# AELAB K2025 High Performance Liquid Chromatography

**Reliability**

With the reliable design and high-quality components, K2025 passes the relability test performed by authority, ensuring the long-term running in optimum condition.

**Precision**

The precision and accuracy of the results are guaranteed with our unique pumping and sampling technology, high sensitivity detector, and powerful data processing software.

**Ease of use**

The operation is more convenient and efficient with a variety of user-friendly designs in Wookinglab

**Compliance**

Fully complies with FDA 21 CFR Part 11 with database mode and data traceability.



# K2025 P1/P2/P4 Pump

## Specifications:

| | |
|---|---|
| Flow rate range | 0.001mL/min~10.000mL/min |
| Pump type | Isocratic(P1), Binary(P2), Quaternary(P4) |
| Maximum pressure | 62MPa |
| Plunger rinsing | Supported |

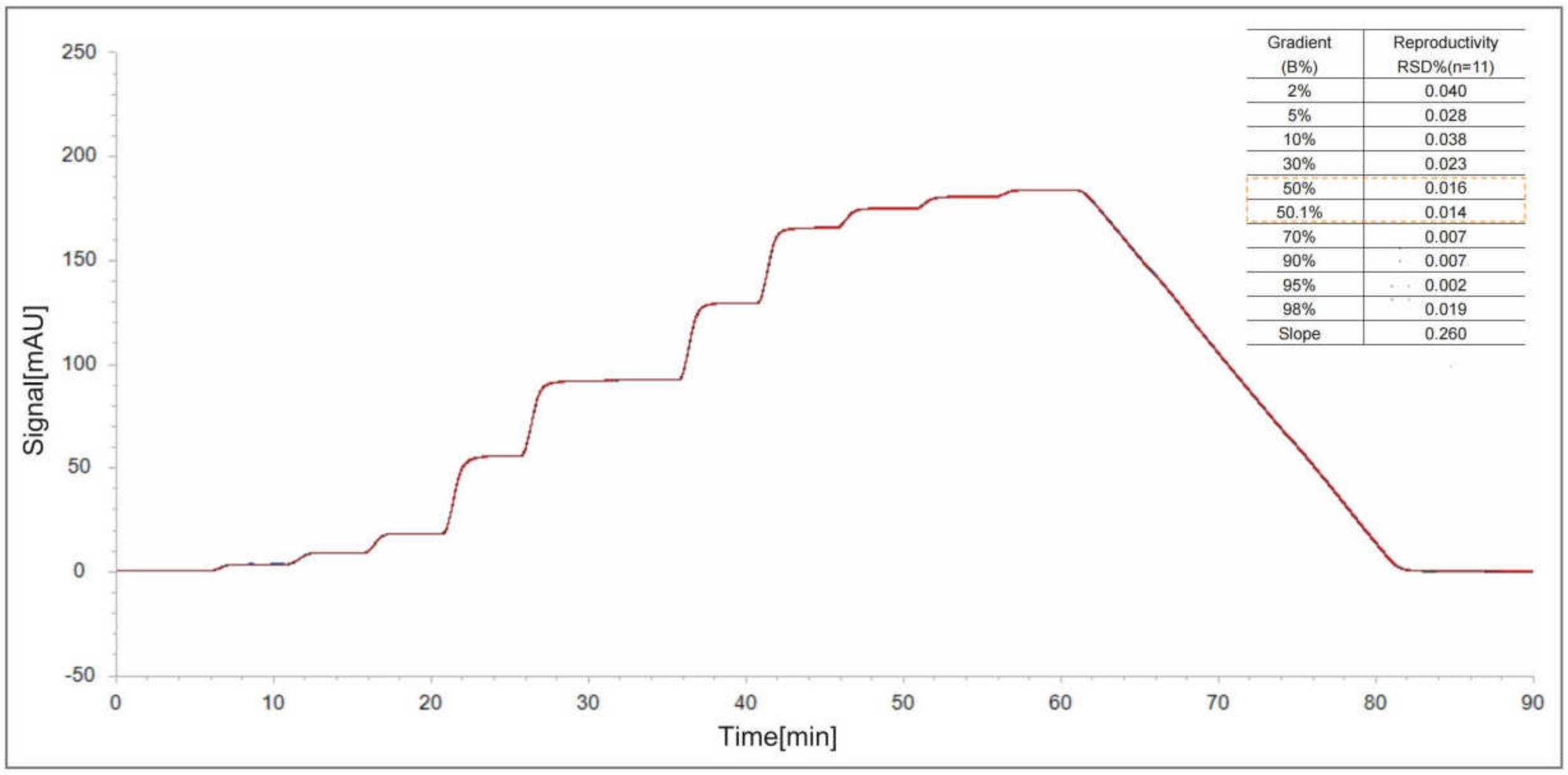

P2 Binary pump


P4 Quaternary pump

# Precision

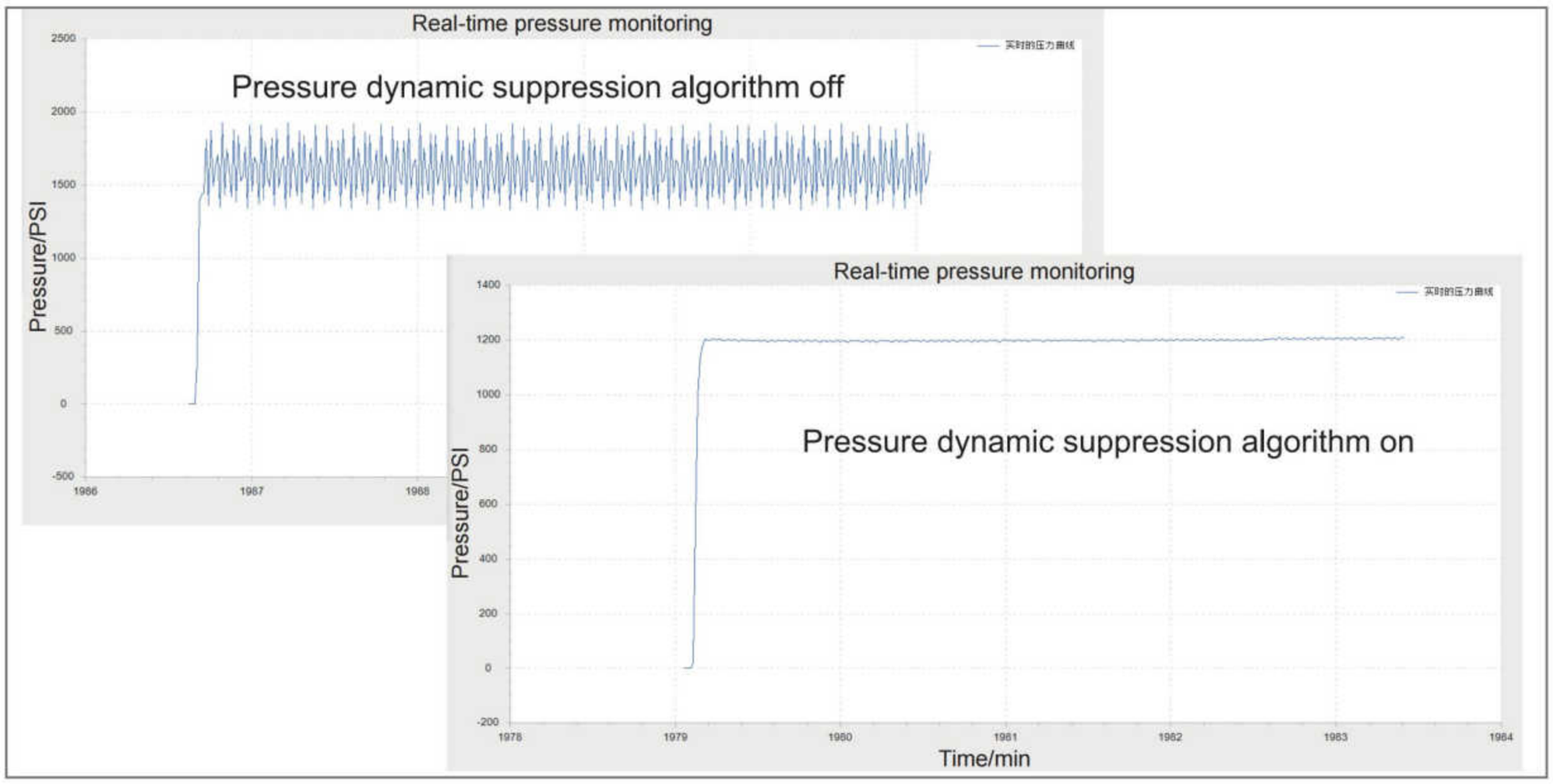
## Excellent repeatability

The precise gradient change and retention time are guaranteed with the reciprocating tandem plunger pump and pressure dynamic suppression algorithm. The repeatability of retention time is less than 0.2%.

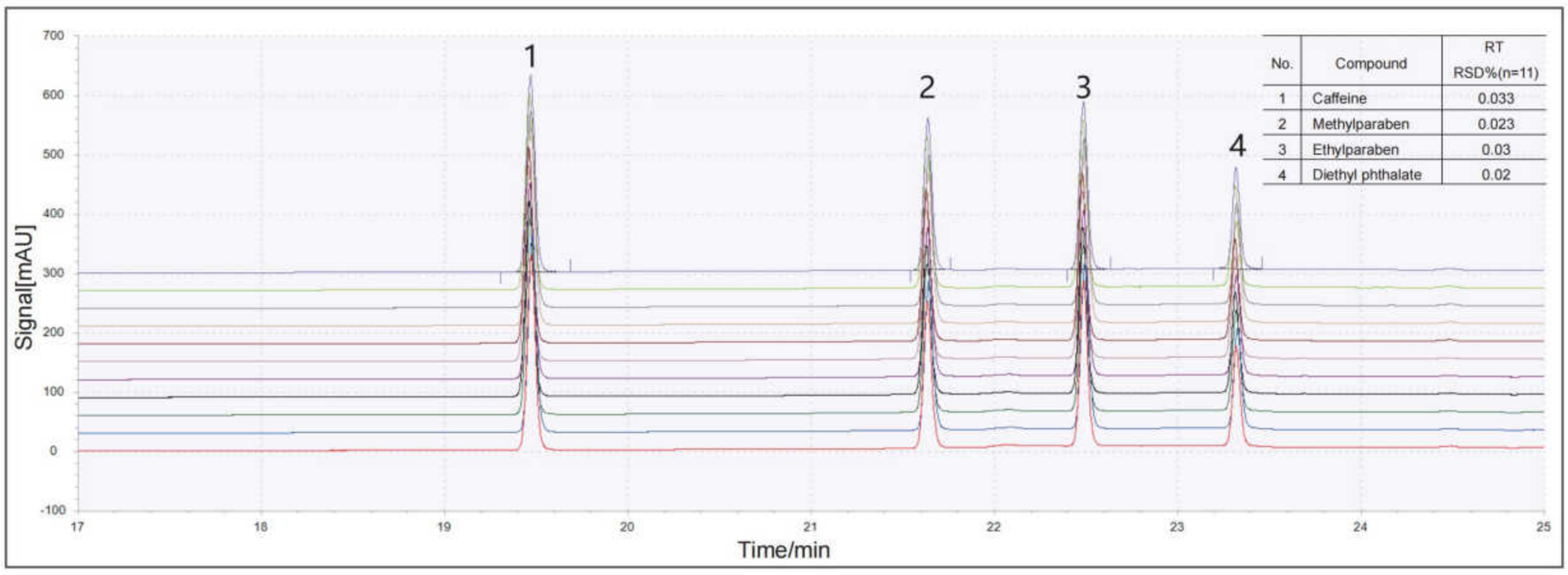



| Gradient (B%) | Reproductivity RSD%(n=11) |
|---|---|
| 2% | 0.040 |
| 5% | 0.028 |
| 10% | 0.038 |
| 30% | 0.023 |
| 50% | 0.016 |
| 50.1% | 0.014 |
| 70% | 0.007 |
| 90% | 0.007 |
| 95% | 0.002 |
| 98% | 0.019 |
| Slope | 0.260 |

## Gradient test




## Pressure fluctuation test




| No. | Compound | RT RSD%(n=11) |
|---|---|---|
| 1 | Caffeine | 0.033 |
| 2 | Methylparaben | 0.023 |
| 3 | Ethylparaben | 0.03 |
| 4 | Diethyl phthalate | 0.02 |

## Retention time repeatability test

# Reliability

## The reliable design makes service life longer

### Material

The cam is integrally processed from high-hardness alloy steel and combined with high-frequency heat treatment technology, which makes the surface of the cam is more wear-resistant (the hardness is above 55HRC), and the service life is longer.

### Power

The high-power customized motor, Japanese NSK bearings, and independent air duct make the power and life even better.

### Gearing

Self-lubricating and wear-resistant materials imported from Germany are used for the piston drive mechanism. Also, the inner wall rifling design prevents the piston from accidentally locking, making the gearing more reliable.

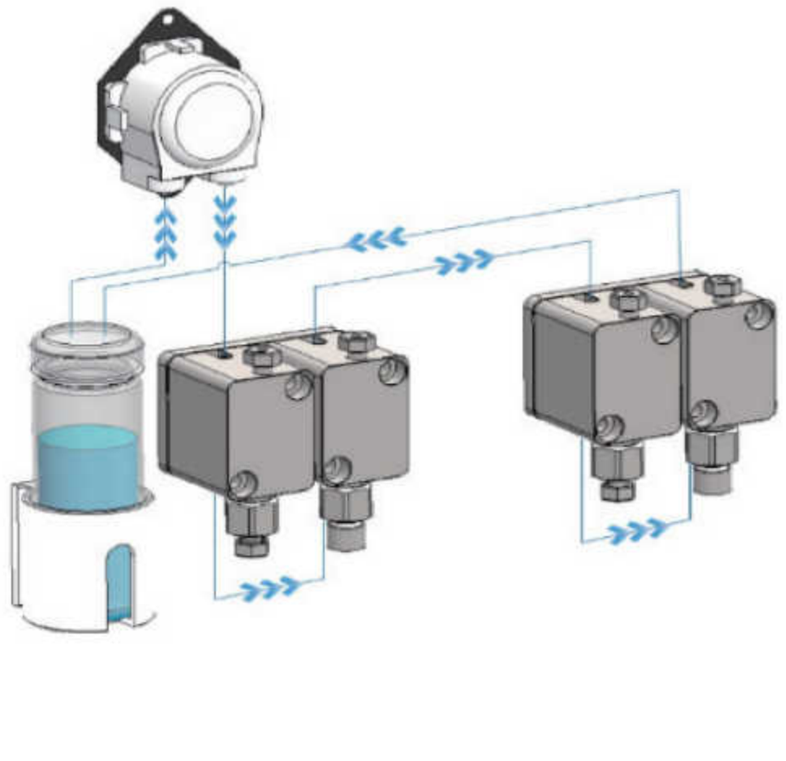
### Plunger

The patented suspended floating plunger(Patent Number: ZL 2020 2 1896102.3 ) can adapt to the working conditions automatically, which is convenient for disassembly and prevents the eccentric wear of the sealing ring effectively. With the special sealing structure and the automatic cleaning of the plunger, the pump seal is more reliable.

## Ease of use

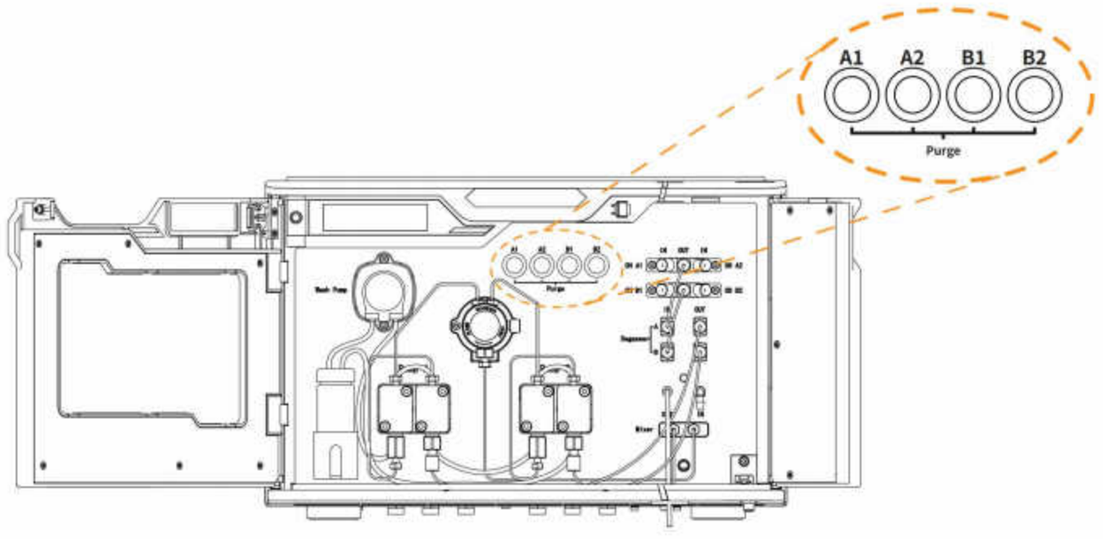
### Equipped with an online automatic rinsing mechanism

When the pump is working, the rinsing pump is automatically turned on and runs periodically, which can effectively prevent the crystallization of buffer salts and the growth of microorganisms, and prolong the service life of the plunger and plunger sealing.



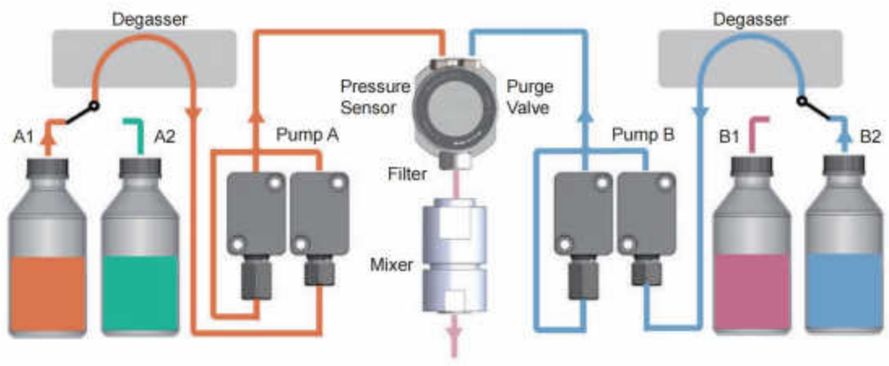
## Easy to purge

Both the workstation and the instrument panel are equipped with a purging function, making it easier to purge.




## Intelligent solvent switching to improve efficiency

Equipped with a 4-channel solvent selection valve for binary pump. The solvent can be automatically switched according to the method.




## Independent 4-channel gradient proportioning valve, easy for maintenance

The gradient proportioning valve of the quaternary pump adopts a 4-channel independent design. The intelligent monitoring and diagnosis can realize real-time monitoring and independent replacement of each channel, the whole design can reduce maintenance costs effectively.