

BS-1000M

Chemistry Analyzer

Technical Specifications

| | | | |
|-------------------------|---|-----------------------------------|---|
| System Function | | Optical System | |
| Throughput | 1,000 photometric tests per hour, up to 1,200 tests per hour with ISE | Photometer | Grating photometer |
| Measuring principles | Absorbance photometry, turbidimetry | Wavelength | 16 wavelengths (340nm, 380nm, 412nm, 450nm, 480nm, 505nm, 546nm, 570nm, 605nm, 630nm, 660nm, 700nm, 740nm, 770nm, 800nm, 850nm) |
| Methodology | End-point, Fixed-time, Kinetic, ISE | Absorbance range | 0 - 3.5Abs |
| On-board tests | Up to 66 (60 photometric tests, 3 ISEs and 3 serum indexes) | | |
| Sample Handling | | Control and Calibration | |
| SDM | 180 samples by racks, sample continuous loading, STAT in priority, start in 1 minute | Calibration mode | Linear (one-point, two point and multi-point), Logit-Log 4P, Logit-Log 5P, Spline, Exponential, Polynomial, Parabola |
| Integrated decapper | Remove tube caps at a speed of 300 tubes/hour, UV disinfection | Quality control | Westgard multi-rule, Twin plot and L-J graphic rule |
| Sample volume | 1 - 25 µL, with an increment of 0.1 µL | Operation Unit | |
| Sample probe | Liquid level detection and tracking, clot detection and collision protection | Operation system | Windows 10 (64-bit) |
| | Ultrasonic washing | Interface | TCP/IP network port and USB port |
| | | Network connection | Unidirectional and bidirectional LIS |
| Reagent Handling | | Environmental requirements | |
| Reagent positions | 109 positions with cooling system (2 - 8°C) | Power supply | 110V: 110V/115V~, 60Hz |
| Reagent volume | 10 - 200 µL, with an increment of 0.5 µL | | 220V: 220V-240V~, 50Hz; 220V/230V~, 60Hz |
| Reagent probe | Liquid level detection, collision protection, bubble detection and automatic removing | Temperature | 15 - 30°C |
| | | Humidity | 35 - 85% |
| | | Water consumption | 35L/H |
| | | Altitude | -400 - 4000m (106 - 61.6kPa). (For areas above 2,000 m, external air pump is required.) |
| Reaction unit | | Dimension | 1,720mm*900mm*1,230mm (W*D*H) |
| Reaction volume | 80 - 280µL | Weight | ≤450kg |
| Reaction cuvettes | 206 reusable cuvettes with an optical path of 5 mm | | |
| Reaction temperature | 37±0.3°C, with ±0.1°C fluctuation | | |



BS-1000M

Chemistry Analyzer

Powerful yet Efficient



www.mindray.com

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BS-1000M

Chemistry Analyzer

Footprint
1.6 m²



High Quality Integration

- 1,000 T/H for routine chemistry, up to 1,200 T/H with ISE
- Whole-blood HbA1c, at a speed of 200 tests per hour

High Biosafety Level

- Integrated auto decapper
- UV disinfection

High Level of Accuracy

- Ultrasonic washing
- PDR panoramic optical platform
- HIL.L innovative solution
- Automatic remove of reagent bubbles

High Quality Integration



Whole-blood HbA1c

- Results traceable to international standards NGSP/IFCC
- Resistant to variants such as HbE, HbD, HbS, HbC.
- Whole blood sample directly loading, onboard hemolysis
- Lower detection limit of Hb, less rerun rate for anemia samples.



Photometric Chemistry Tests

- Constant 1,000 tests per hour
- Complete traceability and quality control system



Integrated ISE Module




- 1 blood tube for electrolytes and photometric chemistry tests
- Long-life of ISE electrodes
- Easy operation and maintenance

BS-1000M Chemistry Analyzer






High Biosafety Level

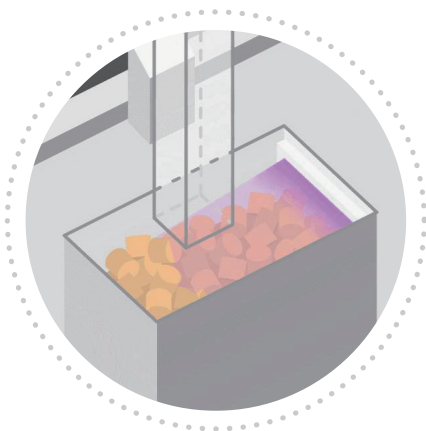
Integrated Auto Decapper

-  Removing tube caps at a speed of 300 tubes per hour
-  Enclosed whole decapping process to avoid aerosol emission
-  Manual-like design for smooth and reliable decapping process

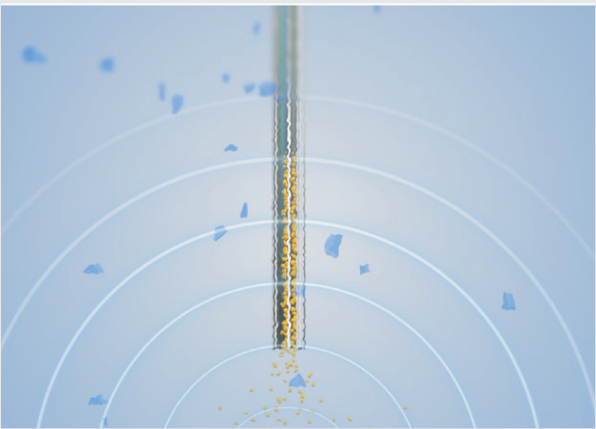


UV disinfection

-  UV disinfection of caps to reduce biosecurity risk
-  Integrated auto decapper in an enclosed space, no extra space requested
-  UV lamp intelligent control mode, safe and environmentally friendly

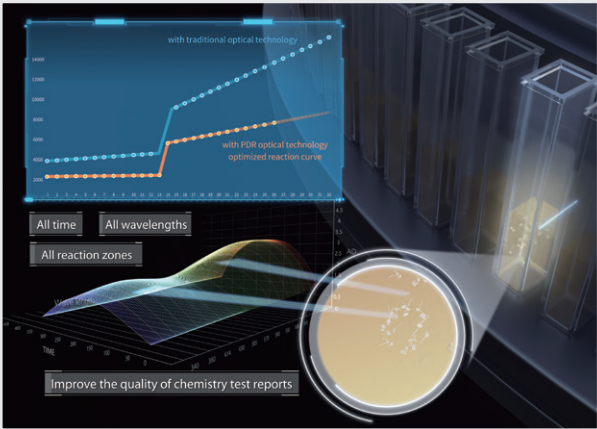


High Level of Accuary



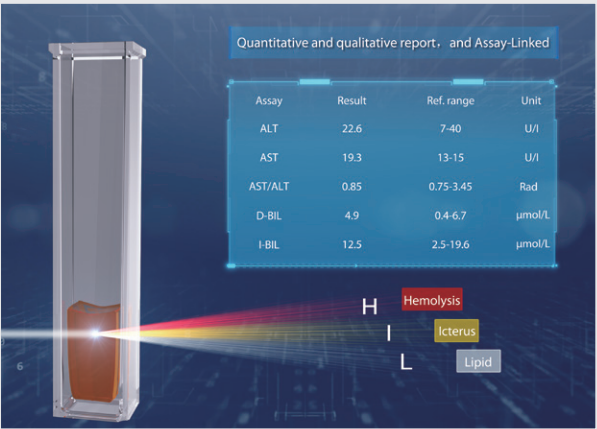
Ultrasonic washing of sample probe

- Onboard automatic ultrasonic washing
- Carryover rate down to 0.1 PPM
- Free of manual maintenance for sample probe



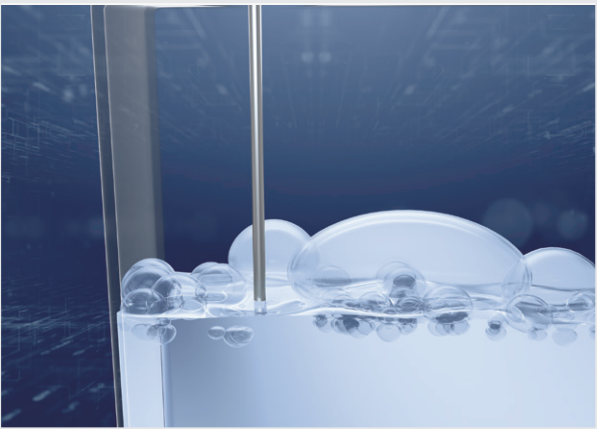
PDR panoramic optical platform

- Panoramic dynamic real-time & signal backtracking
- Elimination of various disturbances and noises
- Stable increase of accuracy of the results



Innovative HIL solution

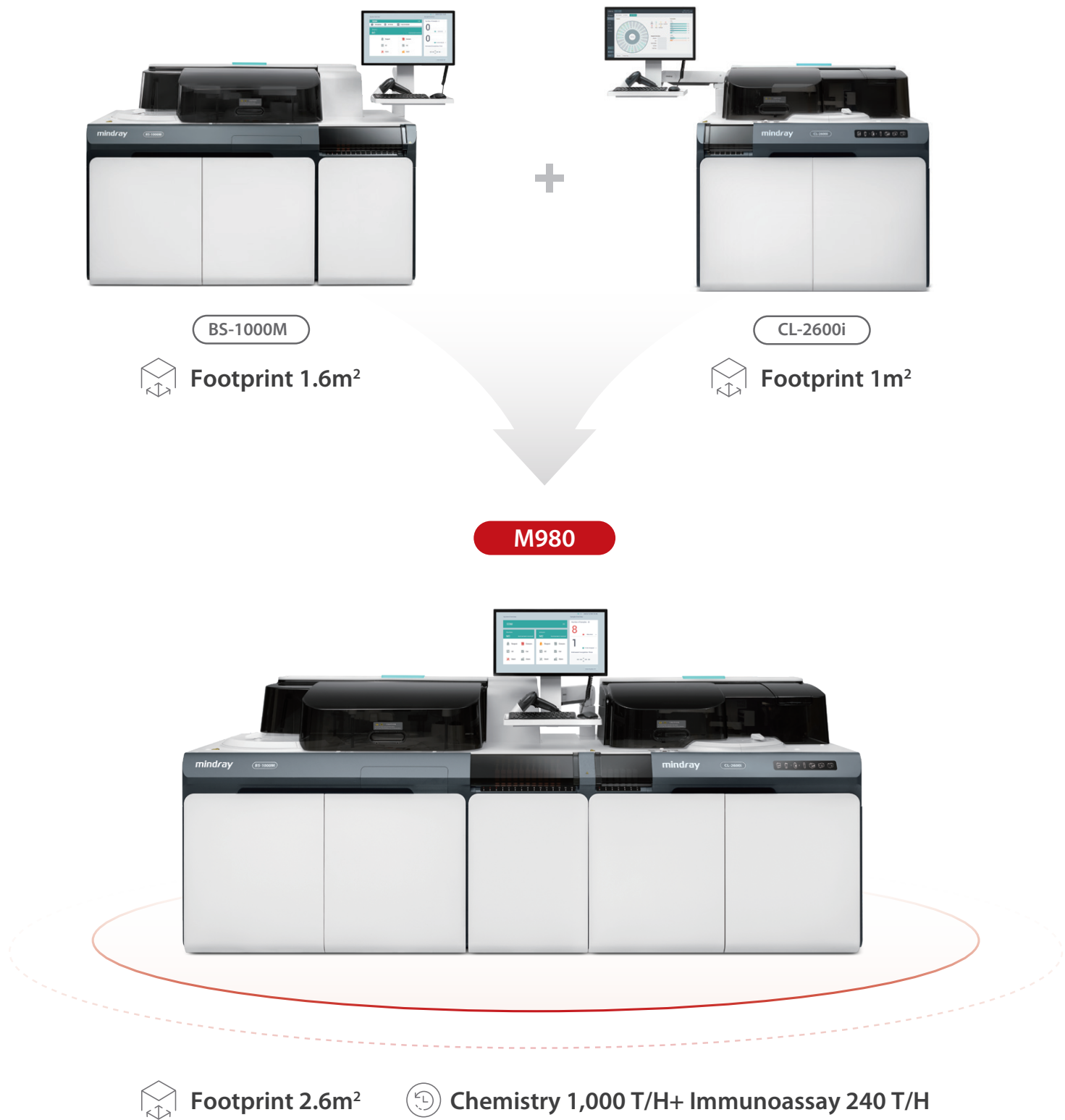
- Automatic testing of serum indexes without deceleration
- Identification of associated assays
- Indication of direction of interference



Automatic remove of reagent bubbles

- Automatic recognition of reagent bubbles
- Automatic remove of bubbles
- Simplified operation without worrying about the bubbles

Integrable with immunoassay module



Assay menu

Chemiluminescence

| Thyroid | Infectious Disease | Fertility | Bone Metabolic | Diabetes | Adrenal Function |
|---|---|---|--|---|---|
| FT3 FT4 T3 T4 TSH Anti-Tg Anti-TPO Tg rT3 TRAb | HIV Combo HBsAg Anti-HBs HBeAg Anti-HBe Anti-HBc Anti-HCV Anti-TP (Syphilis) HAV IgM* HEV IgG* HEV IgM* Anti-HAV* | Total β-HCG FSH LH Prolactin Estradiol Estriol TESTO PROG AMH Free TESTO* 17-OH PROG* SHBG* | CEA AFP CA125 CA15-3 CA19-9 Free PSA Total PSA NSE CYFRA 21-1 CA72-4 PG I PG II SCCA HE4 ProGRP CA50 CA242 PIVKA-II G-17 AFP-L3%* Hp IgG* S100* | Intact PTH Calcitonin Vitamin D total | CK-MB Myoglobin Troponin I BNP NT-proBNP hs-cTnI ST2* |
| Laminin Hyaluronic Acid PIIINP Collagen IV | COVID-19 SARS-COV-2 IgG SARS-COV-2 IgM SARS-COV-2 S-RBD IgG SARS-COV-2 Neutralizing Antibody | Toxo IgG Toxo IgM Rubella IgG Rubella IgM CMV IgG CMV IgM HSV-1+2 IgG HSV-1+2 IgM HSV-1 IgG HSV-2 IgG Toxo IgG Avidity CMV IgG Avidity | Procalcitonin IL-6 sCD14-ST | PAPP-A* Free β-HCG* | Renin Aldosterone |

Clinical Chemistry

| Hepatic Panel | Diabetes Panel | Renal Panel | Pancreatitis Panel | Immune Panel | Lung Panel |
|---|---|--|--|--|----------------|
| ALT AST ALP γ-GT Bil-D DSA Bil-D VOX Bil-T DSA Bil-T VOX TP ALB TBA PA CHE AFU | Fe FER TRF Ca Mg P UIBC G6PD | TC TG HDL-C LDL-C ApoA1 ApoB Lp(a) | UREA CREA-S UA CO ₂ mALB β ₂ -MG CysC RBP | CRP RF ASO | ADA ACE |
| Glu-O Glu-HK HbA1c FUN β-HB | CK CK-MB LDH α-HBDH HS-CRP HCY MYO D-Dimer | IgA IgG IgM IgE C3 C4 | α-AMY LIP | IgA IgG IgM IgE C3 C4 | ADA ACE |

*: Under development