 7027 standard
- ✓ IP 67 protection



## Mineralization System

- ✓ Water-jacketed condensers retain all Hg, Cd, Pb, Cr, Cu, Zn, etc.
- ✓ Includes all glassware, rack and stand



## dragonfly discovery

- ✓ Broad dynamic dispense range from a single syringe type & economical syringe usage
- ✓ Instrument variants 3, 6 or 10 dispense heads
- ✓ Dispense volume range 200 mL - 4 mL
- ✓ Bulk dispense speed 30 seconds per 96 or 384 well plate, 90 seconds per 1,536 well plate
- ✓ Primary SBS plate formats 96, 384 and 1,536 well microplates
- ✓ Deep well blocks or racked tubes up to 45 mm in height
- ✓ Dimensions (W x D x H) 600 mm x 433 mm x 635.5 mm



## apricot apricot PP5 / DC1 / S3 / S1

- ✓ PP5  
Flexible support.  
Select from a range of models.
- ✓ apricot DC1  
Dual-core pipetting head.  
9 + 1 position deck.  
Low volume core: 1 - 125µL  
High volume core: 10 - 1000µL  
Optional protective enclosure.
- ✓ S3  
The S3 benefits from a readily available API to support integration with other laboratory equipment including microplate stackers, robotic arms, and automation work cells.
- ✓ S1  
Increased productivity with flexible multi-channel pipetting.  
Versatile and flexible design.



## mosquito

- ✓ Throughput 2 minutes/ 96-well microplate, 3 minutes/ 384 well copy, 5 minutes/ 4 x 384 plate stamp out (LV & HV)
- ✓ Supported SBS plate formats 96, 384 and 1,536
- ✓ Accessories include Active humidity chamber, spool cover, plate processor integration (MoPP)
- ✓ Technical variants 2 or 5 plate position deck
- ✓ Dimensions (W x D x H) 390 mm (790 mm 5 plate deck) x 470 mm x 690 mm
- ✓ LV: Pipetting range: 25 nL - 1.2 µL
- ✓ HV: Pipetting range: 500 nL - 5 µL
- ✓ X1: Pipetting range: 25 nL - 1.2 µL (LV) or 500 nL - 5 µL (HV)  
Throughput Average of 6 seconds cycle time (aspirate, move, dispense, change tip)



## firefly firefly 3 / 6

- ✓ 384 pipetting core capable of loading 384, 96 or columns of 8 (96 format) or 16 (384 format)
- ✓ Pipetting range and performance 0.5µL to 125µL, extended to 500µL with 4in1 adaptor (96 format only).
- ✓ Particle size of less than 0.032" diameter to prevent tip blockage
- ✓ 96 tips 50uL tbc 125uL tbc
- ✓ Dispense volume range of 200nL to 4mL
- ✓ Compatible with most SBS/ANSI labware
- ✓ Dimensions (W x D x H) 660 mm x 560 mm x 780 mm



## Flexible Tube and Vial Handling Systems XL9 / XL20 / XL100 / XL200

- ✓ Organizing, reformatting and analyzing samples, four models varying by rack capacity and configurable modules
- ✓ User-friendly, integration-ready software and are fully compatible with LIMS systems
- ✓ XL9: Compact footprint of just 45 x 43 cm, a 9 rack capacity
- ✓ XL20: Compact footprint of just 72 x 53 cm, deck capacity of 20 racks
- ✓ XL100: Capacity enables researchers to pre-load 20 racks
- ✓ XL200: Capacity enables researchers to pre-load 30 racks



## Standalone Volume Detection VC100 / VC384

- ✓ VC100  
Save valuable time, collects and outputs sample volume data for each well position.  
Compatible with a range of labware and solutions for flexibility.  
High-speed rack well plate scanning enables increased productivity.  
Highly accurate detecting; senses changes in sample volume in the sub 10 µL range for 96 well plates.  
Intuitive, user-friendly software interface.
- ✓ VC384  
Fastest scanning speed boosts efficiency; scans and detects sample volumes in 96 well plates in as little as 30 seconds.  
Replaces visual or manual inspection of well plates to save valuable time.  
Collects and outputs sample volume data for each well position.  
Highly accurate system detecting to sub 2-3 µL.  
Intuitive, user-friendly software interface.



## Automated Benchtop Capping and Decapping AutoCap

- ✓ The cap tool supports a wide range of closure types, ensuring compatibility with your current and future labware
- ✓ Intuitive and easy to use, includes a user-friendly 7-inch color touch screen interface
- ✓ Eliminate repetitive strain injuries
- ✓ Designed to support flexibility
- ✓ Easily configurable and integration-ready
- ✓ Robust and reliable performance



**comPOUND**

- ✓ Storage conditions Dry air or nitrogen, hermetically sealed with user-defined temperature at +4°C, ambient and -20°C store
- ✓ Capacity and throughput Storage of 100,000 x 1.4 mL vials, 200,000 x 0.5 mL vials and throughput of 600 vials/hour
- ✓ Input and output format 96-position SBS racks with 2D barcoded tubes
- ✓ Two phase @ 60 HzMax power consumption
- ✓ during normal use is 1.8 kW, average 1.25 kW
- Approximate dimensions (W x D x H) 1.2 m x 1.65 m x 2.4 m



**arktic**

- ✓ Input & output format 96-position SBS racks with 2D barcoded tubes
- ✓ Storage conditions Dry air, hermetically sealed, temperature of -80°C or -20°C for main store and -20°C for input/ output area
- ✓ Storage conditions Dry air, hermetically sealed, temperature of -80°C or -20°C for main store and -20°C for input/ output area
- ✓ Capacity & throughput Up to 139,000 2D barcoded tubes, single tubes can be accessed in as little as 15 seconds
- ✓ Approximate dimensions (W x D x H) 1400 mm x 800 mm x 1980 mm



**chameleon**

- ✓ Automates the consistent application of samples to high-quality foil grids for cryo-EM analysis, saving time and improving research
- ✓ Precise automated grid handling
- ✓ Minimum sample volume of 5 µL
- ✓ Minimum dispense volume of 6 nL
- ✓ Sample block temperature control of 4°C to 37°C
- ✓ Standard dispense-to-plunge time of 101 msec, high-speed plunging



**Barcode Scanner**  
Scan + / Scan C / Scan HS / Scan M / Scan ES

- ✓ **Scan +**  
Instantly decode 1D and 2D barcodes without additional software; plug and play, versatile functionality for reading 1D and 2D barcodes  
Designed for ease of use
- ✓ **Scan C**  
Fast, user-friendly decoding for cryoboxes and ANSI/SLAS tube racks  
Decodes an 81/100 cryobox in less than 3 seconds, and a 96 well rack in under 1 second  
Rack orientation guide enables precise positioning
- ✓ **Scan HS**  
Decode a rack in less than 1 second; decodes a rack in less than one second, and a 384 rack in under 3 seconds
- ✓ **Scan M**  
Easy to use, and integration-friendly single tube or whole rack scanning  
Compatible with a range of 2D microtubes and cryotubes and scans a 96-format rack in 4-5 seconds
- ✓ **Scan ES**  
Decoding for laboratories with multiple tube formats  
Simplifies scanning of frozen tubes



**Automated Tube and Vial Labeling**  
LabelPro

- ✓ Storage conditions Dry air or nitrogen, hermetically sealed with user-defined temperature at +4°C, ambient and -20°C store
- ✓ Capacity and throughput Storage of 100,000 x 1.4 mL vials, 200,000 x 0.5 mL vials and throughput of 600 vials/hour
- ✓ Input and output format 96-position SBS racks with 2D barcoded tubes
- ✓ User interface Simple UI at local console
- ✓ Two phase @ 60 HzMax power consumption during normal use is 1.8 kW, average 1.25 kW
- ✓ Approximate dimensions (W x D x H) 1.2 m x 1.65 m x 2.4 m



**BioMicroLab**  
XL Ionizer

- ✓ No calibration required
- ✓ Industrial grade ionizer electronics
- ✓ Fault monitoring circuit with status
- ✓ LED and I/O connection indicates proper operation
- 20 ft3 per minute airflow
- ✓ Reduces high voltage electrostatic
- ✓ charges to +/- 22V at one foot from unit











**BioMicroLab**  
Thaw

- ✓ Fast Performance  
Defrosts 96 tubes in under 20 minutes  
Standalone system  
No warm up time
- ✓ Small Footprint  
Saves benchtop space



sptlabtech

Type	Model	Tube Side Code		Screw Cap blue		Assembly and Rack Version		Working Volume (µl)
		Yes	No	Yes	No	Standard PC Code West (CW)	Automation Friendly PC Code West (AW)	
1C Coding Pre-capped Blue Standard Rack PC	 <b>MI 500</b>		✓	✓		✓		480µl
	 <b>LI 1000</b>		✓	✓		✓		1000µl
1C 2D only Pre-capped Blue Standard Rack PC	 <b>XSX 200</b>		✓	✓		✓		220µl
4C Coding Pre-capped Blue Automation Friendly Rack PC	 <b>SX 300</b>	✓		✓			✓	300µl
	 <b>MX 500</b>	✓		✓			✓	550µl
	 <b>LX 1000</b>	✓		✓			✓	1000µl
	 <b>XLX 2000</b>	✓		✓			✓	2000µl
1C Coding Pre-capped Blue Automation Friendly Rack PC	 <b>XLX 500 (Tissue Tube)</b>		✓	✓			✓	-

Note:

- Packing: Small (10 / 960)

- Purity: ISO 8 Clean Room Production Sterile

# Barcoded Tube (count.) Cap Racks, Capper & Decapper



sptlabtech

Type	Model	Tube Side Code		Screw Cap blue		Assembly and Rack Version		Working Volume (µl)
		Yes	No	Yes	No	Standard PC Code West (CW)	Automation Friendly PC Code West (AW)	
3C Coding Pre-capped Blue Standard Rack PP	 <b>XLX 4000</b>	✓		✓		✓		4000µl
	 <b>XXLX 2000</b>		✓	✓		✓		2000µl
	 <b>XXLX 4000</b>		✓	✓		✓		4000µl
	 <b>XXLX 6000</b>		✓	✓		✓		6000µl
	 <b>XXLX 8000</b>		✓	✓		✓		8000µl

Note:

- Packing: Small (10 / 960)

- Purity: ISO 8 Clean Room Production Sterile

## Cap Rack SBS 96 Cap Racks Empty

- ✓ Small packing of 10 racks
- ✓ Purity: ISO 8 Clean

## Manual 1-Channel Device for Screw Caps Capper & Decapper

- ✓ SAFE® Cap 1 Channel Manual Capper / Decapper / Picker with eject function for SBS 96XT

## White Cryo Packing: 500 / 40

- ✓ **500**  
2ML CRYO TUBES BULKWARE, EXTERNAL THREAD, PRE-CAPPED, PRE-STERILIZED
- ✓ **40**  
LVL CRYO RACKS, BLUE, 81 WELLS FOR 2ML TUBES

# Natural Convection / Vacuum Oven Forced Convection Ovens

JEIotech



**General**  
ON-G / ON-GW

- ✓ Internal Volume of 52L, 91L, 135L
- ✓ Temperature Range of Amb. +15°C ~ 250°C
- ✓ Max. fluctuation at 100°C ±0.3°C
- ✓ Max. variation at 100°C ±5.9°C / ±7.5°C / ±6.9°C
- ✓ Gravity flow convection for uniform sample heating
- ✓ Rounded inner chamber corners for easy cleaning and optimal airflow
- ✓ Window Door type available



**Economy**  
ON-E / OF-E

- ✓ Internal Volume of 52L, 100L, 150L
- ✓ Temperature Range of Amb.
  - ON-E: +15°C ~ 220°C
  - ON-F: +10°C ~ 220°C
- ✓ Max. fluctuation at
  - ON-E: 100°C ±0.3°C / ±0.4°C / ±0.5°C
  - ON-F: 100°C ±0.4°C
- ✓ Max. variation at
  - ON-E: 100°C ±6.5°C / ±4.1°C / ±7.3°C
  - ON-F: 100°C ±6°C - ±5°C
- ✓ Provides notification/alarms when the door is open for an extended period of time.



**Vacuum Oven**  
OV4 / ON-E

- ✓ Control panel 5 inch
- ✓ Internal Volume of 28L, 65L
- ✓ Temperature Range of Amb. +15°C ~ 250°C
- ✓ Max. fluctuation at 100°C ±0.2°C
- ✓ Max. variation at 100°C ±1.5°C
- ✓ Test data is automatically saved and easily downloaded via USB; easy to edit and use.
- ✓ BMS communication port that helps monitor the device temperature on the building management system, enabling quick response incase of abnormality.
- ✓ Polycarbonate safety cover provided to protect a user in case of tempered glass breakage.



**Program / Advanced / Standard**  
OF4-P / OF4-V / OF4-S

- ✓ Internal Volume of 26L, 61L, 112L, 147L
- ✓ Temperature Range of Amb. +10°C ~ 250°C
- ✓ Max. fluctuation at 100°C ±0.3°C
- ✓ Max. variation at 100°C ±1.9°C
- ✓ Heater (120/230VAC) 1400W
- ✓ Program Type:
  - Programmable; 10 program, 10 step



**Program / General**  
OF3-P / OF3/H

- ✓ Internal Volume of 314L, 450L, 760L
- ✓ Temperature Range of Amb. +15 to 300
- ✓ Max. fluctuation at 100°C ±0.2°C
- ✓ Max. variation at 100°C ±3.5°C - ±4.5°C
- ✓ Program Type:
  - Possible to set and save 10 programs
  - Up to 10 steps can be set per program
- ✓ General Type:
  - 4.7-inch large VFD panel for clear information display
  - USB/RS-232 connection and software provide convenient computer operation and data managing.
  - Save and use 3 frequently used temperatures.



**Multi**  
OF-02G-2C / OF-02G-4C

- ✓ Internal Volume of 120L (60 x 2 chambers), 240L (60 x 4 chambers)
- ✓ Temperature Range of Amb. +10 to 200°C
- ✓ Max. fluctuation at 100°C ±0.5°C
- ✓ Max. variation at 100°C ±1°C
- ✓ Easy to open and close the door, soft handle minimizes shock to the sample
- ✓ Easy to clean as inner edges are curved

# Bath Circulator Chiller (Recirculating Cooler)

JEIotech



**Program / General**  
CW3-P / CW3

- ✓ Heating Bath Circulator
- ✓ Internal Volume of 5L, 10L, 20L, 30L
- ✓ Working Temperature Range Amb. +10°C ~ 150°C
- ✓ Temperature Stability at -10°C ±0.05°C
- ✓ Program Type:
  - Programmable temperature control.*
  - LCD color touch screen.*
- ✓ General Type:
  - Suitable for precise temperature testing above ambient temperature.*
  - Temperature deviable alarm.*



**Program / General**  
RW3-P / RW3

- ✓ Refrigerated & Heating Bath Circulator
- ✓ Internal Volume of 5L, 10L, 20L, 30L
- ✓ Working Temperature Range -35°C ~ 150°C  
-23°C ~ 150°C
- ✓ Temperature Stability at -10°C ±0.05°C
- ✓ Program Type:
  - Programmable temperature control.*
  - LCD color touch screen.*
- ✓ General Type:
  - Various temperature range and capacity.*
  - Smart refrigeration system.*



**Compact Chiller**  
RC-05

- ✓ Temperature Stability of ±0.1°C
- ✓ Working Temperature Range of -10°C ~ 30°C
- ✓ Max. Cooling Capacity of 580 kW at 20°C
- ✓ Pump Capacity of Max. 26L /min. 0.7 bar
- ✓ Easily installation and moving with compact design
- ✓ Optimized for use with rotary evaporators



**Ambient Temp. Chiller**  
HX General

- ✓ Temperature Stability of ±1.0°C
- ✓ Working Temperature Range of +3°C ~ 40°C
- ✓ Max. Cooling Capacity of 8.1 kW at 20°C
- ✓ Pump Capacity of Max. 40L /min. 6 bar
- ✓ Representative recirculating cooler suitable for general use.
- ✓ Minimized on/off operation of compressor.



**Low Temp. Chiller**  
HL Low-Temperature  
General

- ✓ Temperature Stability of ±1.0°C
- ✓ Working Temperature Range of -20°C ~ 40°C
- ✓ Max. Cooling Capacity of 7.1 kW at 20°C
- ✓ Pump Capacity of Max. 70L /min. 6 bar
- ✓ Recirculating cooler for low temperature range.
- ✓ Easy checking the pump status by pump pressure gauge.



**High-Temperature  
Precision Chiller**  
HH

- ✓ Temperature Stability of ±0.1°C
- ✓ Working Temperature Range of -20°C ~ 80°C
- ✓ Max. Cooling Capacity of 6.5 kW at 20°C
- ✓ Pump Capacity of Max. 70L /min. 6 bar
- ✓ Wide temperature range
- ✓ Precise control with +0.1°C stability by PID temperature control



**Low-Temperature  
Precision Chiller**  
HS

- ✓ Temperature Stability of ±0.2°C
- ✓ Working Temperature Range of -20°C ~ 40°C
- ✓ Max. Cooling Capacity of 7.1 kW at 20°C
- ✓ Pump Capacity of Max. 70L /min. 6 bar
- ✓ Precise temperature control at low temperature range
- ✓ Provide function of control via external temperature sensor



**General Incubator  
(Air-Jacket)**  
IB-G

- ✓ Air-Jacket Type
- ✓ Temperature Range of Amb. +5°C ~ 70°C
- ✓ Bath Volume of 60L / 102L / 151L
- ✓ Versatile air-jacketed natural convection incubators
- ✓ Glass door for contamination prevention



**Economy Incubator  
(Film Heater)**  
IB-E

- ✓ Natural Convection Type
- ✓ Temperature Range of Amb. +3°C ~ 60°C
- ✓ Bath Volume of 65L / 150L / 205L
- ✓ Stable product that is faithful to the basics
- ✓ Low noise with film heater-type incubator



**Mini Incubator  
(Forced Convection)**  
IM

- ✓ Forced Convection Type
- ✓ Temperature Range of Amb. +5°C ~ 65°C
- ✓ Bath Volume of 10L
- ✓ Compact design
- ✓ Simple control with touch button



**2 / 4 Chamber Incubator**  
IB-02G-2C

- ✓ Forced Convection Type
- ✓ Temperature Range of Amb. +5°C ~ 70°C
- ✓ Bath Volume of 120L (60 x 2) / 240L (60 x 4)
- ✓ Independent temperature control for each chamber
- ✓ Built-in caster for easy moving and installation



**Plant Growth Chamber**  
GC-300TL / 300TLH / GC-1000TLH

- ✓ Temperature Range of +5°C ~ 50°C  
(10 ~ 50°C: Lamp on / 20 ~ 50°C: with humidity)
- ✓ Illumination Range 0 to 20000 lux, 0 to 35000 lux
- ✓ Chamber Volume of 300L / 300L, 1000L
- ✓ Auto-tuning for temperature/humidity
- ✓ Lighting provided by plant-friendly lamps



**General Low Temp. Incubator**  
IL3

- ✓ Forced Convection Type
- ✓ Temperature Range of 0°C ~ 80°C
- ✓ Chamber Volume 150L / 242L
- ✓ Provides low temperature culture environment like BOD experiment
- ✓ Internal power outlet included as standard for easy operation of small products



**Air-Jacket Low Temp. Incubator**  
IL3-A

- ✓ Natural Convection (Air-Jacket)
- ✓ Temperature Range of 4°C ~ 70°C
- ✓ Chamber Volume 150L / 242L
- ✓ Minimizes medium getting dried by air-jacket type.
- ✓ Prevention of frost by automatic defrosting at all times.



**Personal Low Temp. Incubator**  
ILP

- ✓ Forced Convection Type
- ✓ Temperature Range of 10°C ~ 40°C (Amb. 25°C)
- ✓ Chamber Volume 14L / 48L
- ✓ Low temperature control by using electronic cooling element (Peltier Module)
- ✓ Convenient use by minimized vibration and power consumption



**Multi Low Temp. Incubator**  
IL-11-2C / IL-11-4C

- ✓ Forced Convection Type
- ✓ Temperature Range of 0°C ~ 60°C (Amb. 25°C)
- ✓ Chamber Volume 300L (150L x 2) / 600L (150L x 4)
- ✓ 150L capacity for each chamber.
- ✓ Independent temperature control for each chamber.



**Dual Action Shaker**  
OS-2000 / OS-3000 / OS-4000

- ✓ Orbital / Reciprocating motion type
- ✓ Speed Range of 20 ~ 500 rpm
- ✓ Max. 250ml flask of ~8 ea / ~14 ea / ~24 ea
- ✓ Provides powerful shaking
- ✓ Orbital / Reciprocating motion selection



**General Shaker**  
OS-7100 / OS-7200

- ✓ Orbital motion type
- ✓ Speed Range of 30 ~ 500 rpm / 30 ~ 300 rpm
- ✓ Max. 250ml flask of ~ 39 ea
- ✓ Powerful DD motor for large-capacity shaking
- ✓ Structure prevents the sample from flowing into inside



**Program Type Shaker**  
SKC

- ✓ Orbital motion type
- ✓ Speed Range of 30 ~ 500 rpm
- ✓ Max. 250ml flask of ~51 ea (102 ea when using Dual Platform)
- ✓ Program control mode
- ✓ Mounts the large capacity of samples



**Compact Shaker**  
CMS

- ✓ Orbital motion type
- ✓ Speed Range of 50 ~ 300 rpm
- ✓ Max. 250ml flask of ~ 9 ea
- ✓ Easy to use as a small shaker
- ✓ It can be used inside of another chamber (amb. 2°C - 60°C)



**Microplate Shaker**  
CPS

- ✓ Orbital motion type
- ✓ Speed Range of 150 ~ 1200 rpm
- ✓ Capacity of Microplate 4 ea
- ✓ Suitable for sample mixing for microplates, tubes etc
- ✓ Tube rack as optional accessory



**Rocking Shaker**  
CRS

- ✓ Rocking motion type
- ✓ Speed Range of 5 ~ 100 rpm
- ✓ Capacity of 276 x 276 mm
- ✓ Easy to adjust angle of motion from 7° to 13°
- ✓ Up to 99 hours timer function



**Waving Shaker**  
CWS

- ✓ Waving motion type
- ✓ Speed Range of 8 ~ 100 rpm
- ✓ Capacity of 276 x 276 mm
- ✓ Easy to adjust angle of motion from 0° to 13°
- ✓ It can be used inside of another chamber (Amb. 2 - 60°C)



**Rotator**  
CRT

- ✓ Rotating motion type
- ✓ Speed Range of 2 ~ 70 rpm
- ✓ Capacity of 1.5ml Tube x 120 ea (when 2-stage disk loading)
- ✓ Easy to adjust angle up to 90°
- ✓ Large quantities sample could be mixed at once when loading 2-stage disk



**Funnel Shaker**  
RS-2

- ✓ Vertical & Inclined reciprocating motion type (0°C ~ 20°C)
- ✓ Speed Range of Vertical 30 to 300 rpm / Inclined 30 to 250 rpm
- ✓ Capacity of separated funnel 500ml x 6 ea in max
- ✓ Powerful up and down reciprocal motion
- ✓ Adjustable shake tilt (0°C ~ 20°C) to achieve high mixing efficiency at low rpm
- ✓ 4 holders are provided as basic, 10 holders can be mounted in max (depends on the funnel size)



**Heating Shaker**  
CBS

- ✓ Temperature range of Amb. +5°C ~ 100°C)
- ✓ Orbital motion type
- ✓ Speed Range of 150 ~ 1500 rpm
- ✓ Rapid and accurate control of temperature
- ✓ Optional block according to kinds of sample



### Digital Magnetic Stirrer MS-G

- ✓ Digital control type
- ✓ Speed Range of 30 ~ 2000 rpm
- ✓ Timer & Program: *Available*
- ✓ Maintains accurate speed with feedback control even when sample viscosity and amount change
- ✓ Timer & Program operation function



### Analog Triangle-type Magnetic Stirrer MS-T

- ✓ Analog control type
- ✓ Speed Range of 150 ~ 2500 rpm
- ✓ Timer & Program: *Not Available*
- ✓ Stable structure even with fast stirring  
Polypropylene (PP) material with excellent chemical resistance



### Hotplate T

- ✓ Max. Temp. Range of 350°C (Top Plate)
- ✓ Timer: *Heating available*  
*Stirring not available*
- ✓ Top plate coated with white ceramic for excellent corrosion resistance
- ✓ Warning displayed when top plate is 50°C or more



### Analog Hotplate & Magnetic Stirrer TM

- ✓ Max. Temp. Range of 350°C (Top Plate)
- ✓ Max. Speed Range of Max. 2000 rpm
- ✓ Timer: *Heating available*  
*Stirring available*
- ✓ Structure prevents the sample from flowing into inside
- ✓ Fast stirring speed control with real time response



### Digital Hotplate & Magnetic Stirrer TS

- ✓ Max. Temp. Range of 350°C (Top Plate)
- ✓ Max. Speed Range of 30 ~ 2000 rpm
- ✓ Timer: *Heating available*  
*Stirring available*
- ✓ Precise temperature control by external temperature sensor
- ✓ Multiple overheating protection devices



### Multi Position Magnetic Stirrer MS-M

- ✓ Digital control type
- ✓ Speed Range of 30 ~ 2000 rpm
- ✓ 6 models provided with max. 15 positions
- ✓ 4 kinds of stirring control mode  
(*All, Column, Row, Point*)



### Multi Position Hotplate & Magnetic Stirrer MS-MH

- ✓ Digital control type
- ✓ Temp. Range of Max. 120°C (Top Plate)
- ✓ Speed Range of 30 ~ 2000 rpm
- ✓ 4 kinds of stirring control mode and timer  
(*All, Column, Row, Point*)
- ✓ 2 model provided with 9/15 position



### Heating Block for Round Bottom Flask & Vial RBP, RBI, VBP, VBI

- ✓ Temp. Range of Max. 300°C
- ✓ Mounted on the hotplate, heating the samples in a round flask or vial safely

# Overhead Stirrer & Vortex Mixer Incubated Shaker

## JEIotech



### Prestige Touch Overhead Stirrer MSH-0512 / MSH-0520

- ✓ LCD Touch Display
- ✓ Speed Range of MSH-0512: 50 ~ 1200 rpm  
MSH-0520: 50 ~ 2000 rpm
- ✓ Viscosity, Max. (cP) MSH-0512: 30000 (~1200 rpm)  
/50000 (~700 rpm)  
MSH-0520: 5000 (~2000 rpm)  
/50000 (~300 rpm)
- ✓ Timer: Available
- ✓ Best Effort Mode: Available
- ✓ BLDC motor and color LCD display
- ✓ External controller and PC control for remote operation



### High Performance Overhead Stirrer MSD

- ✓ Digital Display
- ✓ Speed Range of 80 ~ 2000 rpm
- ✓ Viscosity, Max. (cP) 5000 (~2000 rpm)  
50000 (~200 rpm)
- ✓ Timer: Not Available
- ✓ Best Effort Mode: Available
- ✓ Safety function for over temperature and overload protection
- ✓ Convenient use through the computer interface



### Easy Overhead Overhead Stirrer MSA

- ✓ Digital Display
- ✓ Speed Range of 80 ~ 2000 rpm
- ✓ Viscosity, Max. (cP) 5000 (~2000 rpm)  
50000 (~200 rpm)
- ✓ Timer: Not Available
- ✓ Best Effort Mode: Not Available
- ✓ Easy control model optimized for simple use
- ✓ Safety function for over temperature and overload protection



### Magnetic Drives MD

- ✓ Max. Torque: 6 kgf-cm
- ✓ Driving Pressure:  $1 \times 10^{-4}$  mmHg to 5 kg/cm<sup>2</sup>
- ✓ Driving Temp. (with Cooling): Max. 300°C
- ✓ Full sealing of reaction container
- ✓ Cooling line as standard



### Vortex Mixer VM-96T

- ✓ Orbital Motion type
- ✓ Speed Range of Max. 3000 rpm
- ✓ Operating Mode: Touch, Run
- ✓ Convenient use with easily interchangeable accessories
- ✓ Intuitive and convenient operation



### Vortex Mixer VM-96A

- ✓ Orbital Motion type
- ✓ Speed Range of Max. 3000 rpm
- ✓ Operating Mode: Touch, Run-L, Run-H
- ✓ Stable motion by its low-profile with small footprint
- ✓ 3 operation mode according to use



### Tabletop Incubated Shaker IST / IST-R

- ✓ Temperature Range of Amb. +5°C ~ 80°C / -15°C ~ 80°C (min. 15°C)
- ✓ Max. speed at 200 ~ 500 rpm
- ✓ Orbital motion type
- ✓ Max. 250ml flask of ~ 20 ea
- ✓ Optimized for use on bench top
- ✓ Convenient internal observation



### Stackable Incubated Shaker ISS / ISS-R

- ✓ Temperature Range of Amb. +5°C ~ 80°C / -20°C ~ 80°C (min. 4°C)
- ✓ Max. speed at 200 ~ 500 rpm
- ✓ Orbital motion type
- ✓ Max. 250ml flask of ~ 24 ea
- ✓ Double-stacked for space saving
- ✓ Includes internal power outlet, and 2 ea shelves are provided as standard



### Floor Incubated Shaker ISF / ISF-R

- ✓ Temperature Range of Amb. +5°C ~ 80°C / -20°C ~ 80°C
- ✓ Max. speed at 30 ~ 300 rpm  
30 ~ 300 rpm / 500 rpm
- ✓ Orbital motion type
- ✓ Max. 250ml flask of ~ 39 ea
- ✓ Strong DD motor for large shaking capacity agitation
- ✓ Large capacity up to 5 ea x 6L flasks at the same time



### Multi-Stackable Incubated Shaker ISS / ISS-R

- ✓ Temperature Range of Amb. +10°C ~ 80°C / -20°C ~ 80°C (min. 4°C)
- ✓ Max. speed at 30 ~ 300 / 400 rpm
- ✓ Orbital motion type
- ✓ Maximum triple-stacked for space saving
- ✓ Strong DD motor for large-capacity



**General Heating Bath**  
BW3-G

- ✓ Temperature Range of Amb. +7°C ~ 100°C
- ✓ Bath Volume of 3.5L / 11.5L / 20L
- ✓ Temperature calibration & timer
- ✓ Low water level limiter



**Agitator Heating Bath**  
BW-H

- ✓ Temperature Range of Amb. +5°C ~ 100°C
- ✓ Bath Volume of 3.5L / 11.5L / 20L  
3.5L & 3.5L / 3.5L & 11.5L / 11.5L &  
11.5L / 11.5L & 20L
- ✓ Circulation of solution by an agitator
- ✓ Independent temperature control for each bath



**Economy Heating Bath**  
BW-B

- ✓ Temperature Range of Amb. +7°C ~ 100°C
- ✓ Bath Volume of 3.5L / 11.5L / 20L
- ✓ Economical water bath for easy use
- ✓ Over temperature limiter



**Visible Heating Bath**  
VB

- ✓ Temperature Range of Amb. +5°C ~ 150°C
- ✓ Bath Volume of 25L / 40L
- ✓ Convenient for internal observation
- ✓ Easy to measure viscosity



**Shaking Heating Bath**  
BS

- ✓ Temperature Range of Amb. +5°C ~ 100°C
- ✓ Bath Volume of 17L / 25L / 37L / 55L
- ✓ Temperature control and shaking can be set independently
- ✓ Spring wire rack as standard accessory



**Cold Trap Bath**  
CTB-10

- ✓ Temperature Range down to -40°C
- ✓ Bath Volume of 4.8L
- ✓ Capture moisture, organic solvents etc. into vacuum pump
- ✓ It can be used in bath that requires low temperature



**Autoclave**  
ST

- ✓ Sterilization Temperature of 110 ~ 123°C
- ✓ Melting Temperature of 60 ~ 100°C
- ✓ Sterilization Pressure at 121°C: 1.1 ~ 1.2 kg/cm<sup>2</sup>
- ✓ Volume of 50L / 60L / 85L / 105L
- ✓ Convenient use with various operation mode for each usage
- ✓ Sterilization process monitoring ensures reliable sterilization



**Ultrasonic Cleaner**  
UCP / UCS

- ✓ Frequency of 40 kHz
- ✓ Ultrasonic Power of Mx. 500 W
- ✓ Strong cleaning power by high-energy BLT Type vibrator
- ✓ Easy drain of cleaning solution through drain valve



**Electrical Aspirator**  
VE

- ✓ Free-air Capacity of 18L / min x 2 ea
- ✓ Max. Vacuum Range of 0.0998 Mpa
- ✓ Motor Capacity of 150 W
- ✓ Bath Volume of 9.5 L
- ✓ Fast formation of low vacuum state via two aspirators
- ✓ Use PP having good chemical-resistance for contact parts of organic solvent



**Rotary Vacuum Pump**  
W2V

- ✓ Pump Speed of 100 / 200 / 400 / 600 L/min
- ✓ Ultimate Pressure of  $1.3 \times 10^{-1}$  /  $6.7 \times 10^{-2}$  Pa
- ✓ Oil vacuum pump for formation of high vacuum state
- ✓ Prevents air reflux, essentially used with vacuum ovens to achieve a higher level of vacuum pressure



**Heating Block**  
CHB-S / CHB-T

- ✓ Temp. Range of Amb. + 5 ~ 130°C
- ✓ Uniformity at 80°C: ±0.5°C
- ✓ Precise temperature control which can be set in units of 0.1°C
- ✓ Optional block depend on tube size



**Heating & Cooling Block**  
CCB

- ✓ Temp. Range of Amb. - 20 ~ 95°C
- ✓ Uniformity at 37°C: ±0.5°C
- ✓ Timer & program operation function
- ✓ Precise and stable temperature control



**Heating Shaker**  
CBS

- ✓ Temp. Range of Amb. + 5 ~ 100°C
- ✓ Orbital Motion type, Max. 1500 rpm
- ✓ Rapid and accurate control of temperature
- ✓ Optional block depend on tube size



**Hybridization Oven**  
HO

- ✓ Temp. Range of Amb. + 5 ~ 65°C
- ✓ Speed range: 5 ~ 50 rpm
- ✓ Rocker insides of chamber
- ✓ Suitable for hybridization experiments with 10 programs & 10 steps program control



**Electrophoresis System**  
EP

Capacity (L): 0.5 / 1 / 1.8  
Integral structure of transparent polycarbonate material  
Excellent durability and convenient sample identification



**Power Supply**  
EPS

- ✓ Output Range: 5 ~ 250V, 0.01 ~ 3A, Max. 300W
- ✓ Type of Output: Constant Voltage, Constant Current
- ✓ Power supply for electrophoresis system
- ✓ 4 of output terminal can be used simultaneously
- ✓ Exact output by microprocessor



**PCR Workstation**  
PW

- ✓ 3 model provided according to size
- ✓ UV timer function
- ✓ High-performance HEPA filter provides a clean environment
- ✓ Suitable for sensitive experiment like PCR
- ✓ Convenient shelf with pipette holder



**On-Ice Rack**

- ✓ On-Ice Rack: Micro Tube (1.5 ml, 0.2 ml)
- ✓ On-Ice Rack (96W): 96-well Plate, Micro Tube (1.5 ml)
- ✓ Aluminum with excellent thermal conductivity
- ✓ Keeps temperature of the sample constant on ice



**Storage Box & Cryo Box**

- ✓ Storage Box (SRB-100): 1.2 ~ 2.0 ml, 100 ea
- ✓ Cryo Box (CRB)  
: 3 models according to size  
: 1.2 ~ 2.0 ml (25 ea), 1.2 ~ 2.0 ml (81 ea), 5 ml (81 ea)



**Advanced Clean Bench**  
BC-H

- ✓ HEPA Filter
- ✓ UV Lamp: Available
- ✓ Fluorescent Lamp: Available
- ✓ Airflow: Available
- ✓ Convenient dual controller (outside and inside of chamber)
- ✓ Fully compliant with validation requirements



**Basic Clean Bench**  
BC-B

- ✓ HEPA Filter
- ✓ UV Lamp: Available
- ✓ Fluorescent Lamp: Available
- ✓ Airflow: Available
- ✓ Pressure gauge at front as standard accessory
- ✓ Easy replacement of HEPA filter



**PCR Workstation**  
PW

- ✓ HEPA Filter
- ✓ UV Lamp: Available
- ✓ Fluorescent Lamp: Available
- ✓ Airflow: Available
- ✓ UV blocking about 99.9% with transparent polycarbonate material
- ✓ Essential for sensitive experiment such as PCR
- ✓ Convenient shelf with pipette holder



**UV Sterilization Cabinet**  
UVC

- ✓ UV Lamp: Available
- ✓ Fluorescent Lamp: Available
- ✓ Airflow: Not Available
- ✓ Sterilization using UV lamp
- ✓ Count-down timer



**Ductless Fume Hood**  
DLH

- ✓ Filter: Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter
- ✓ Remove and circulate fume via built-in filter
- ✓ No need duct, convenient moving and installation



**Extraction Arm Hood**  
EFS-33 (Dual), EFS-33 (Single)

- ✓ Filter: Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter
- ✓ Filter box type
- ✓ Various hood and arms
- ✓ Magnetic system for easy hood change (Option)



**Molded Fume Hood**  
PMH-720 + EM-33

- ✓ Filter: Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter (EM-33)
- ✓ Table top type with compact design
- ✓ Easy use with connection duct system



**Molded Observation Fume Hood**  
POH-720 + EM-33

- ✓ Filter: Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter (EM-33)
- ✓ Easy use with connecting duct system
- ✓ Design by transparent windows at the front rear, making it easy to observe the experiment process from the both side



**Multipurpose Cabinet (Window)**  
DS-OW

- ✓ Window door type for easy figures out stored samples
- ✓ Drawer shelves with PP having good chemical resistance, makes easy store
- ✓ Fume extraction module & filters



**Multiple Drawer Cabinet**  
DS-OR

- ✓ Temp. Range of  $-5 \sim 100^{\circ}\text{C}$
- ✓ Humidity Range of  $20 \sim 90\%R$
- ✓ Vertical airflow
- ✓ Chamber Volume of  $150\text{L} \times 2$  Chamber /  $288\text{L} \times 2$  Chamber /  $384\text{L} \times 2$  Chamber
- ✓ Space efficiency model that controls two upper and lower chambers individually
- ✓ Provide optimized experiment environment with precise temp. & humid. controls



**Filtering Storage Cabinet**  
FSC

- ✓ Internal Volume of  $604\text{L} / 1317\text{L}$
- ✓ Capacity (L or 1L Bottle):  $140 / 280$
- ✓ Optional Filter: HEPA Filter, Complex Carbon Filter (Aldehyde, acid and amines are available)
- ✓ Filter installed inside, internal air circulation.
- ✓ Easy moving and installation, safety warning alarm



**Gas Cylinder Cabinet**  
DS-GC

- ✓ Gas Cylinder Max. storage capacity ( $\varnothing 230\text{ mm}$ ): 2 ea / 3 ea
- ✓ Safe protection from external shock
- ✓ Convenient folding ramp structure for replacing heavy cylinders



**Fire Safety Storage Cabinet**  
SC3-F / SC2-F + EM-3

- ✓ Internal Volume of Stand (90 min type):  $763\text{L} / 357\text{L}$   
Stand (30 min type):  $802\text{L} / 375\text{L}$   
Under (90 min type):  $244\text{L} / 110\text{L}$   
Under (60 min type):  $89\text{L} / 76\text{L}$   
Under (30 min type):  $252\text{L} / 116\text{L}$
- ✓ Safe storage of flammable / combustible materials in the event of a surrounding fire
- ✓ Designed according to the strictest European standard EN 1470-1
- ✓ Fire proof performance: 30 min / 60 min / 90



**Acid Corrosive Cabinet**  
SC-C + EM-33

- ✓ Internal Volume of Stand Type:  $894\text{L} / 852\text{L}$   
/  $445\text{L} / 426\text{L}$   
Under Type:  $314\text{L} / 227\text{L}$   
/  $146\text{L} / 115\text{L}$
- ✓ Acid/Base reagents can be safely stored for a long period of time.
- ✓ Solid steel structure with corrosion-resistant interior finish



**Molded Acid Corrosive Cabinet**  
PCC-720

- ✓ Internal Volume of  $122\text{L}$
- ✓ External Dimension of  $720 \times 472 \times 535\text{ mm}$
- ✓ Durable chemical resistant plastic storage cabinets for Acid/Base materials reagents
- ✓ Easy use with connecting filter or fan modules

# Refrigerator & Freezer for Laboratory Temperature & Humidity Chamber

## JEIotech



**Laboratory Refrigerator**  
CLG / CLG3

- ✓ Temp. Range of 2 ~ 10°C
- ✓ Internal Volume of 74L / 156L / 303L / 603L / 805L / 1327L
- ✓ Automatic defrosting function
- ✓ Controller lock & built-in key lock system
- ✓ Safety warning such as temperature deviation, door open and so on
- ✓ 2 kinds of door type (glass/solid), various volume
- ✓ Satisfied required condition of cold storage for pharmaceuticals stability
- ✓ Voice alarm system (option)
- ✓ LC Connected system (option, only for CLG3 model)



**Laboratory Freezer**  
FMG / FCG

- ✓ Temp. Range of FMG : -25 ~ -15°C  
FCG : -35 ~ -25°C
- ✓ Internal Volume of 154L / 303L / 647L
- ✓ Excellent thermal insulation and sealing to make keep stable temperature
- ✓ Dual defrost systems (automatic/manual)
- ✓ Controller lock & built-in key lock system
- ✓ Safety warning such as temperature deviation, door open and so on
- ✓ Simultaneously displays set temperature and actual temperature



**Pharmaceutical Refrigerator**  
PSR3

- ✓ Chamber Volume of 73L
- ✓ Temp. Range of FMG : 2 ~ 10°C (5°C set point)
- ✓ Verified temperature variation by KS P 6108 and DIN 13221.
- ✓ Authorized for manufacturing medical devices. (No. 3333 registered by KFDA)
- ✓ Satisfied required condition of cold storage for pharmaceuticals should maintain  $5 \pm 3^\circ\text{C}$  regardless of quantities of stored pharmacies
- ✓ Voice alarm system (Option)
- ✓ LC Connected system (Option)



**Tabletop Temperature & Humidity Chamber**  
TH3-KE / TH3-ME / TH3-PE

- ✓ Temp. Range of TH3-KE: -40 ~ 150°C  
TH3-ME: -20 ~ 150°C  
TH3-PE: 0 ~ 120°C
- ✓ Humidity Range of TH3-KE: 20 ~ 95 %RH  
TH3-ME: 20 ~ 95 %RH  
TH3-PE: 30 ~ 95 %RH
- ✓ Vertical airflow
- ✓ Chamber Volume of 25L / 65L / 100L
- ✓ Provides maximized performance in limited space
- ✓ Suitable for development step of small samples



**Ultra Low Temperature (-70°C) & Humidity Chamber**  
TH-KH

- ✓ Temp. Range of -70 ~ 150°C
- ✓ Humidity Range of 25 ~ 95 %RH
- ✓ Vertical airflow
- ✓ Chamber Volume of 189L / 302L / 408L
- ✓ Extended temperature range from -70 ~ 150°C
- ✓ Stable temp and humid control up to 95 %RH



**Low Temperature (-40°C) & Humidity Chamber**  
TH-G

- ✓ Temp. Range of -40 ~ 150°C
- ✓ Humidity Range of 25 ~ 95 %RH
- ✓ Vertical airflow
- ✓ Chamber Volume of 189L / 302L / 408L / 800L / 1450L
- ✓ Representative model with proven reliability
- ✓ Minimized water consumption & maintenance



**Pharmaceutical Stability Test Chamber**  
TH-ICH

- ✓ Temp. Range of 5 ~ 85°C
- ✓ Humidity Range of 20 ~ 85 %RH
- ✓ Vertical airflow
- ✓ Chamber Volume of 300L / 760L
- ✓ Satisfied ICH Guideline Q1A (R2) & Q1B (Option 2) Stability Test.
- ✓ Dedicated controller for light cumulative dose setting/control.



**Basic Temperature & Humidity Chamber**  
TH3-E

- ✓ Temp. Range of 0 ~ 90°C
- ✓ Humidity Range of 35 ~ 85 %RH
- ✓ Vertical airflow
- ✓ Chamber Volume of 201L / 398L
- ✓ Convenient operation with multifunctional 5.6 inch color touch controller.
- ✓ Possible to check the operation status with graphs.



**General Temperature (-5°C) & Humidity Chamber**  
TH-TG

- ✓ Temp. Range of -5 ~ 100°C
- ✓ Humidity Range of 10 ~ 95 %RH, 25 ~ 95 %RH
- ✓ Vertical airflow
- ✓ Chamber Volume of 189L / 302L / 408L, 770L / 997L / 1540L
- ✓ Stable temperature and humidity control for even during long-term continuous use over 1 year
- ✓ Convenient internal observation with LED lamp and looking glass window



### Tabletop Heating & Cooling Chamber TC3-KE / TC3-ME

- ✓ Temp. Range of TC3-KE: -40 ~ 150°C  
TC3-ME: -20 ~ 150°C
- ✓ Vertical airflow
- ✓ Chamber Volume of 25L / 65L / 100L
- ✓ Provides maximized performance in limited space
- ✓ Suitable for development step of small samples



### General Heating & Cooling Chamber LCH / LCH-G

- ✓ Temp. Range of LCH: -40 ~ 150°C  
LCH-G: -20 ~ 150°C
- ✓ Horizontal airflow
- ✓ Chamber Volume of 150L / 255L / 485L / 150 x 2 Chamber
- ✓ Suitable for temperature characteristics test of samples
- ✓ Space-saving vertical structure of dual chamber model



### Low Ultra Low Heating (-70°C) & Cooling Chamber KBD / KMV

- ✓ Temp. Range of KBD: -70 ~ 180°C  
KMV: -35 ~ 180°C
- ✓ Horizontal airflow
- ✓ Chamber Volume of 125L / 253L / 420L / 720L / 1000L
- ✓ Wide range from low to high temperature
- ✓ Provide reliability specification of fluctuation and gradient



### Low Temp. (-35°C) Heating & Cooling Chamber JMV

- ✓ Temp. Range of -35 ~ 180°C
- ✓ Vertical airflow
- ✓ Chamber Volume of 125L / 253L / 420L / 720L / 990L
- ✓ Vertical airflow and temperature range from -35 to 180°C
- ✓ Electronic over temperature protection system



### Low Temp. (-25°C) / Ambient Heating & Cooling Chamber PBV / PMV

- ✓ Temp. Range of PBV: -25 ~ 100°C  
PMV: -5 ~ 100°C
- ✓ Horizontal airflow
- ✓ Chamber Volume of 125L / 250L / 400L / 1000L
- ✓ Wide range from low to high temperature
- ✓ Provided reliability specification of fluctuation and gradient



### Heating Chamber LBV / LTV

- ✓ Temp. Range of LBV: -45 ~ 250°C  
LTV: -45 ~ 350°C
- ✓ Horizontal airflow
- ✓ Chamber Volume of 125L / 250L / 400L / 1000L
- ✓ Verified 27 point fluctuation and gradient  
Excellent insulation, sealing and durable structure



### Clean Oven OFC / OFC-P, OFC-H / OFC-HP

- ✓ Temp. Range of OFC/OFC-P: -45 ~ 250°C  
OFC-H/OFC-HP: -45 ~ 350°C
- ✓ Vertical airflow
- ✓ Chamber Volume of 200L / 400L
- ✓ Built-in class 100 HEPA filter-high temperature testing using clean conditions



**Desiccator**  
*SDC*

- ✓ Internal Volume of 35L / 50L
- ✓ Built-in hygrometer at front
- ✓ Stackable structure for space saving
- ✓ Drawer provided as standard for the convenient storage of small container



**Cubic Vacuum Desiccator**  
*VDC, VDC-U*

- ✓ Internal Volume of 11L / 23L / 35L / 45L
- ✓ Material of Body, Shelf: PC
- ✓ Desiccator Tray, Latch : PP
- ✓ Keep vacuum of 1 Torr for 72 hours
- Standard vacuum gauge at front



**Round Vacuum Desiccator**  
*VDR, VDR-U*

- ✓ Internal Volume of 6L / 10L / 20L
- ✓ Material of Lid, Bottom: PC
- ✓ Desiccator Tray, Locker: PP
- ✓ Durable one-mold design makes no leak
- ✓ UV block models are available



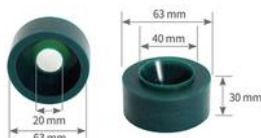
**Cylinder Vacuum Desiccator**  
*VDP, VDP-U*

- ✓ Internal Volume of 16L / 25L
- ✓ Material of Body, Bottom: PC
- ✓ Desiccator Tray, Locker: PP
- ✓ Standard 3-way stopcock valve
- ✓ Transparent for easy observation



**Wash Bottle**  
*JMV*

- ✓ Easily sprayed solution even when lightly pressed for convenience
- ✓ Vapor pressure self-discharge structure inside the container eliminates the inconvenience of liquid flowing out
- ✓ Double helical structure increases tightness of both container and cap
- ✓ Replaceable nozzle tip for effective maintenance
- ✓ Engraved markings for convenient capacity checking
- ✓ 250ml / 500ml



**Filter Adapter**

- ✓ It can be used between the filtering funnel and the filtering flask during vacuum filtration
- ✓ Excellent dealing and adhesion with silicone material
- ✓ Various uses for flasks as they come in various sizes



**Safety Waste Disposal System**  
*SF-14P & WT-20P, SF-14C & WT-20C*

- ✓ Volume of 1L / 22L
- ✓ Easy to collect and store various chemicals and waste liquids generated in the lab.
- ✓ Waste liquid level notification function.
- ✓ It is possible to configure a container together with flammable cabinets.
- ✓ Classified color label and lid color according to chemical properties.
- ✓ Exclusive carbon filter (Option).



## BIOSAFE® Cryocooler 120, 220, 420, 820, 500, 800, 1800, 2400

- ✓ Very low evaporation rate with full gas-phase storage capacity; remote diagnosis & monitoring available
- ✓ Systems are optimised for maximum capacity with compact external dimensions; large, vacuum-insulated lid for fast access
- ✓ Mobile and flexible: smooth-running castors; safety enhanced by combined vacuum seal-off/safety device



## Apollo

- ✓ 50–350 L pressurised LN<sub>2</sub> vessels; PED 2014/68/EU compliant.
- ✓ Built for secure, smooth transport with large, stable wheels and low maintenance
- ✓ Widely usable: analysis, cryomilling, cryosauna, freezing, biobank supply, or feeding BIOSAFE® systems



## Juno

- ✓ Supply vessel for LN<sub>2</sub>; example JUNO 30: 30 L, 1.3 bar max operating overpressure, compact footprint
  - ✓ Low static evaporation ( $\approx 0.75$  L/day  $\approx 2.5$  %/day on JUNO 30)
- Integrated safety features at the neck and built-in pressure indicator (channel partner spec).



## Saturn

- ✓ Low evaporation (e.g.,  $\sim 1.2$  %/day on SATURN 150) with efficient exhaust-gas cooling
- ✓ Integrated vacuum sealing/safety device with long-term vacuum protection (adsorber/getter materials)
- ✓ Multi-layer super-insulation; inner & outer containers helium leak-tested; robust transport frame and compact dimensions



## BIOSAFE® smart

- ✓ Dual access control (RFID + PIN) with full activity logging and 21 CFR Part 11 compliance
- ✓ Automatic lid locking plus on-site monitoring (Smart Config) and remote desktop option (Smart+ Info.View) with secure data transfer
- ✓ Supports level/temperature monitoring, alarm evaluation/forwarding; optional battery backup and warm gas bypass



## Flexible/Rigid Line Systems

- ✓ Vacuum super-insulated flexible line DN 20 with plug-in coupling DN 14 (flexible), and Vacuum superinsulated straight line elements and angles with plug-in coupling DN 14 (rigid)
- ✓ Optically appealing
- ✓ Made of non-magnetic highly corrosion-resistant stainless steel, can also be used in clean rooms and in food industry
- ✓ Expandable and can be combined



**Chamber Furnaces**  
*Primary Series*

- ✓ Volume options of 3, 5, 8 and 20 liters.
- ✓ Ideal for simple applications up to 1100°C
- ✓ PID control features.
- ✓ Advanced heater protection, durable inner chamber and reliable.
- ✓ Ideal for basic ashing and burning processes.
- ✓ Bottom, side and top walls made of light firebrick.
- ✓ Lockable door handle.
- ✓ Thanks to SSR driven duty cycle control algorithm accurate temperature control.
- ✓ Standard chimney with fan



**Chamber Furnaces**  
*Standard Series*

- ✓ Volume options of 5, 7, 10, 20, 40, 60 and 100 liters.
- ✓ Robust, durable and reliable.
- ✓ Ideal for all ashing, burning and similar processes up to 1300°C
- ✓ Bottom, side and top walls and front facing insulations made of light firebrick.
- ✓ Programming with easy-to-understand menu on 4-line LCD display.
- ✓ Lockable door handle.
- ✓ Optional Lift-up door.
- ✓ Thanks to SSR driven duty cycle control algorithm accurate temperature control.
- ✓ 4 line display with menu makes it easy to use.
- ✓ Standard chimney with fan.



**Tube Furnaces**  
*MTF Series*

- ✓ Specially engineered for absolute accuracy of temperature measurement.
- ✓ Optional gas inlet and purge systems for protective gas atmosphere.
- ✓ Thermal shock resistant tubes.
- ✓ Precise temperature control for a wide range of working temperature.
- ✓  $\pm 1^\circ\text{C}$  control accuracy.



### **PRECI SCS (Single-Cell Sorter)**

- ✓ Single-Cell Detection and Separation
- ✓ Ultra-High-Precision Sorting with a Single-Cell Isolation Success Rate of Over 99%
- ✓ Highly Automated Workflow, Easy to Learn and Use
- ✓ Multiple Models with Excellent Expansion Capability



### **PRECI SCS-R300 (Raman)**

- ✓ Visual-guided and Precise Single-Cell Sorting
- ✓ Confocal Raman Spectroscopy System for Single-Cell Identification
- ✓ Comprehensive Solution for Microbial Single-Cell Analysis



### **Scatcher (Single-Cell Optical Tweezers Sorter)**

- ✓ Ultra-High Precision & Viability of Single Cell Manipulation for Single Cell Sorting
- ✓ Automated Cell Receiving in Culture Plate
- ✓ Customized Microfluidic Cell Manipulation Chips
- ✓ Modular Design with Excellent Expansion Capability



### **S3000 (Ultrafast 3D Fluorescence Imaging System)**

- ✓ Fast Array Imaging
- ✓ Friendly for Biological Sample
- ✓ Minimal Maintenance Required and Easy to Use
- ✓ Versatile Compatibility & Upgrades



### **Scatcher Ultra (Single-Cell Raman Optical)**

- ✓ Equipped with Confocal Raman Spectroscopy System for Single-Cell Identification
- ✓ Highly Automated Workflow with, Easy to Learn and Use
- ✓ Visual-Guided and Precise Single-Cell Sorting



### **P300 (Confocal Raman Microscope)**

- ✓ Efficient Weak Raman Signal Collection
- ✓ Multi-Dimensional Spectral Calibration System
- ✓ Intelligent Visual Data Analysis
- ✓ Database Building & Rapid Retrieval



### **PartiGen (Particle Analyzer)**

- ✓ Aqueous Solution Friendly for Non-Destructive Analysis
- ✓ In-Situ Analysis of Visible Particles
- ✓ Pharmaceutical Industry Professional Database, Supports Custom Database Creation
- ✓ Compliant with 21 CFR Part 11



### SavantAA

- ✓ Programmable flame control with ten safety interlocks provides reproducible operation
- ✓ Automatic wavelength setting, 185 to 900 nm
- ✓ Asymmetric modulation reduces noise by up to 40%



### SavantAA Σ

- ✓ All-reflective optics for high light throughput
- ✓ Automatic wavelength setting, 175 to 900 nm
- ✓ Hyper Pulse fast background correction provides 175-423 nm correction range, at up to 2.5 Abs



### XplorAA

- ✓ Six Lamp Motorised or Two Lamp Manual Turret, with warm up Lamp Position
- ✓ Fully Integrated Liquid Trap
- ✓ New State of the Art Fully Programmable Gasbox
- ✓ Lightweight for Easy Portability



### GeminAA Plus

- ✓ 1800 lines/mm diffraction grating, which increases resolution and energy efficiency
- ✓ Optical system allows for low detection limits for elements such as As, Se among others
- ✓ Six lamp turret with lamp auto peaking



### enduro T2100

- ✓ Transversely heated graphite furnace technology ensures high efficiency and homogeneity of sample atomisation
- ✓ Longitudinal Zeeman and Deuterium Lamps are two types of background correction modes
- ✓ Optional Hydride Generator



### Graphite System 5000

- ✓ Variable injection volume of 1 µL to 100 µL in 1 µL increments allows the user to setup optimum method
- ✓ Temperature program up to 3,000°C for even the most complex sample
- ✓ Programmable gas selection allows different gases to be used allowing for diverse ashing techniques to be used in one method



**Quantima**

- ✓ Unlimited wavelength selectivity
- ✓ High sensitivity
- ✓ Highest resolution
- ✓ Unparalleled optical stability
- ✓ High stray light rejection



**Integra 6000**

- ✓ Computer control of over 200 instrument parameters
- ✓ Precise mass flow gas control of nebulizer gas (with optional mass flow of plasma and auxiliary gas)
- ✓ Thermostatted optics for unparalleled optical stability



**SDS3000**

- ✓ The SDS3000 is a precision engineered X-Y-Z auto sampler
- ✓ The SDS3000D is the SDS3000 auto sampler with inbuilt dilutor
- ✓ PTFE and PEEK material is used to provide a metal free liquid flow path



**OptiMass 9600**

- ✓ Low operating cost
- ✓ Low argon consumption
- ✓ Unique retrospective semi-quantitative (RSQ) analysis
- ✓ Multielemental spectral fingerprinting capability



**OptiMass 9500**

- ✓ Low operating cost.
- ✓ Low argon consumption.
- ✓ Unique retrospective semi-quantitative (RSQ) analysis
- ✓ Laser Ablation-ICP-MS system



**OptiMass Accessories**

- ✓ The ETV accessory is designed and made by GBC specifically for the OptiMass
- ✓ This accessory is ideal for slurries and viscous samples to be analysed. As low as 1  $\mu\text{L}$  can be injected, any low volume samples such as blood or precious samples can be analysed and all masses analysed simultaneously



### ***Nebula GC***

- ✓ Boasting a choice of five detectors—including the thermal conductivity detector (TCD), flame ionization detector (FID), flame photometric detector (FPD), nitrogen phosphorus detector (NPD), and electron capture detector (ECD)
- ✓ The Nebula GC is designed with a stable temperature control system, featuring a 10-segment programmable temperature control, over-heating alarm, and protection mechanisms



### ***Aludra GC-MS***

- ✓ The Aludra GC-MS stands at the forefront of analytical excellence with its comprehensive range of features
- ✓ Boasting both an Electron Ionization (EI) source and an Adjustable Positive Chemical Ionization (PCI) source, this system provides unparalleled versatility in ionization techniques
- ✓ The Aludra GC-MS further extends its capabilities with optional accessories, including the DIP 100 liquid/solid direct injection probe assembly, a thermal desorption device, a dynamic headspace sampler, and a purge-and-trap sample concentrator



## Syringe Filters

PureTech, MeTech, StarTech, DualTech, TriTech, Reusable Syringe Filters

- ✓ Fast and efficient filtration of aqueous and organic solutions
- ✓ Available in all the major membranes: nylon, hydrophilic & hydrophobic PTFE, regenerated cellulose (RC), PES, MCE, and PVDF
- ✓ Three different size formats: 4 mm, 13mm, and 25 mm
- ✓ Available sterilized with EO or with a pre-filter layer (PP or GF)
- ✓ Luer lock that complies with ISO 594-1



## Air/Vent Filters

- ✓ Manufactured out of clear polycarbonate and in a Class 10,000 clean-room.
- ✓ Hydrophobic PTFE membrane and a tight 0.2um pore size, air/vent filters pass HEPA-filter tests with a filtration efficiency of >99.99%.



## Membrane Filter

- ✓ Broad offerings of membrane materials: PTFE, regenerated cellulose, nylon, cellulose nitrate, polycarbonate, etc
- ✓ Some membrane materials are also available in sterile format
- ✓ Provide customized diameters and pore sizes according to an individual's specific needs.



## Transducer Protector

- ✓ Diameter: 23mm
- ✓ Membrane: PTFE
- ✓ Pore Size: 0.2um
- ✓ Filtration area: 2.5cm<sup>2</sup>
- ✓ Hydrophobic membrane with 0.2 micron pore size
- ✓ Prevents contamination of the internal pressure monitoring lines
- ✓ Antibacterial hydrophobic air filter with female luer lock/male luer lock
- ✓ Protective hydrophobic barrier allows only sterile air to pass through, protecting patients and equipment from cross contamination
- ✓ Prevents blood and dialyzing fluid from damaging sensitive transducer monitoring devices



## Solvent Safety Caps GL-45, FT Solvent Safety Waste Caps

- ✓ GL-45  
Protects solvents from outside contamination  
Prevents evaporation of solvents  
Protects the lab staff from hazardous fumes
- ✓ FT Solvent Safety Waste Caps  
Purifies harmful volatile gases from the waste container  
Protects lab staff from hazardous fumes



## Glass Microfiber Filter

- ✓ High efficiency, submicron particle retention combined with high permeability and high dust holding capacity
- ✓ Made of 100% borosilicate glass microfibers, resistant to most solvents and reagents with the exception of hydrofluoric acid and highly concentrated alkali solutions
- ✓ Binder-free and resistant to temperatures up to 500°C
- ✓ Grade 550 HA can withstand temperatures to 550°C



## Glass Filtration Apparatus Type A, Type B

- ✓ **Type A**  
Ground glass joint connection.  
Filter Diameter: 47mm; 90mm  
Outlet Fitting: 6mm (1/4 in.) O.D tubulated cap sidearm to vacuum  
Funnel Capacity: 300ml; 500mm
- ✓ **Type B**  
Silicone plug connection.  
Filter Diameter: 25mm, 47mm  
Outlet Fitting: 6mm (1/4 in.) O.D tubulated cap sidearm to vacuum  
Funnel Capacity: 25ml, 300ml



## Stainless Steel Vacuum Manifold Type A, Type C

- ✓ Constructed out of durable 316 stainless steel for high chemical resistance and sterilization by autoclave or dry heat
- ✓ Comes in a traditional clamp lock system or in our EZ-lock system for one-handed operation
- ✓ Available in multiple number of branches, Finetech's steel filtration set fits any size laboratory
- ✓ Ready to use sterile filter units are available



## Vacuum Filtration System Type A, Type C

- ✓ Vacuum filtration system is designed for filtering many samples for microbiological or general lab filtration
- ✓ The system consists of a durable 316 stainless steel manifold and funnel, a reliable vacuum pump, and a waste bottle



## HPLC Vials/Caps & Septa

- ✓ Manufactured with amber or clear borosilicate glass
- ✓ Manufactured with amber or clear borosilicate glass
- ✓ Micro-inserts allows the use of standard 2mL vials for microsampling



## SPE (Solid Phase Extraction)

- ✓ **SPE Cartridges**  
Lower solvent consumption and improve signal to noise ratio.  
Extend your analytical instrument's life, and save time in the lab.  
Available in a wide variety of sorbents.
- ✓ **SPE Vacuum Manifold**  
Solid phase extraction manifold is made of transparent glass and has high corrosion resistance.  
Tolerate high vacuum and with no deformation after long-term use.  
Uniform pressure throughout the vacuum chamber.  
Extraction speed is consistent and with easy controls to adjust.  
Multi-channel can be controlled independently; the connector can resist high corrosion.  
Internal test tube rack made of PTFE, and has high corrosion resistance.



## QuEChERS Extraction and Clean-up Kits

- ✓ Process is divided into three stages: homogenization, extraction, and clean-up.
- ✓ These steps are quick and easy to implement and are less prone to errors.



## COD Products

- ✓ **COD Test Tubes**  
Capacity of 10mL, Max. of 12mL  
Height of 10±0.02cm  
Diameter of 1.58±0.02cm  
Neck Inner Diameter of 0.95±0.02cm  
Neck Outer Diameter of 1.50±0.02cm
- ✓ **Nessler Color Comparison Tubes**  
Uniformed glass for clear optical transmission.  
High borosilicate glass 3.3.  
Has markings for nominal stroke volume and halfway mark.  
Graduation markings available for accurate measurements.  
Includes stopper.



## PCR Supplies

### PCR Tubes, 8-Strip Tubes, 96 Well Plates

- ✓ Easy to open and provide tight sealing to prevent evaporation. With their thin, consistent wall thickness and smooth wall surface, they also ensure efficient heat transfer to the sample, speeding up your PCR
- ✓ Thin wall allows precise thermal transfer
- ✓ Easy labeling
- ✓ Low Evaporation: insertion cap ensures a tight fit to reduce evaporation
- ✓ Autoclavable
- ✓ No DNase, RNase, heat source and inhibitor pollution



## Microbiological Filtration Products

- ✓ **Vacuum Driven Sterile Filter Cup**  
Sterilized through gamma irradiation  
Filtration Area of 15.2 cm<sup>2</sup>  
Hold-up Volume of ≥3 ml  
Bacterial Retention of 0.22 micron pore size : 1 x 10<sup>-7</sup> cfu per cm<sup>2</sup> (Brevundimonas diminuta)
- ✓ **Micro Funnel Filter Unit**  
Membrane: MCE  
Pore Size: 0.45um  
Membrane Size: 47mm  
Funnel Capacity: 100mL  
Convertible to petri dish



## Centrifuge Tubes

- ✓ These conical-bottom tubes are made of ultra-clear polypropylene
- ✓ Cap Material: HDPE
- ✓ Sterility: EO or Gamma
- ✓ Leakproof
- ✓ Large white marking strip for easy labeling
- ✓ Easy single-hand operation
- ✓ Clear graduations provides easy volume reference
- ✓ Available in non-sterile



## Microcentrifuge Tubes

- ✓ High transparency PP
- ✓ Max speed of 15,000 RPM
- ✓ DNase/RNase and pyrogen free
- ✓ Usable temperature range of -80°C - 121°C



### Cell & Tissue Culture Products

- ✓ Manufactured from virgin Polystyrene.
- ✓ Tissue culture treated surface to aid in cell attachment.
- ✓ Gamma ray sterilization.  
DNase/RNase-free and non-pyrogenic.



### Erlenmeyer Shake Flasks

- ✓ Polyethylene terephthalate glycol-modified (PETG) construction provides excellent optical clarity and mechanical strength.
- ✓ HDPE with 0.2µm.
- ✓ Sizes range from 125 to 1000ml.
- ✓ Molded-in graduations for accuracy (±5%).
- ✓ Vent cap for continuous gas exchange while ensuring sterility and preventing leakage.



### Sterile Bottle Top Vacuum Filter

- ✓ Filter Membrane: PES, PVDF
- ✓ Capacity of 500mL
- ✓ Thread GL-45
- ✓ Membrane Pore Size of 0.22µm, 0.45µm
- ✓ Membrane Diameter of 90mm
- ✓ Suitable for sterile filtration of cell culture media and serum
- ✓ Gamma sterilized



### Sterile Serological Pipette

- ✓ Six capacity: 1.0ml, 2.0ml, 5.0ml, 10.0ml, 25.0ml, 50.0ml
- ✓ Graduations are calibrated within ±2%.  
1.0ml, 2.0ml, 5.0ml pipettes are shaped by stretching method
- ✓ 5.0ml, 10.0ml, 25.0ml, 50.0ml pipettes tips are welded to the tube by supersonic wave
- ✓ Smooth and clean without draw lines. Different colors correspond to different specification
- ✓ Maximum reduction of liquid adhesion to the tube inner wall, which improve the sampling accuracy
- ✓ Clear and simple graduation, as well as the negative one for extra volume, makes the liquid drawing and reading easier
- ✓ Available sterile or non-sterile



### Auto-Pak™ Membrane Dispenser

- ✓ Touch-free sensor: dispenses the next membrane without having to physically touch any buttons. Reduces possibility of contamination while also being more convenient and fast
- ✓ Membrane counter: can keep track of membrane count for better experiment management
- ✓ Built-in lithium battery: No external power source needed, making it portable and convenient. Can continuously dispense 6,000-12,000 filters on a full charge
- ✓ 304 stainless steel casing: Durable, good corrosion resistance, and resistant to chemicals such as disinfectants



### Single/Multi Micropipette, Pipette Stand S Series, P Series

- ✓ **Micropipettes**  
Single Channel: Available in the range of 0.1µL to 10mL  
Multi Channel: Available in the range of 0.5µL to 300µL  
Autoclavable 121°C (20min)  
Corrosion-resistant piston and ejector
- ✓ **The S Series micropipettes offers a ceramic piston for increased durability and corrosion resistance over the traditional plastic or metal pistons**



## LED Plant Growth Chamber

- ✓ Temperature range of 5°C to 40°C.
- ✓ Energy efficient: LED lights used reduces 1/3 of energy waste
- ✓ Accurate performance: The cooling, heating, and humidification systems provides accurate and reliable performances
- ✓ Safe: Protection devices for both heating and cooling system automatically cuts off power when there's a problem
- ✓ Illumination control: Can set the illumination of day, night, time interval. Selectable LED light of 470nm blue light, 660nm red light, and 740nm orange light
- ✓ Easy maintenance



## Refrigerated Circulating Bath

- ✓ Temperature range of Ambient to 100°C.
- ✓ 10-20 liter capacity
- ✓ Quick, accurate, stable, and reliable heating.
- ✓ PID Controller
- ✓ LED Digital Display
- ✓ Stainless steel heating system: Durable and corrosion-resistant. Has better lifespan and reliability than other materials used in heating systems
- ✓ Accurate temperature control: Set temperatures are reached quickly, accurate, and kept stable, saving time and energy
- ✓ Easy maintenance



## Non-Circulating Water Bath

- ✓ Temperature range of 0°C to 100°C
- ✓ Stainless steel heating system
- ✓ German-made compressors
- ✓ PID Controller
- ✓ LED Digital Display
- ✓ Power efficient and durable: Designed to be efficient and reliable
- ✓ Accurate temperature control: Set temperatures are reached quickly, accurate, and kept stable, saving time and energy



## Oil-Free Piston Vacuum Pumps VS01, VS08

- ✓ No air pollution & maintenance free
- ✓ Quiet and low vibration
- ✓ Chemical resistant
- ✓ Built in thermal protection
- ✓ Easy to carry design: light and portable
- ✓ High performance pump
- ✓ Runs steadily for long periods of time



## Compact Series VS300, VS400

- ✓ Low vibration and low noise emission
- ✓ Oil-less design, no pollution generated
- ✓ Built in thermal protection
- ✓ Compact and easy-to-carry design
- ✓ Max Vacuum: 660 mmHg
- ✓ Flow Rate for VS300 : 24L/min, VS400: 40L/min



## Diaphragm Vacuum Pumps

- ✓ High chemical resistance
- ✓ No air pollution & maintenance free
- ✓ Quiet and low vibration
- ✓ Built in thermal protection
- ✓ High performance pump
- ✓ Available in models C300, C400, C410, C510, C600, C610

# Cuvette/Cells Certified Reference Material



Starna scientific



## Cuvette/Cells

- ✓ Quartz and glass cells for spectrophometers, fluorometers, colorimeters, and laser applications
- ✓ Available in standard, micro, sub-micro, flow, and other cell type



## Certified Reference Material

- ✓ Holmium Glass - UV and Visible wavelength
- ✓ Usable range 270–640 nm
- ✓ Neutral Density Filter - Visible absorbance and linearity
- ✓ Usable range 440–635 nm
- ✓ Inorganic cut-off filters - UV stray light
- ✓ Usable range 200–260 nm



- ✓ The range of Starna reference materials is continually expanding and includes references for ultraviolet and visible spectrophotometry, for fluorescence, NIR and Raman spectroscopy, references for use in plate readers and HPLC instrumentation, and a range of specialised materials for use in bioscience. References are also available in convenient sets for instrument qualification to the requirements of Pharmacopoeias and other regulatory bodies.



**MP 101 Z**

- ✓ Standard duty diaphragm pump
- ✓ Ultimate pressure < 8 mbar
- ✓ Application for aspiration, rotary evaporator, filtration, desiccation, vacuum oven, concentrator, and vacuum manifold



**MPC 302 Z**

- ✓ Standard duty diaphragm pump
- ✓ Ultimate pressure < 5 mbar
- ✓ Application for aspiration, rotary evaporator, filtration, desiccation, vacuum oven, concentrator, and vacuum manifold



**MPC 090 E**

- ✓ Chemical resistance diaphragm pump
- ✓ Ultimate pressure < 100 mbar
- ✓ Application for aspiration, rotary evaporator, filtration, desiccation, vacuum oven, concentrator, and vacuum manifold



**DryFast eco**

- ✓ Chemical resistant diaphragm pump
- ✓ Ultimate pressure < 8 mbar
- ✓ Application for aspiration, rotary evaporator, filtration, dessication, vacuum oven, concentrator, and vacuum manifold.



**WOB-L Pump (2546)**

- ✓ Oil free dry piston pump.
- ✓ Ultimate pressure 80 mbar.
- ✓ Includes vacuum and pressure regulators and gauges.
- ✓ Application for filtration, aspiration dessication, and vacuum drying.



**CRVpro**

- ✓ Cool running (10°C cooler than comparable pump).
- ✓ Large oil capacity.
- ✓ PTFE and black oxide coating.
- ✓ Ultimate pressure  $5 \times 10^{-4}$  mbar (without gas ballast) (CRVpro 4, 6, 8)
- ✓ Ultimate pressure  $3 \times 10^{-4}$  mbar (without gas ballast) (CRVpro 16, 24, 30)
- ✓ Application for schlenk line, freeze dryer, vacuum concentrator, HVAC, vacuum oven, glovebox, and mass spectrometers.



### Milli-Q® IQ 7000

- ✓ Consistent trace-level ultrapure water using Jetpore® + IQnano™ resin media
- ✓ Ergonomic, precise dispensing from drop-by-drop up to ~2 L/min; intuitive HD touchscreen
- ✓ Designed for productivity & sustainability



### Milli-Q® IX 7003/05/10/15

- ✓ Delivers Type 2 (and Type 1 at the Q-POD/E-POD) directly from tap with integrated Elix® EDI
- ✓ Automation for consistency (RO & EDI rinsing, loop recirculation, tank UV; smart alerts)
- ✓ Mercury-free UV & sustainability award winner



### RiOs™ Essential

- ✓ Reliable, constant production of RO (Type 3) water from tap water
- ✓ High-performance RO with pretreatment & temperature compensation for steady flow/quality
- ✓ Ideal for non-critical applications



### Milli-Q® EQ 7008/16

- ✓ Produces Type 1 (18.2 MΩ-cm, TOC ≤ 5 ppb); final POD-Pak at Q-POD removes application-specific contaminants at dispense
- ✓ Flexible installation & dispense options (on/under bench, wall-mount; remote HMI; manual rates + one-touch volumetric)
- ✓ Check & Dispense lights, 7" touchscreen, foot-pedal option for confident, hands-free operation.



### Milli-Q® HR 7000

- ✓ Advanced purification tech for constant flow with reduced water consumption
- ✓ Interactive touchscreen with guided wizards; modern data management & MyMilli-Q™ Remote Care
- ✓ Connected central solution sized across 7060/7120/7170/7220 for building/lab networks.



### Polyethylene (PE) Storage Tanks

- ✓ Preserves purity: vent filter, smooth inner surface (biofilm prevention), aseptic overflow
- ✓ Opaque PE with minimal extractables; conical base for complete draining & easy sanitization
- ✓ Compact footprint; wall-mount/under-bench options across sizes



### Milli-Q® SQ 200 Purification System

- ✓ Autonomous Type 1 dispensing module fed by a mobile 3.5 L SQ Switch tank; plug-and-use.
- ✓ Flexible handset: variable flow up to 1.6 L/min down to drop-by-drop; simple, manual operation
- ✓ Reliability indicators & low bioburden



### AFS® E

- ✓ Elix® EDI core for superior, consistent quality with reduced environmental impact
- ✓ Intelligent RO optimizes water use while ensuring constant product flow
- ✓ Meets CLSI CLRW requirements for clinical analyzers; models with 24/7 remote monitoring available.



### Milli-Q® CLX 7000

- ✓ Up to 3,000 L/day CLRW for analyzers; economical, high-performance feed.
- ✓ Connected system with series options and documentation for clinical workflows



### Clinical Benchtop Centrifuge

- ✓ 500–6,000 rpm (set in RPM or RCF), 30 s–60 min timer or continuous
- ✓ Programmable memory + built-in safety; quiet, compact, maintenance-free design
- ✓ Adapters for common blood collection/conical tubes; optimized for clinical settings



### Centrifuges

- ✓ Up to 12,500 rpm with 1–30 min timer; ideal for PCR, microfilter cell separation clinical/diagnostic & HPLC protocols
- ✓ Compact footprint for fast spins when bench space is tight
- ✓ Durable build with brushless motor for quiet, low-vibration operation



### MagFuge® (centrifuge + magnetic stirrer)

- ✓ Industry's first 2-in-1 high-speed centrifuge & magnetic stirrer → saves cost & bench space
- ✓ Bundle includes 3 rotors (1.5/2.0 mL, 5 mL, stirrer) + adapters & stir bars—ready to use
- ✓ Integrated safety features; precise stirring with strong magnetic coupling



### Stirrers

- ✓ Motor-less magnetic-coil drive → minimal heat, quiet/low vibration, maintenance-free
- ✓ Constant-speed control for reproducible results; AC-driven coupling stirs viscous samples
- ✓ Up to 3 L capacity



### Digital Orbital Shaker

- ✓ 20–300 rpm (1-rpm increments), 19 mm orbit, 0–74 h 59 m timer or continuous
- ✓ Auto feedback motor compensates for load/unbalance—reproducible results
- ✓ Works in incubators (non-CO<sub>2</sub>) & cold rooms; max load 4.5 kg; 5-year warranty



### eCount™ Colony Counter (pen-style)

- ✓ Count up/down with audible beep/LED flash verification
- ✓ Stores totals for up to 32 zones; quick color-marker swaps for multi-sample plates
- ✓ Combines electronic counter + Sharpie® to reduce missed/double counts; can be used as digital tally (adapter).



### Vortex

- ✓ 0–3000 rpm rotary control with preset steps; stable elastomer feet damp vibration
- ✓ Durable ABS body; 5-year warranty
- ✓ One head can accommodate most common tube sizes + assay plate (no head swaps)



### Refractometers (Handled / Digital)

- ✓ Largest, easy-to-read scale with sharp contrast better precision across users.
- ✓ All-metal housing + optical-glass prism → fast temperature equilibrium & rugged field use.
- ✓ Quick digital accuracy with automatic temperature compensation (ATC) and continuous-loop readings.
- ✓ Large LCD; IP67-rated models for field/industrial use.



PCR Rack 32 Place



PCR Tube Rack  
96-Well



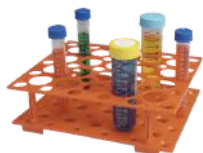
PCR Cooler



Needle and Spreader



Duraporter



Snap-Together Conical  
Tube Rack



Universal Tube Rack



Transformable Cube  
Tube Rack



Fold and Snap  
Tube Rack



TracRack Tube



Mini Magnifier



Mini-Light Box



Weighing Boats



Holder, Biohazard  
Disposable Bag



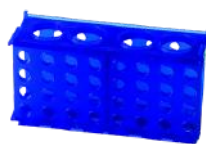
Rota-Rack Duo



4 Way Rack Clinical



Cube Rack Tube Rack



4-Way Tube Rack



OneRack MULTI



Adapt-A-Rack



Pipette Controller



OneRack Tube Rack  
Half POM



Mega Racks Tube



Parafilm &  
Parafilm Dispenser



Rack 80 Well



Rota-Rack Rotating 4-  
Way



Reversible Tube Rack,  
96-Well



Workplace Lab Mat



One-Well Tube  
Rack Wire



Pop-Up Tube Rack

## Compliance to the Standard

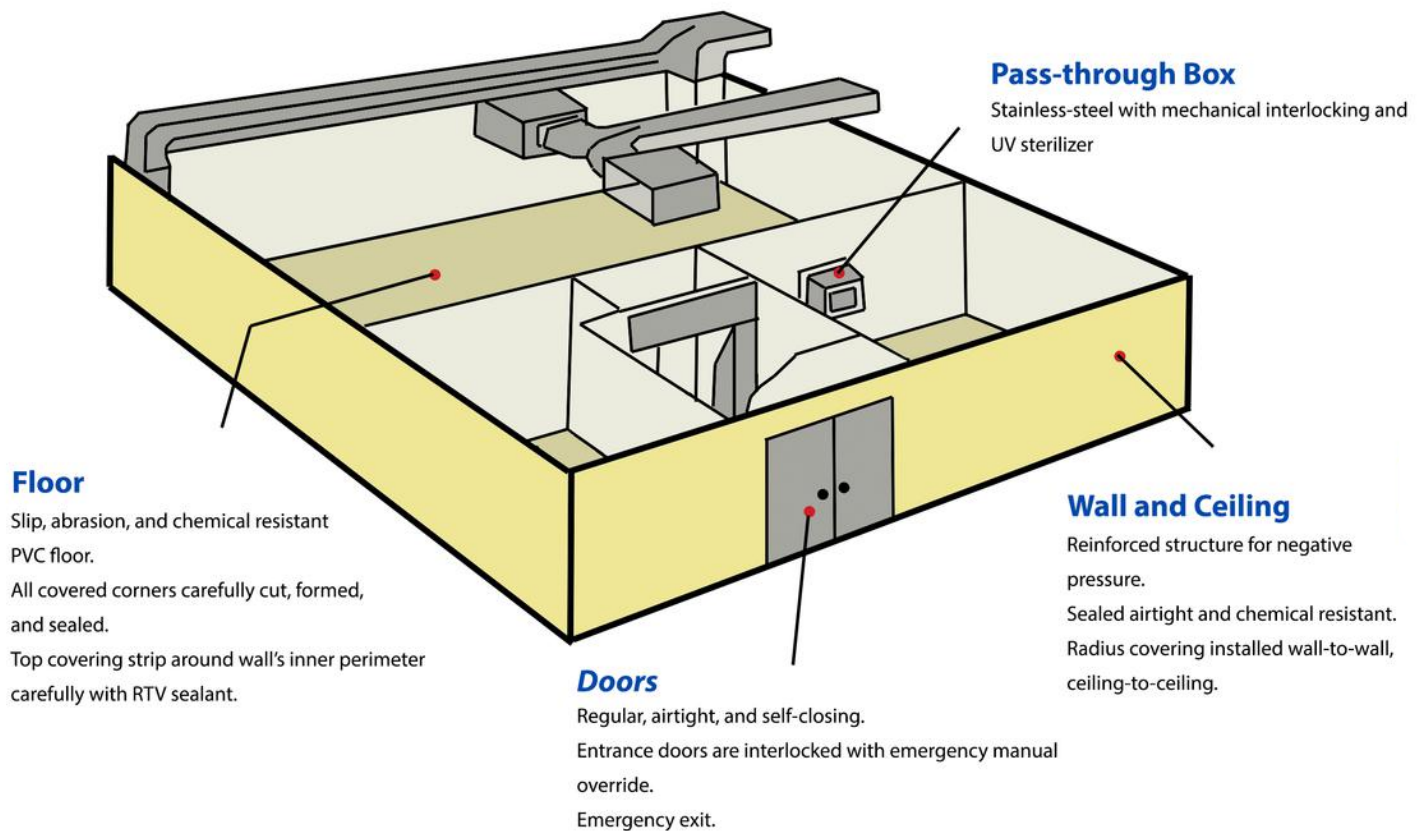
### Principal standard

- ✓ Laboratory Biosafety Manual - 3rd Edition Biosafety Level 1-4 WHO, Geneva

### Reference standards

- ✓ Biosafety in Microbiological and Biomedical Laboratories - 5th Edition Biosafety Level 1-4 NIH/CDC, USA
- ✓ Laboratory Biosafety Guidelines - 3rd Edition Containment Level 1-4, Health Canada
- ✓ EN12128-1998, Biotechnology Laboratories for research development and analysis - Containment level of microbiological laboratories, areas of risks localities and physical safety requirement. PCL 1-4 Physical Containment Level Laboratory
- ✓ EN12738-1999, Biotechnology Laboratories for research development and analysis - Guidance for containment of animal inoculated with microorganism in experiment. ACL 1-4 Animal Containment Level Laboratory
- ✓ NIH Guidelines for Research Involving Recombinant DNA Molecules (Jan 2001) Biosafety Level 1-4
- ✓ National Sanitation Foundation (NSF USA) NSF Class II (Laminar Airflow) Biohazard Safety Cabinets Ann Arbor

## Design and Material\*



Menurut ISO 17043, **Uji Profisiensi** adalah kegiatan untuk mengevaluasi kinerja laboratorium yang melakukan pengujian melalui perbandingan laboratorium. Setiap laboratorium pengujian, khususnya yang sudah terakreditasi ISO 17025 perlu untuk melakukan Uji Profisiensi sebagai mandatory dari ISO 17025, dan sebagai wujud kinerja kompetensi suatu laboratorium.

## Komoditi :



### **Air Minum/ Air Bersih** (Permenkes RI No 2 Tahun 2023)

- Fisika/Kimia\*
- pH (2 - 14)
- Kekeruhan (0,9 - 5,1 NTU)
- Nitrit (0,9 - 5,1 mg/l)
- Kromium Heksavalen (0,006 - 0,110 mg/l)
- Warna (3 - 34 TCU)
- Logam \*\*

\* Fluorida, Nitrat, TDS

\*\* Fe, Mn, As, Pb, Al, Cr, Se, Ni, Cu, Zn, Cd



### **Air Sungai** (PP No. 22 Tahun 2021)

- Fisika/Kimia\*
- Warna (2,5 - 25,5 TCU)
- Kekeruhan (0,8 - 22,5 NTU)
- Nitrit (0,068 - 0,202 mg/l)
- Kromium Heksavalen (0,015 - 0,085 mg/l)
- pH (- mg/l)
- Logam\*\*

\* Fluorida, Nitrat, TDS, Sulfat

\*\* Fe, Mn, As, Pb, Al, Cr, Se, Ni, Cu, Zn, Cd

## Our Customers :



 **Pendaftaran:**  
WhatsApp  
0877-7030-8825  
(Ressa)

 scan me



## Jasa Kalibrasi Terakreditasi KAN

Indotech senantiasa berkomitmen untuk memberikan pelayanan terbaik.

Kami telah terakreditasi oleh Komite Akreditasi Nasional sebagai laboratorium kalibrasi (LK-320-IDN) berdasarkan SNI ISO/IEC 17025:2017.

Melayani kalibrasi *on-site* maupun *via pengiriman*.

## ANALYTICAL INSTRUMENTS

### SPECTROPHOTOMETER

240 ~ 640 nm

0.5 ~ 1.2 Abs

### pH METER

pH 4, 7, 10

### MOISTURE METER (Karl Fischer)

0.01 %

1 %

## MASS

### ELECTRONIC BALANCE

0 ~ 600 g

### WEIGHTS

50 g

### ANALYTICAL BALANCE

0 ~ 200 g

100 g

200 g

## VOLUMETRIC

### BURETTE

1 ~ 10 ml

### ANALYTICAL BALANCE

0 ~ 200 g

## TIME AND FREQUENCY

### CENTRIFUGE (RPM)

300 ~ 15000 rpm

### STOPWATCH AND TIMER

60 ~ 600 s

## PRESSURE

### DIFFERENTIAL PRESSURE GAUGE

-30 Pa ~ 30 Pa

30 Pa ~ 500 Pa

## TEMPERATURE AND HUMIDITY

### THERMOHYGRPMETER

Temp. 15 °C ~ 40 °C

Hum. 40% RH ~ 80% RH

### ENCLOSURE

#### 1. OVEN

Ambient °C ~ 100 °C

100 °C ~ 200 °C

#### 4. WATERBATH

Ambient °C ~ 90 °C

#### 2. INCUBATOR

0 °C ~ 80 °C

#### 5. FREEZER

-30 °C ~ 20 °C

#### 3. FURNACE

Ambiant °C ~ 500 °C

500 °C ~ 1000 °C

#### 6. REFRIGERATOR

0 °C ~ 5 °C

5 °C ~ 20 °C







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