



PRODUCT CATALOGUE |

ABOUT CARIAD

Founded in 2019, CARIAD was established in response to the significant global challenge of declining birth rates and the need for advancements in reproductive medicine healthcare. Our inception is a commitment to the vital field of reproductive health, addressing needs that affect societies at their core.

Located in Zhuhai, China, CARIAD has quickly become a key player in the global reproductive medicine arena. Our product range, including Andrology diagnostic reagents, flow cytometry, biochemistry, and chemiluminescence products, is the result of meticulous research and development. Our 23,000 m² facility, equipped with a GMP-compliant laboratory and a 4,400 m² reagent production area, is at the forefront of innovation in our field.

The heart of our innovation lies in our national-level joint engineering laboratory, recognized by the government. Here, we focus on creating advanced technologies that are crucial in reproductive medicine.

Quality is a cornerstone of our operations, as evidenced by our TÜV SÜD ISO13485 certification and adherence to international standards including CE IVDR, IVDD, FDA, and NMPA approvals.

Our mission is straightforward: to excel in the field of reproductive medicine, combining innovation and reliability. CARIAD is committed to making a significant impact in improving reproductive health globally.



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Practical Application of Seminal Plasma Biochemical Assay

Male semen is composed of **sperm (5%)** and **seminal plasma (95%)**, akin to fish and water, where sperm symbolizes the fish and seminal plasma symbolizes the water. The water's quality directly impacts the fish's survival, just as the quality of seminal plasma significantly influences sperm motility and fertility.

Clinical Significance		
Seminal vesicles	Fructose	Main energy source for sperm, low levels can indicate blockages or issues with these glands
Prostate gland	Zinc	A vital role in maintaining sperm nuclear stability, low levels of zinc are associated with reduced fertility, poor sperm quality, and can affect the ability of the sperm to fertilize an egg
	Citric acid	Balances semen pH and osmotic balance and its involvement in semen liquefaction
	Acid phosphatase	It can participate in maintaining the osmotic pressure of seminal plasma which is related to sperm survival. It also plays a vital role in semen coagulation and liquefaction and sperm motility
Epididymis	Carnitine	Low levels can indicate disturbed emission of fluid through the Wolffian ducts (vas deferens & ejaculatory ducts) which can be caused by neuromuscular impairment or obstruction
	Neutral α -glucosidase	Low levels can indicate epididymal blockage or dysfunction, which can lead to issues with sperm maturation and transport
	Total α -glucosidase	The Total α -glucosidase levels in seminal plasma, derived from the epididymis and prostate gland, are key indicators of epididymal function
Inflammation	Elastase	Primarily associate with leukocytes (white blood cells), essential for diagnosing and managing inflammatory-related fertility issues
Testes	LDH-X	It correlates with important variables such as total sperm count and sperm motility, vitality, and hypotonic swelling tests

Applications



Fertility Evaluation

- Routine preconception health check-ups
- Sperm quality analysis is normal but infertile
- Patients with abnormal sperm quality



Sperm Evaluation

- Artificial insemination
- Sperm bank



Scientific Research & Forensic

- Family planning research
- Forensic medical examination



Disease Diagnosis

- Inflammatory infections such as prostatitis, epididymitis, and seminal vesiculites
- Obstruction site diagnosis for azoospermia patients
- Oligospermia, asthenospermia, azoospermia and teratospermia patients



ART

- ART solution decision



Efficacy Observation

- Post-vasectomy
- Medication testing for prostatitis

Diagnosis of Andrological Disorders by Differential Ejaculate Biochemistry

Region of tract /issue	Ejaculate volume	Fructose (seminal vesicles)	Acid phosphatase (prostate)	Citric acid (prostate)	Neutral α-glucosidase (epididymis)	Zinc (prostate)
Epididymis: bilateral obstruction	○	○	○	○	↓	○
Vasa deferentia: agensis	↓	X	↑	↑	↓	○ / ↑
Ejaculatory ducts: obstruction	↓	X	↑	↑	↓	○ / ↑
Prostate: infection / inflammation	○	○	↓	↓	○	↓
Prostato-vesiculitis	↓	↓	↓	↓	○	↓

Note: ○ stands for "Normal", "X" stands for "Absent"

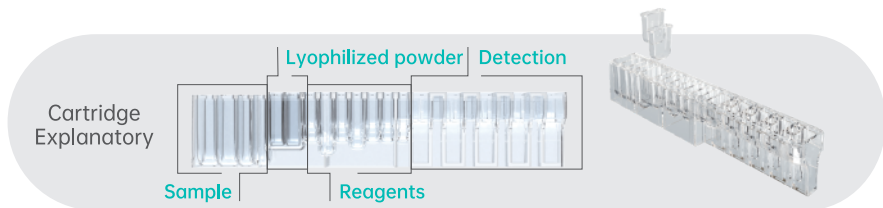
SEA-5

Seminal Plasma POCT Automated Chemistry Analyzer

SEA-5 is a rapid in vitro diagnostic biochemistry analyzer for the quantitative determination of Seminal Plasma biomarkers. Seminal plasma analysis often requires timely results for diagnostic and fertility assessments. SEA-5 can deliver quick results, eliminating the need for sending samples to off-site laboratories as well as free Andrologist from complicated manual tests.



- No need professionally trained technician
- 3-5 parameters in 1 single-test cartridge
- 12 minutes for 5 parameters
- Highly accurate results with $CV \leq 5\%$
- No user calibration necessary
- Sample volume: 150~200 μL



Test Cartridges

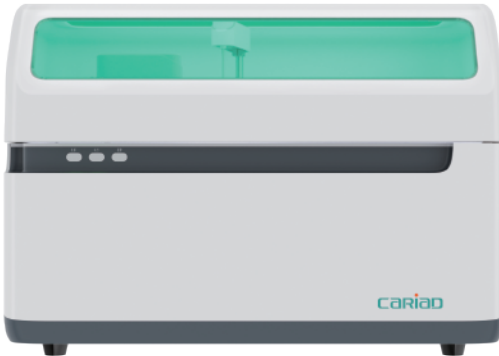
	Fructose	Zinc	Citric Acid	Neutral α -glucosidase	Acid phosphatase
SP3	—	—		—	
SP31	—	—	—		
SP4	—	—	—	—	
SP5	—	—	—	—	—

BLA-360

Seminal Plasma Full Automated Chemistry Analyzer

BLA-360 is a fully automated high accuracy seminal plasma analyzer, with the throughput of 360 tests per hour which is dedicated for high volume diagnosis.

- Original Quality Control & Calibrators
- Liquid level detection
- Collision avoiding
- Liquid volume monitoring
- Holographic diffraction grating technology
- CV ≤ 5%



Reagents

100 tests/ kit

Fructose

Zinc

Citric Acid

Carnitine

Elastase

LDH-X

Neutral α -glucosidase

Total α -glucosidase

Acid Phosphatase

Specifications

- Throughput: 360 T/H
- Measuring Principle: Spectrophotometry
- Temperature accuracy: $\pm 0.1^{\circ}\text{C}$
- 12 steps wavelength: 340-800 nm
- Sample Types: Seminal Plasma
- Sample Volume: 2.0-30.0 μL
- Dimensions: 720×540×505 mm (W×D×H)
- Weight: 57 kg

CLA-800

POCT CLIA System

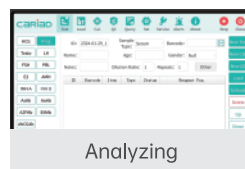
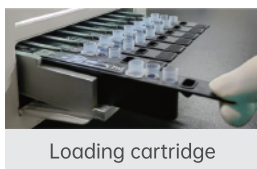
The CLA-800, a compact and fully automated chemiluminescence immunoassay analyzer (CLIA), is designed for simplicity and efficiency in reproductive health diagnostics. Its all-in-one single test cartridge design is ideal for both professionals and non-specialists, ensuring easy operation in reproductive testing.



Cartridge

All-in-one single test design

3-step Operation



Specifications

- Instrument type: Chemiluminescence Immunoassay Analyzer
- Channel: 8 channels, simultaneous tests in 15 minutes
- Throughput: Up to 32 T/H
- Sample volume: 10-50 μ L
- Monitor: 8-inch LCD touch screen
- Dimensions: 225×390×260 mm (W×D×H)
- Weight: 13.7 kg

Test Menu (For CLA-800 & CLA-120)

AMH	INH B	PRL	ZPAb-IgG
Prog	β -HCG	E2	ASAb-IgG
LH	Testo	FSH	AOAb-IgG
EMAb-IgG	Anti-TAAb	HCGAb-IgG	

Package | 12 / 24 tests/kit (2/4 QC included) — CLA-800
100 tests/kit — CLA-120

CLA-120

Full Automated Chemiluminescence Immunoassay System

Offering rapid, accurate testing with a capacity of 120 tests per hour, it's ideal for hormone analysis and reproductive medicine diagnostics. With its user-friendly interface and space-efficient design, the CLA-120 streamlines laboratory workflows, ensuring high-quality, reliable results.

Specifications

- Measuring Principle: Acridinium ester direct chemiluminescence
- Throughput: 120 T/H
- Time to First Result: \leq 15 minutes
- Walk Away Capacity: 3 hours
- Sampling Volume: 10-150 μ L
- Sample Capacity: 30 positions
- Reagent Capacity: 10 positions
- Dimensions: 433×679×638 mm (W×D×H)
- Weight: 62 kg

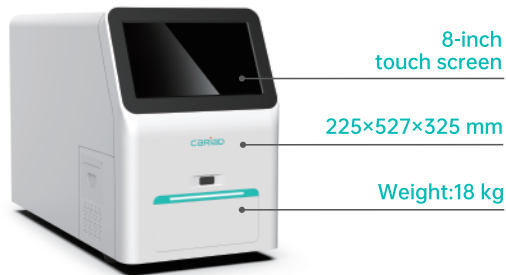


CFA-108

POCT Flow Cytometer

Andrology Dedicated

Flow Cytometer is a crucial instrument for cell analysis, proving particularly valuable in the field of sperm diagnostics. The CFA-108, a specialized flow cytometer designed explicitly for Andrology, stands out with its intelligent, compact design and high sensitivity. Its user-friendly operation is further enhanced by a unique, single-use, all-in-one cartridge system, streamlining the process for ease of use.



Intelligent: Simplifies complex analysis, providing accurate and reliable results effortlessly

Compact: Space-efficient, perfect for hospitals and clinics with limited space but requiring high-quality diagnostics

High Sensitivity: Ensures detailed and precise measurements

All-in-One Cartridge: User-friendly, single-use cartridges streamline the testing process, making operation straightforward and minimizing errors

Test Menu

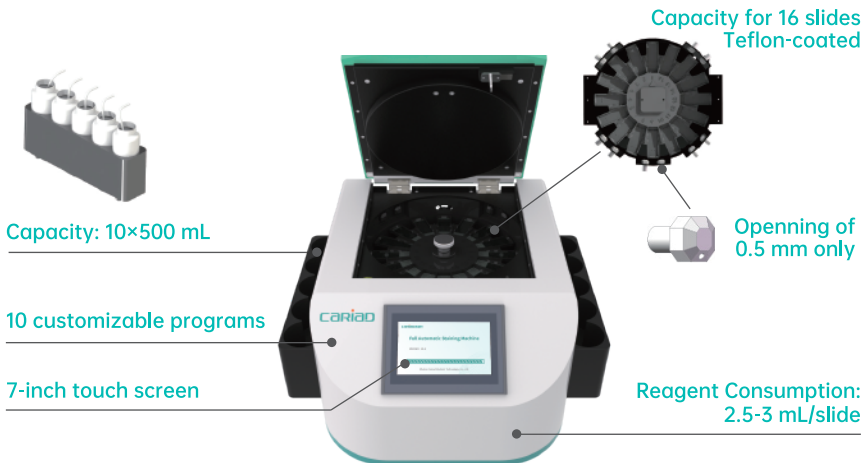
20 / 40 / 50 tests/kit

Sperm DNA Fragmentation (SCSA)	Antisperm MAR Test IgA & IgG
Semen Leukocyte Staining	Sperm Reactive Oxygen Species Staining
Sperm Acrosome Reaction Staining	Sperm Mitochondrial Membrane Staining
Sperm Acrosome Staining	Sperm Plasma Membrane Staining
Sperm Membrane Surface Antibodies IgA & IgG (Fluorescent Staining)	

RS-162

Full Automatic Sperm Staining Machine

The RS-162 is a versatile fully automated sperm staining machine, able to handle 16 slides simultaneously and offering 10 customizable staining programs. This efficiency enhances laboratory productivity, reduces labor costs, and improves staining accuracy in reproductive medicine.



Specifications

- Staining Method: Injection
- Staining Program: Up to 10 customizable staining programs; defaults: Papanicolaou, Modified Papanicolaou and Diff-Quik
- Staining Carousel: Single layer, teflon-coated, individual slide positions, avoid cross-contamination
- Staining Capacity: 16 slides
- Reagent Capacity: 10 reagent bottles (10 × 500 mL)
- Centrifugal Speed: 100-300 rpm, adjustable
- Maintenance: Auto-checking of reagents and waste liquid volume when starts up
Auto-cleaning when shuts down
- Safety: Lid interlock; ensure it's locked down during operation
- Dimensions: 560×450×282 mm (W×D×H)
- Weight: 20.5 kg

M1000

Automated Blood Collection Tube Labeling System

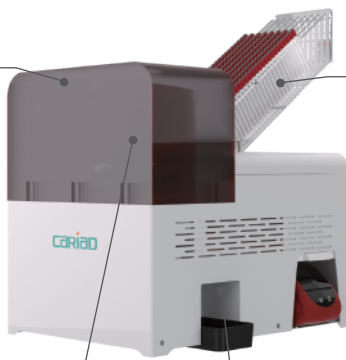
M1000 is an automated and independent blood collection tube labeling system, integrating intelligent tube selection, label printing, label sticking, and verification. It is designed to work in all types of blood collection stations, such as in outpatient departments, wards, clinica laboratories, etc..

1.8-3.5 s/tube

8 different types of tubes



Manipulator design with less clogging



416 tubes can be loaded at one time

Applications



Outpatient department



Ward



Clinical laboratory



Nursing station

Specifications

- Tube Feeding: Manipulator
- Tube Types: 12-15 mm in diameter, 50-100 mm in length
- Label Spec.: 75x30 mm, 50x30 mm, 50x25 mm, 30x25 mm, 30x20 mm, more specifications can be customized
- Integration: HL7 protocol, supports HIS and LIS
- Dimensions: 520x440x380 mm (WxDxH)
- Weight: 35 kg

Sperm DNA Fragmentation Detection Kit (SCD Assay)

Sperm DNA fragmentation is a condition that affects male fertility. It refers to the presence of sperm with damaged (broken) DNA. Alterations of any kind in sperm DNA are likely to cause infertility in the man affected, as integrity of sperm DNA is key to obtaining viable embryos and subsequently a healthy baby. Sperm DNA fragmentation (SDF) is associated with male infertility, and it adversely affects reproductive outcomes. Both chromatin integrity and protamination status determine the extent of DNA damage.



The
FASTEST
Reaction Time



Package	10 tests/kit or 20 tests/kit
Shelf Life	12 months – Before opening 90 days – After opening
Storing Environment	2-8 °C

Sperm DNA

Sperm Nuclear Staining Solution

(Acridine Orange Method)

Package	10 tests/kit or 20 tests/kit
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	2-8 °C

Quality & Function

Sperm Hyaluronic Acid Binding Test Kit

(Solid Phase Capture Method)

Package	20 tests/kit
Shelf Life	12 months – Before opening 60 days – After opening
Storing Environment	2-8 °C

Antisperm Antibody

Antisperm MAR Test IgG

(Mixed Antiglobulin Reaction)

Package	20 tests/kit
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	2-8 °C

Vitality

Sperm Vitality Staining Solution

(Eosin-Nigrosin Staining)

Package	40 tests/kit
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	2-8 °C

Staining Solution for the Maturity of Spermatozoan Nucleoprotein

(Aniline Blue-Eosin Staining)

Package	20 tests/kit
Shelf Life	12 months – Before opening 15 days – After opening
Storing Environment	2-8 °C

Infection

Semen Leukocyte Staining Solution

(Peroxidase Method)

Package	10 tests/kit or 20 tests/kit
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	2-8 °C

Antisperm MAR Test IgA

(Mixed Antiglobulin Reaction)

Package	20 tests/kit
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	2-8 °C

Sperm Membrane Detection Kit

(Hypotonic Dilution Method)

Package	20 tests/kit
Shelf Life	12 months – Before opening 15 days – After opening
Storing Environment	2-8 °C

Semen Preparation

Semen Liquefaction Kit

(Enzyme Digestion Method)

Package	2 vials/kit
Shelf Life	12 months – Before opening 15 days – After opening
Storing Environment	2-8 °C

Diff-Quik Sperm Staining Solution

Package	500 mL x 3
Shelf Life	12 months – Before opening 3 months – After opening
Storing Environment	4-30 °C

Biochemical Assay

Seminal Plasma Zinc Detection Kit

(5-Br-PAPS)

Package	20 tests/kit
Shelf Life	12 months – Before opening 15 days – After opening
Storing Environment	2-8 °C

Seminal Plasma Fructose Detection Kit

(Indole Method)

Package	20 tests/kit
Shelf Life	12 months – Before opening 15 days – After opening
Storing Environment	2-8 °C

Morphology

Papanicolaou Sperm Staining Solution

Package	500 mL x 5
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	Room temperature

Modified Papanicolaou Sperm Staining Solution

Package	500 mL x 3
Shelf Life	12 months – Before opening 3 months – After opening
Storing Environment	4-30 °C

Seminal Plasma Citric Acid Detection Kit

(Enzymatic Method)

Package	40 tests/kit
Shelf Life	12 months – Before opening 30 days – After opening
Storing Environment	2-8 °C

Seminal Plasma Acid Phosphatase Detection Kit

(P-nitrophenol Method)

Package	20 tests/kit
Shelf Life	12 months – Before opening 15 days – After opening
Storing Environment	2-8 °C

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