Specifications

Specimen	Seminal Plasma
Sample Volume	20μL
Analysis Method	Spectrophotometry
Analysis Time	≤12 minutes per cartridge
Consumables	Disposable cartridge; diluent(purified water)
Cartridge Detection	Automatic, built-in
Display	8 inch touch screen
Reaction Temperature	37°C±0.5°C
Printer	Built-in thermal printer
Integration	HIS/LIS
Interface	USB, LAN
Weight	10 KG
Dimension	25x20x30 cm (WxLxH)

Test Cartridges

	Fructose	Zinc	Citric Acid	Neutral α-glucosidase
SP3	—	—		—
SP33	—	—	—	
SP4	—	—	—	—

SEA-20

Seminal Plasma
Fully Automated Analyzer

SEA-20 is a rapid in vitro diagnostic analyzer for the quantitative determination of Seminal Plasma biomarkers. Seminal plasma analysis often requires timely results for diagnostic and fertility assessments. SEA-20 can deliver multiple results in just 12 minutes, eliminating the need for sending samples to off-site laboratories as well as free Andrologist from complicated manual tests.

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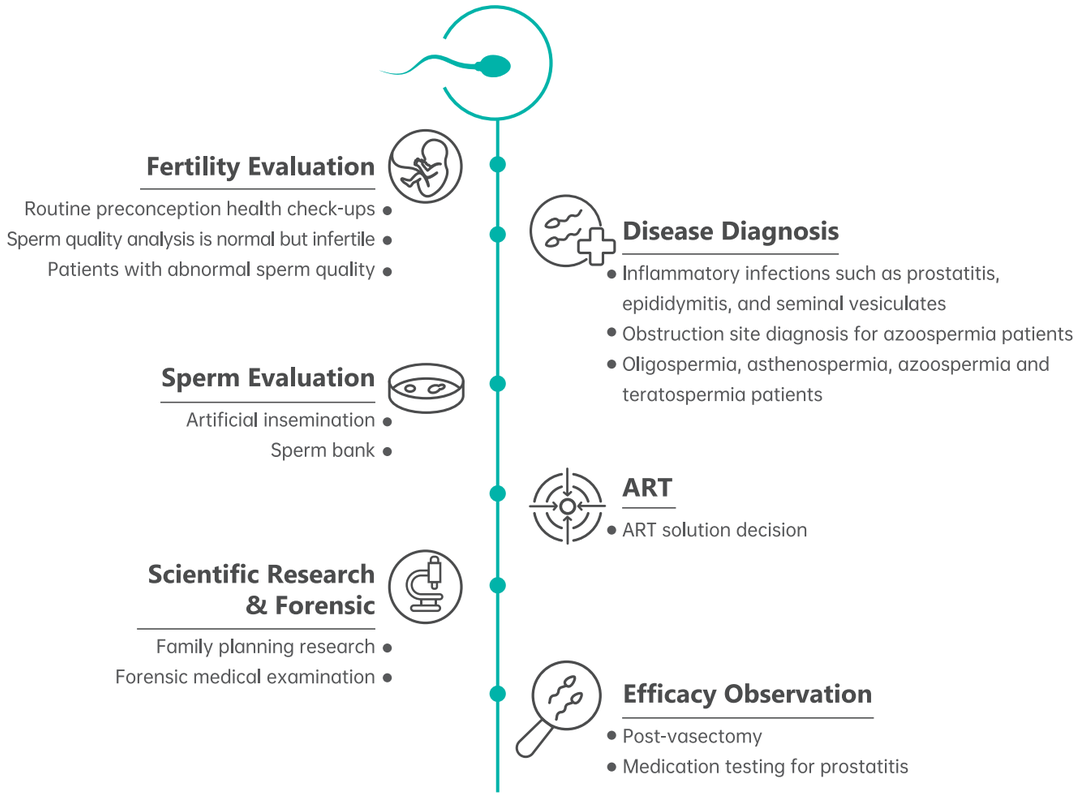
CARIAD
Andrology, Reproduction, IVF.

Practical Application of Seminal Plasma Diagnosis

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.



Seminal Parameters and Biomarkers Changes among Common Male Accessary Gland Diseases

Disease / Biomarker	Coagulation	Liquefaction	PH	Fructose	Zinc	Citric acid	Neutral α-glucosidase	Acid phosphatase
Epididymis diseases	○	○	Acute >8 Chronic <7	○	○	○	↓	○
Agenesis of seminal vesicles	Negative	○	<7	↓	○	○	○	○
Prostatic diseases	○	Negative	>8	○	↓	↓	○	↓ Prostatitis ↑ BPH / early-stage prostate cancer
Vasectomy obstruction	○	○	○	○	○	○	↓	○

Note: ○ stands for "Normal"

Clinical Significance

Fructose	Main sperm energy source, and a marker for assessing seminal vesicle function, and sperm energy levels, with decreased fructose often indicating potential fertility issues or seminal vesicle-related conditions
Zinc	Influencing sperm quality and motility, low levels affect testicular development and gonadal function, impacting sperm vitality and prostatitis diagnosis
Citric acid	Reflects prostate health and function, and its levels are used to diagnose conditions like prostatitis and indirectly assess testicular androgen secretion
Neutral α-glucosidase	NAG levels provide valuable insights into epididymal function and duct patency
Acid phosphatase	A marker for prostate health, with decreased levels indicating prostatitis and increased levels suggesting the possibility of benign prostatic hyperplasia or prostate tumors

SEA-20 Features

- Innovative Microfluidic Technology
- Multiple parameters in 12 minutes
- 3-step operation
- No need calibration