

mindray

CL-2000i

Chemiluminescence Immunoassay System



Mindray Solution for Immunoassay Tests

01 >>

High Throughput

Up to 240 tests/hour

04 >>

Flexible Scalability

Flexible connection with BS-800 module and BS-2000 module into integrated system



02 >>

Large Capacity

300 samples in one batch
Support continuous loading
36 onboard capacity for reagent cartridges
1134 cuvettes loaded in one batch

03 >>

Easy Operation

Intuitive interface for software
Real-time indication of cuvettes, waste and wash buffer status
Step-by-step maintenance guide

Test Menu

Thyroid

FT3
FT4
T3
T4
TSH
Anti-TG
Anti-TPO
Tg
rT3
TRAB*

Infectious Disease

HIV Combo
HBsAg
Anti-HBs
HBeAg
Anti-HBe
Anti-HBc
Anti-HCV
Anti-TP (Syphilis)
HBeAg quantitative*
Anti-HBc IgM*

Fertility

Total β -HCG
FSH
LH
Prolactin
E2
E3
TESTO
PROG
Free testosterone*
17-OH PROG*
SHBG*
AMH*

Tumor marker

CEA
AFP
CA125
CA15-3
CA19-9
FPSA
TPSA
NSE
CYFRA 21-1
CA72-4
PG I
PG II
SCCA
HE4
ProGRP
CA50
CA242

Bone Metabolic

Intact PTH
Calcitonin
Vitamin D total

Cardiac

CK-MB
Myoglobin
Troponin I
BNP

Diabetes

Insulin
C-peptide

Adrenal Function

DHEA-S
Cortisol
ACTH

Liver Fibrosis

LN
HA
PIIINP
CIV

ToRCH

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*

Anemia

Ferritin
Vitamin B12
Folate
RBC Folate

Hypertension

Angiotension I*
Angiotension II*
Renin
Aldosterone

Growth Hormone

hGH*
IGF-1*

Inflammation

PCT

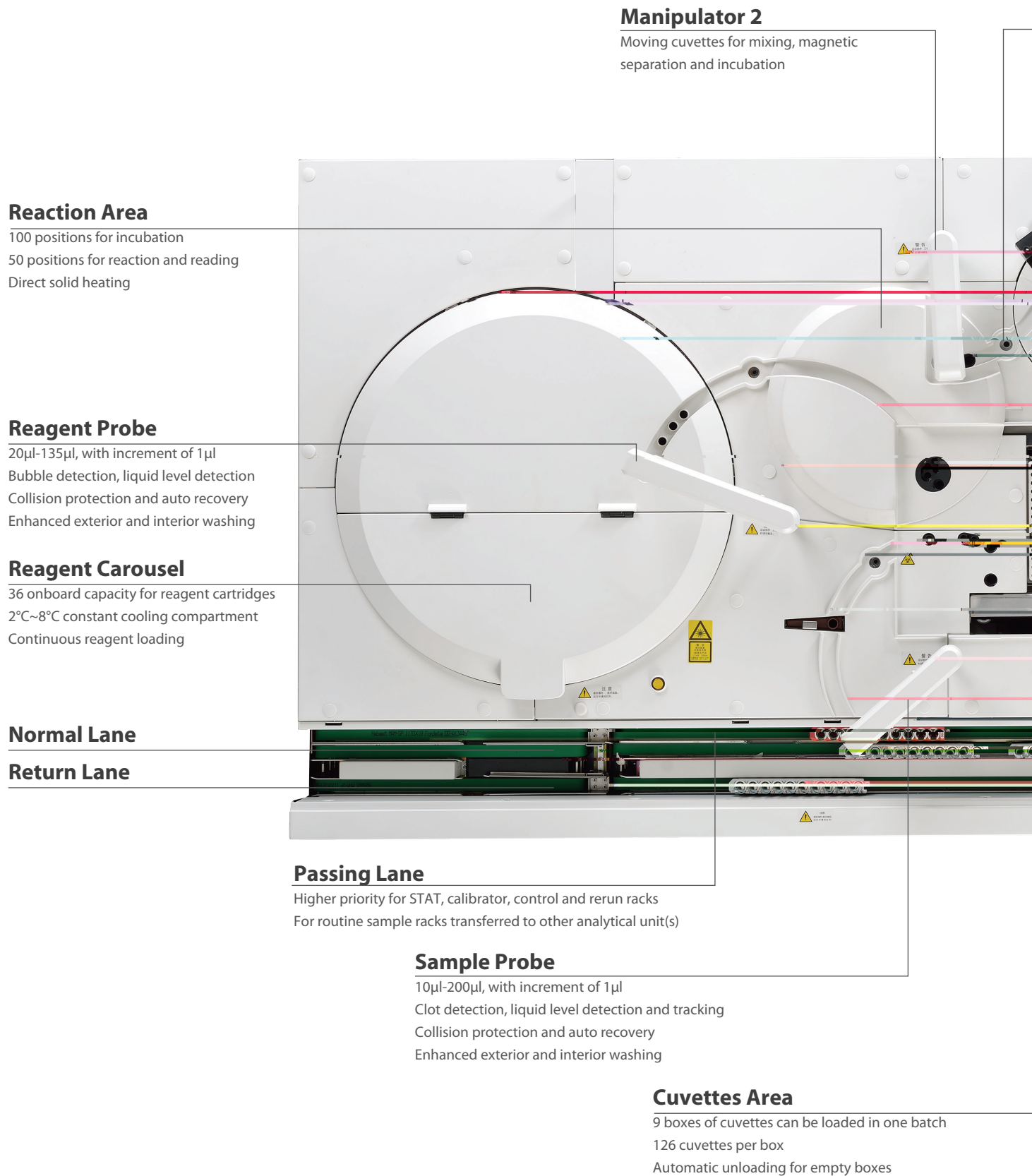
DS' Screening

PAPP-A*
Free β -HCG*

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CL-2000i

Chemiluminescence Immunoassay System



System Layout

Mixing Unit

High speed vortexer mixing for reaction solution

Magnetic Separation Unit

4-phase washing

Sample Delivery Module (SDM)

Up to 300 samples to be loaded
Continuous sample loading and offloading

STAT and RUN buttons

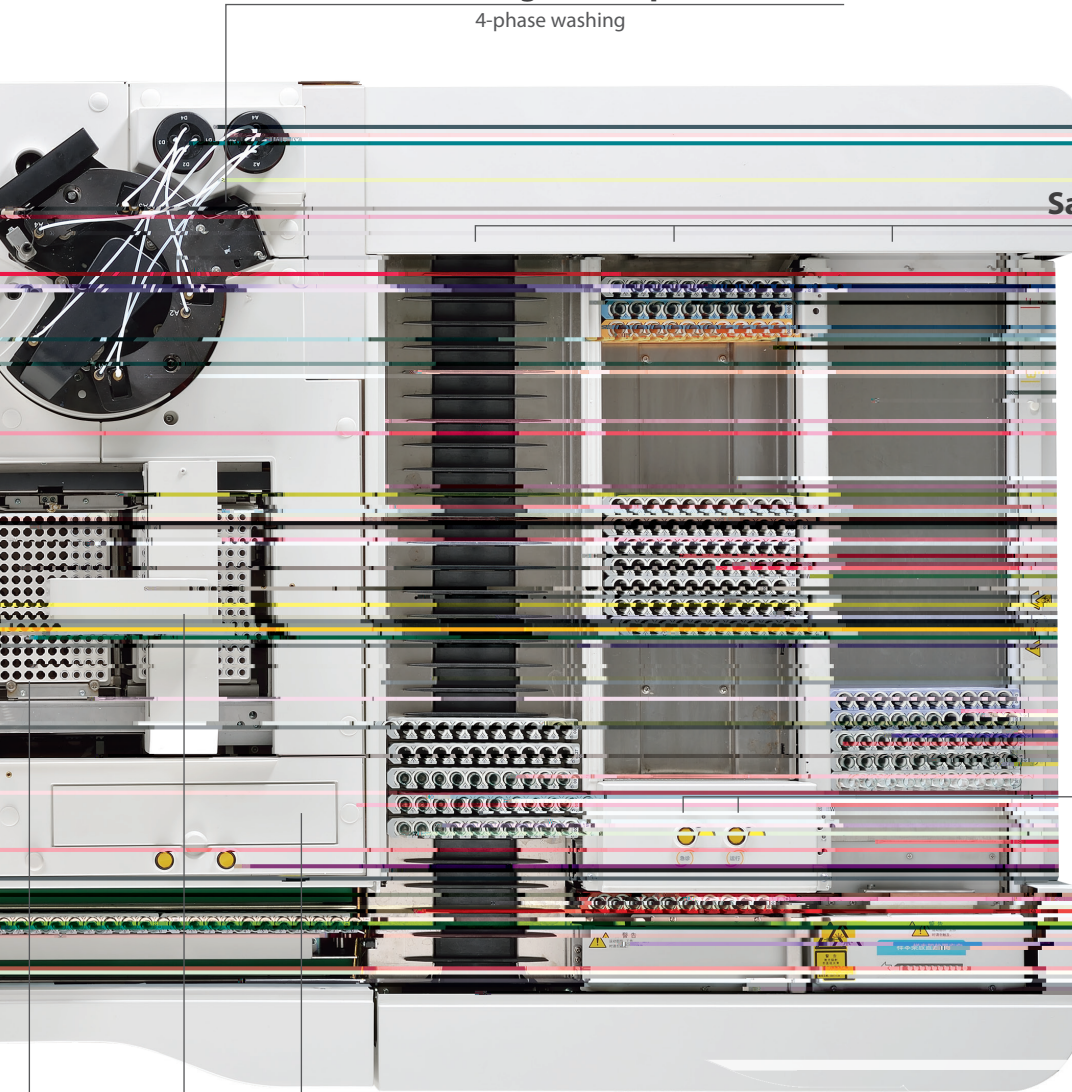
Flexible STAT rack loading
One touch to initiate analysis

Substrate Bottles

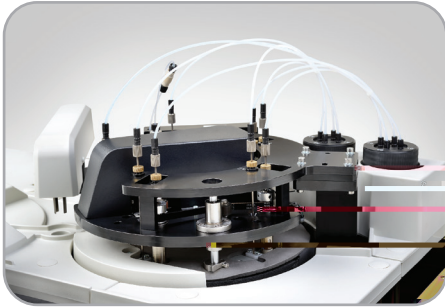
2 bottles for equilibrium
2 bottles ready for aspirating
Bottom piercing to eliminate contamination

Manipulator 1

Moving cuvettes for dispensing
Intelligent cuvette detection

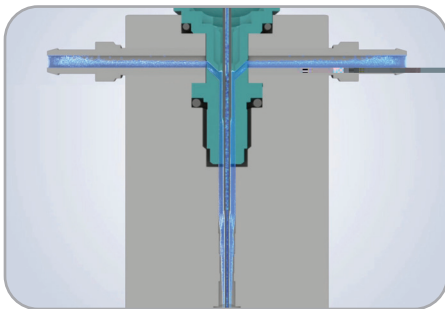


Reliable Results



Enhanced Reaction System

- Non-touch vortexer mixing for reaction solution without any contamination
- Precisely controlled temperature for magnetic separation, incubation & reaction by maintenance free direct-solid heating technology
- Reliable clinical performance with enhanced PMT chemiluminescent detection system



Efficient Washing System

- Interior & exterior probe washing with high pressure pre-heated water
- Programmed enhanced washing with detergent for reagent and sample probes
- 4-phase washing for magnetic separation unit with high efficiency

Stable Reagent Cartridges Utility

- 2°C~8°C constant cooling compartment for reagents cartridges
- Membrane sealed liquid reagent ready-to-use
- Intelligent magnetic particles mixing by reagent carousel rotation



Intelligent Indication for Daily Operation

- Real-time indication of cuvettes, waste and wash buffer status
- Real-time monitoring for substrates consumption
- Easy operation for replacing cuvettes, wash buffer and placing new substrates



Technical Specifications

General Information

| | |
|-----------------------|--|
| Throughput | Up to 240 tests/hour |
| Measurement Principle | Micron superparamagnetic particles platform with alkaline phosphatase (ALP) labeled reagents and AMPPD substrate |

Sample Assembly

| | |
|-----------------|---|
| Sample Feeder | Rack system with Sample Delivery Module Up to 300 onboard samples with 30 racks |
| Sample Probe | Steel probe, liquid level detection, clot detection, horizontal and vertical collision protection |
| Sample Volume | 10 μ L~200 μ L, with increment of 1 μ L |
| Sample Dilution | Automatic dilution with 1:2 ~ 1:40 |

Reagent Assembly

| | |
|-----------------|---|
| Reagent Disk | 36 reagent positions, continuous loading, real-time mixing for magnetic particles |
| Cooling System | 2°C~8°C |
| Reagent Barcode | Automatic scanning |
| Reagent Probe | Steel probe, liquid level detection, bubble detection, horizontal and vertical collision protection |
| Reagent Volume | 20 μ L~135 μ L, with increment of 1 μ L |

Substrate System

| | |
|-------------------|--|
| Substrate Bottle | 300/500 tests per bottle, bottom piercing |
| Substrate Loading | Capable of continuous loading during testing |
| Substrate Heating | Constant heating |
| Aspiration Volume | 200 μ L |

Magnetic Separation Unit

| | |
|---------------------|--|
| Separation Assembly | 4-phase magnetic separation |
| Temperature | Accuracy: 37 \pm 0.3°C, fluctuation: \pm 0.1°C |

Measurement and Reaction System

| | |
|-----------------|--|
| Detection Mode | Photon counting |
| PMT Calibration | LED reference module |
| Signal Detector | Photomultiplier (PMT) photon counter |
| Reaction Disk | 150 positions |
| Temperature | Accuracy: 37 \pm 0.3°C, Fluctuation: \pm 0.1°C |
| Mixing Unit | Non-touch vortexer mixing |

Cuvette Loading and Waste Collection

| | |
|------------------|--|
| Cuvette | Disposable plastic cuvettes |
| Cuvette Loading | Trays continuous loading and offloading, 126 cuvettes per tray, up to 9 trays (1134 cuvettes) can be loaded in one batch |
| Waste Collection | 2 waste boxes, overflow detection |

Working Conditions

| | |
|-----------------------|---|
| Power Supply | 110V/115V~, 60Hz; 220V-240V~, 50Hz; 220V/230V~, 60Hz |
| Input Power | 3200VA |
| Operating Temperature | 15°C~30°C |
| Relative Humidity | 35%RH~80%RH, without condensation |
| Dimension | Main Unit: 1450mm*1020mm*1200mm (W*D*H) SDM: 710mm*1020mm*1200mm (W*D*H) Total: 2150mm*1020mm*1200mm (W*D*H) Weight: 750kg |
| Altitude Height | -400m~2000m (optional external compressor for 2000m~4000m) |

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