Sniper DQ24 Plus Digital PCR System

Fully automated digital PCR solution

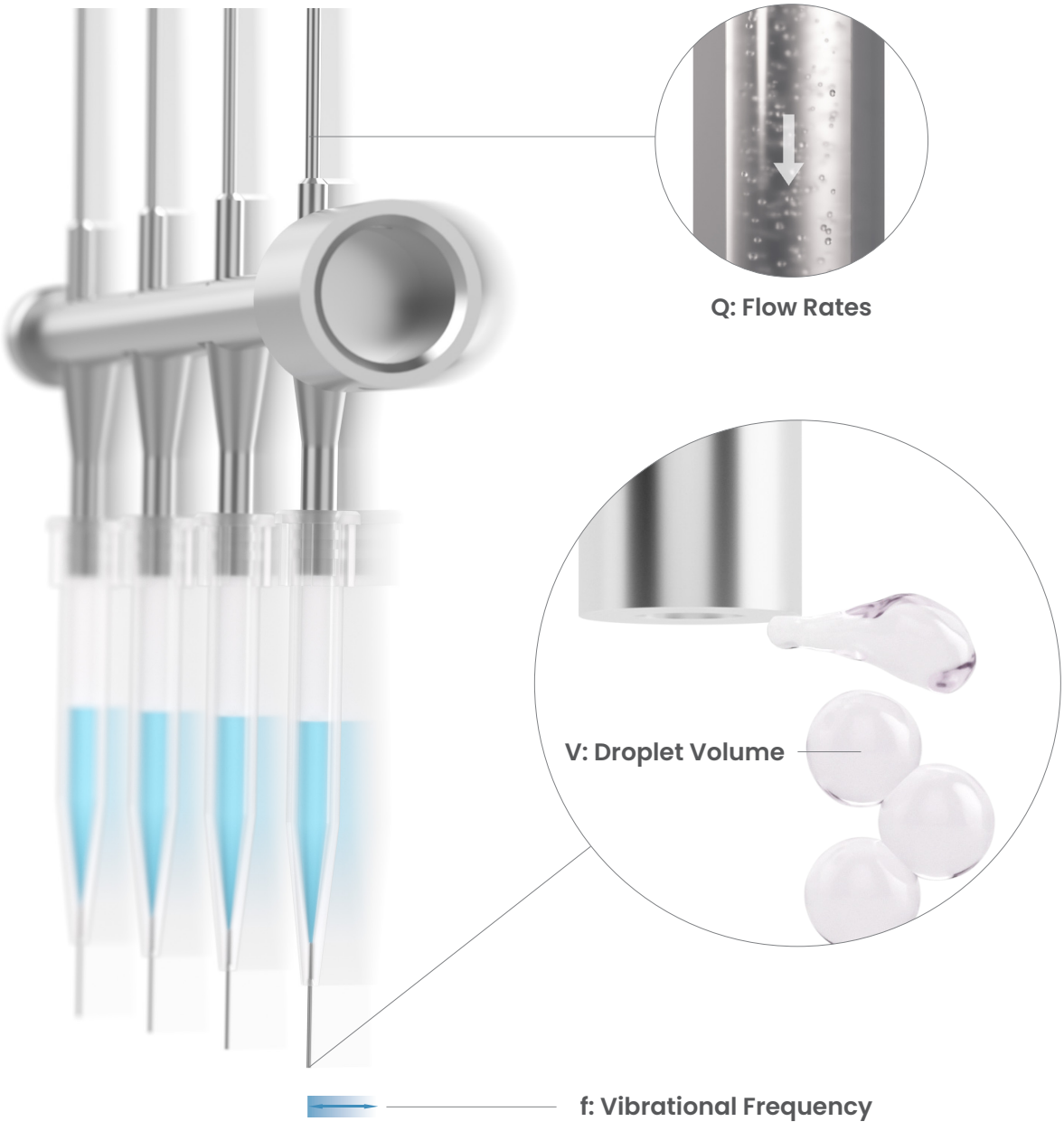
Innovative VibroJect® Technology

Sniper patented VibroJect® technology is a novel droplet generation method enabling droplet generation without reliance on a microfluidic chip.

The VibroJect® technology is an efficient, fast and reliable method for droplet generation. Below the oil surface, the dPCR reaction mixture flows from a microneedle into the oil phase at a constant speed under the control of a sophisticated syringe pump, while the microneedle vibrates reciprocally at a constant frequency. Reaction mixture is steadily split into tens of thousands of droplets of uniform volume and distributed in the oil phase.

VibroJect® $V=Q/2f$

Droplet volume is precise regardless of external conditions.



Precise Droplet Sizes

HRD Mode

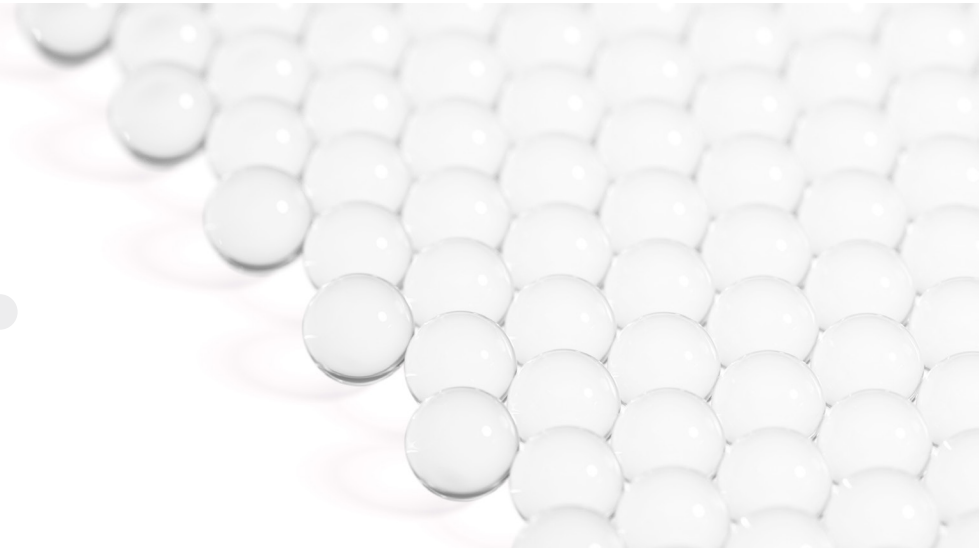
Copy Number Variation | NIPT

Standard Mode

Absolute Quantification | Liquid biopsy | Methylation | NGS Library

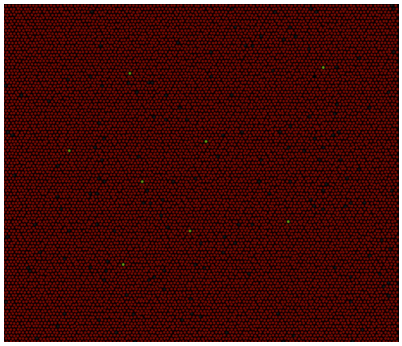
HS Mode

Rare mutation Detection

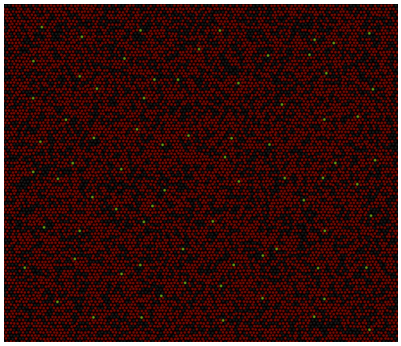


Automated sample aspiration and dispensing to maximise sample use

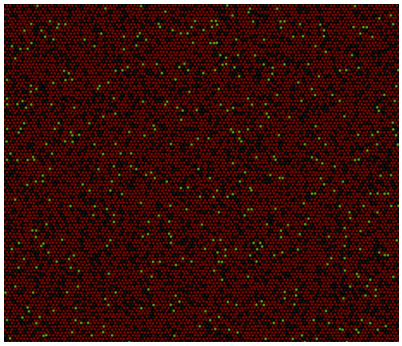
DQ24 Plus performance detecting the BCR-ABL1 fusion gene



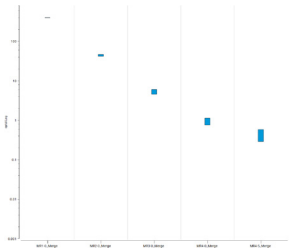
MR 4.5



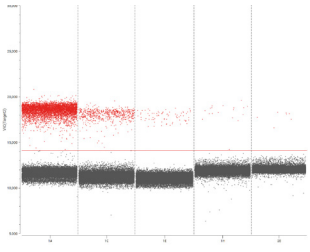
MR 3.0



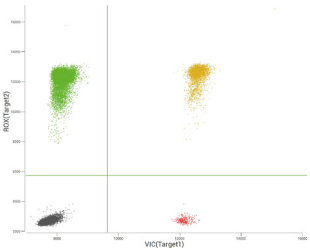
MR 2.0



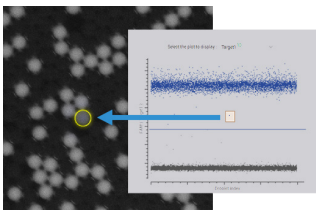
Concentration Graph



1D Plot



2D Plot

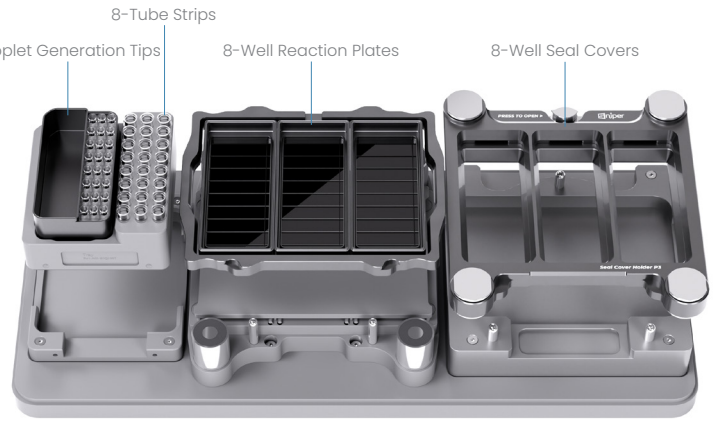


Single droplet quality control

Work Flow

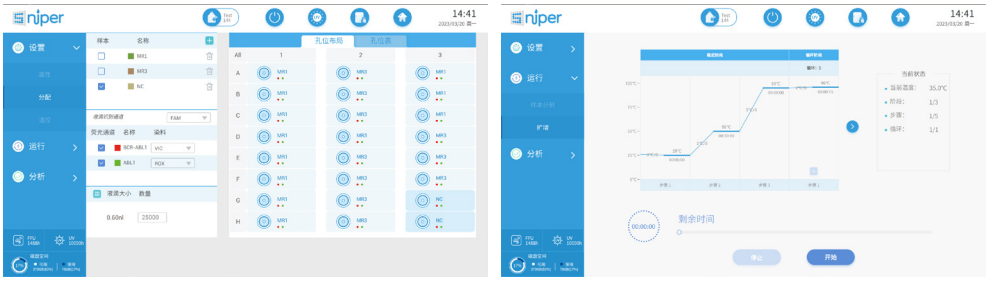
1 Min
Hands-on Time

Manual — Prepare Instrument



Place reaction tubes and consumables into the instrument.

Manual — Program Setting

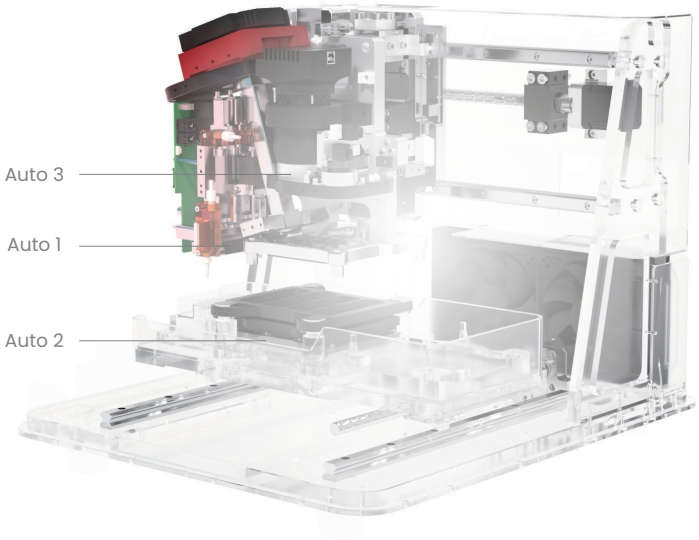


Input sample names, cycling program and detection channels then run!

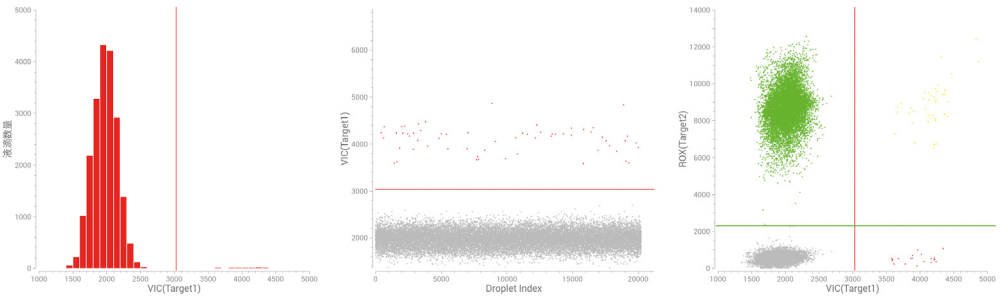
Auto 1 — Droplet Generation

Auto 2 — Cycling

Auto 3 — Imaging



Auto — Data Analysis



90 Mins
Total Run Time

In China For Global

* Exclusive patents filed for China, USA, Canada, Europe and Japan
* Sniper has passed the certification of ISO13485:2016-Medical Device-Quality Management System and obtained the certificate
* All-in-one Digital PCR system has entered the Special Review Program for Innovative Medical Devices of National Medical Products Administration (NMPA)
* ALL-in-one Digital PCR System has obtained FDA and CE approvals
* Leukemia Fusion Gene BCR-ABL1 (p210) Nucleic Acid Detection Kit (Digital PCR) received CE and FDA Market Access Qualification
* DQ24-sight software complies with FDA C1.22FR Part 11
* IQ/OQ service for All-in-one Digital PCR System is provided

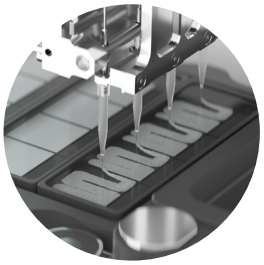
Applications

Features and Benefits

All-in-one Instrument

Minimal hands-on time
Results in 1.5-2 hours
No need for external peripheral equipments

Droplet Generation Module



PCR Amplification Module

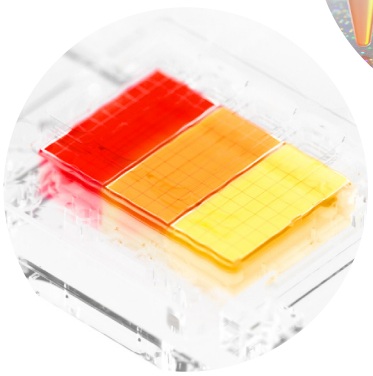
Fluorescence Detection Module

Easy to Use

8-tube strips
Fully automated

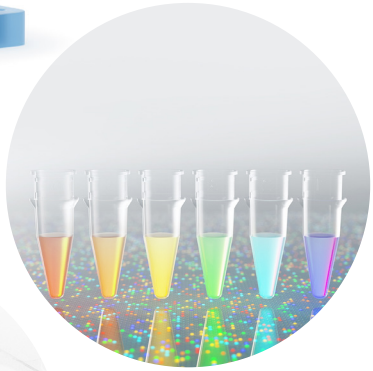
Flexible

1-16/24 reaction size consumables to meet different throughput demands



Advanced Temperature Module

Precise temperature control for cycling with gradient option available



6+1 Channels

Supports up to 21 fluorophore combinations

Ordering Information

Catalog #	Product Name	Note
RM001008A	All-in-one Digital PCR System	DQ24 Plus

Service

RS001001	IQ/OQ	
RS001002	21 CFR Part 11 V1.0.0	Compliant with FDA 21 CFR Part 11

Universal Reagents

RT002096A	2×dPCR EvaGreen Master Mix (Rox)	Dye Method	96 tests/Pack
RT021096A	2×dPCR Probe Master Mix Plus (Rox)	Probe Method	96 tests/Pack
RT017096A	2×dPCR Probe Master Mix Plus (Cy5.5)	Probe Method	96 tests/Pack
RT020096A	4×dPCR Probe Master Mix (Cy5.5)	Probe Method	96 tests/Pack
RT003096A	2×One-step RT-dPCR Probe Super Mix (Rox)	One-step Method	96 tests/Pack
RT018096A	5×One-step RT-dPCR Probe Super Mix (Cy5.5)	One-step Method	96 tests/Pack

Blood Cancer Solution

LT005048E	BCR-ABL1 (p210) %IS Kit	Digital PCR Method	48 Tests/Kit
RT013048C	BCR-ABL1 (P190) Detection Kit	Digital PCR Method	48 Tests/Kit
RT014048C	BCR-ABL1 (P230) Detection Kit	Digital PCR Method	48 Tests/Kit
RTL10048C	PML-RARα (L-Type) Detection Kit	Digital PCR Method	48 Tests/Kit
RTS10048C	PML-RARα (S-Type) Detection Kit	Digital PCR Method	48 Tests/Kit
RT012048C	AML-ETO Detection Kit	Digital PCR Method	48 Tests/Kit
RTV15048C	KIT D816V Detection Kit	Digital PCR Method	48 Tests/Kit
RTY15048C	KIT D816Y Detection Kit	Digital PCR Method	48 Tests/Kit
RTH15048C	KIT D816H Detection Kit	Digital PCR Method	48 Tests/Kit
RTK15048C	KIT N822K (A-Type/G-Type) Detection Kit	Digital PCR Method	48 Tests/Kit
RTF15048C	JAK2 V617F Detection Kit	Digital PCR Method	48 Tests/Kit

Solid Tumor Solution

LT080048E	EGFR Mutation Universal Detection Kit	Digital PCR Method	48 Tests/Kit
LT001048C	EGFR Exon 21-L858R Detection Kit	Digital PCR Method	48 Tests/Kit
LT002048E	EGFR Exon 20-T790M Detection Kit	Digital PCR Method	48 Tests/Kit
LT003048C	EGFR Exon 21-L861Q Detection Kit	Digital PCR Method	48 Tests/Kit
LT004048E	EGFR Exon 21-L858R & 19-del Detection Kit	Digital PCR Method	48 Tests/Kit

Infectious Disease Solution

LT110048C	Mycobacterium tuberculosis Complex cfDNA Detection Kit	Digital PCR Method	48 Tests/Kit
RK081048C	Multiplex Viral Encephalitis & Meningitis Pathogens Detection Kit	Digital PCR Method	48 Tests/Kit
RK082048C	Multiplex Bloodstream Infecton Pathogens Detection Kit	Digital PCR Method	48 Tests/Kit
RK001048C	Multiplex Respiratory Pathogens Detection kit	Digital PCR Method	48 Tests/Kit
RK002048C	Enterovirus Universal Detection Kit	Digital PCR Method	48 Tests/Kit
RK121048C	ctHPV Detection and Genetype Kit	Digital PCR Method	48 Tests/Kit
RK003048C	2019-nCoV Detection Kit	Digital PCR Method	48 Tests/Kit

Specifications

Dimensions	495mm×500mm×560mm
Weight	60kg
Work Conditions	Temperature 15-40℃ Humidity≤80%
Power	100-240VAC, 50/60Hz
Contamination Control	FFU, UV lamp

Droplet Generation Method	VibroJect™
User Interface	17.3-inch internal touchscreen
Chemistries	Dye Method; Probe Method; One-step Method
Quality Control	Standalone QC software module that automatically performs quality control on each droplet. Editing functions are available

Company Introduction

Suzhou Sniper Medical Technologies Co., Ltd., established in 2018, is dedicated to providing rapid, sensitive, accurate, and intelligent molecular diagnostic solutions. The company has developed the VibroJect® technology, a globally patented droplet generation method based on next-generation vibration injection technology. This innovation has pioneered a new, chip-free droplet generation pathway, effectively addressing the high costs and complex operations associated with microfluidic technologies in practical applications. It is poised to revolutionize the field of precision medical testing.

Building upon this technology, Sniper Medical Technologies has introduced the Sniper DQ Series All-in-one Digital PCR System, which only requires sample loading with an 8-tube strip. The system achieves full automation of the entire experimental process without manual intervention. Its single-test consumable costs are significantly lower compared to similar products, facilitating the widespread adoption of digital PCR technology across various application scenarios.

Currently, Sniper Medical Technologies has completed its fourth round of financing, securing hundreds of millions of CNY in capital. The company has established a 6,100 m² research and development center and a 7,900 m² production base, assembling a robust and comprehensive team for instrument and reagent development and production. These efforts provide solutions for life science research, clinical diagnostics, application testing, and the development of new therapies and drugs.

DQ24 Plus Principle Demo

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