



Sniper DQ24 Plus Digital PCR System

Highly automated digital PCR solution

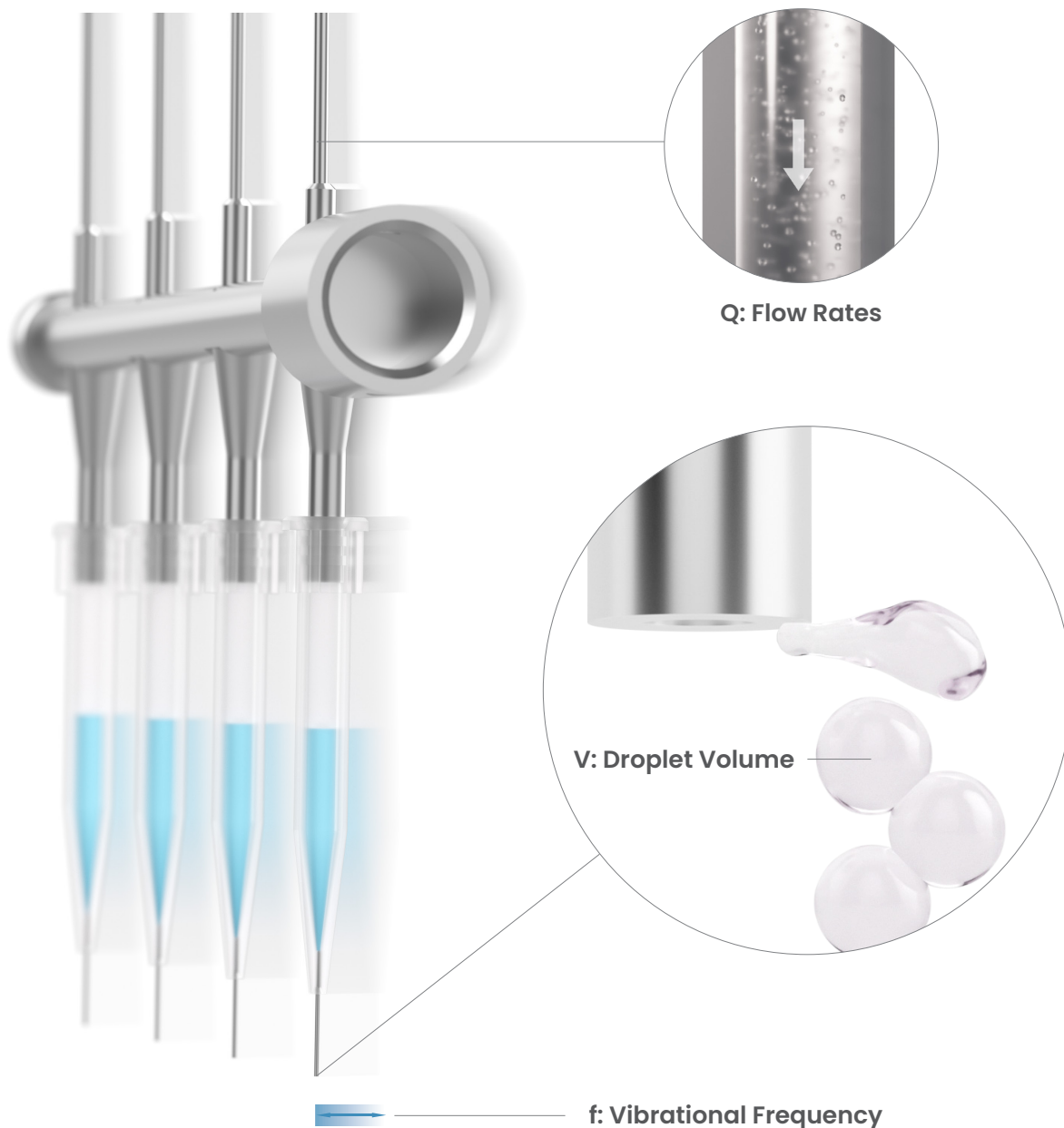
Innovative VibroJect® Technology

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.

$$\text{VibroJect}^{\text{®}} \quad V=Q/2f$$

Droplet volume is precise regardless of external conditions.



Precise Droplet Sizes

HRD Mode

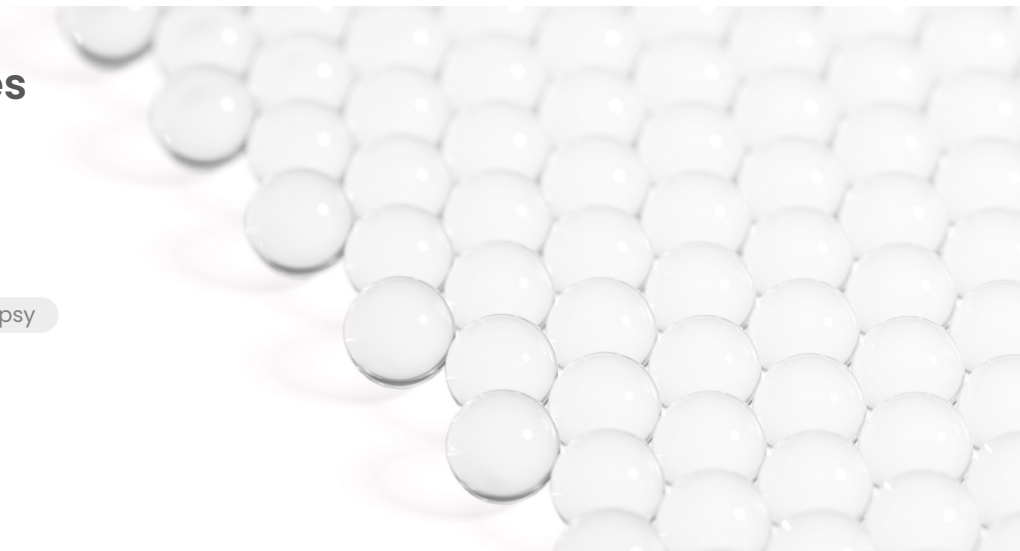
Copy Number Variation NIPT

Standard Mode

Absolute Quantification Liquid biopsy
Methylation NGS Library

HS Mode

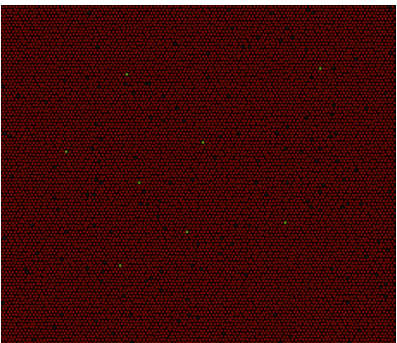
Rare mutation Detection



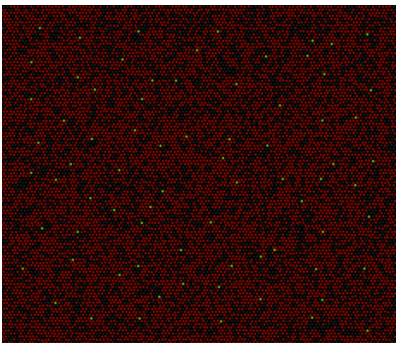
Automated sample aspiration and dispensing to maximise sample use



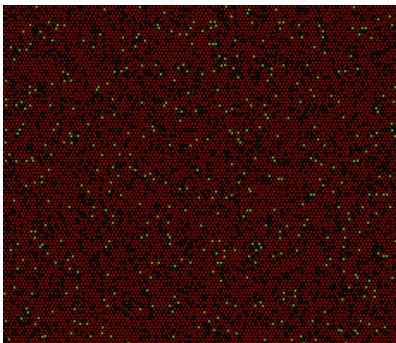
DQ24 Plus performance detecting the BCR-ABL1 fusion gene



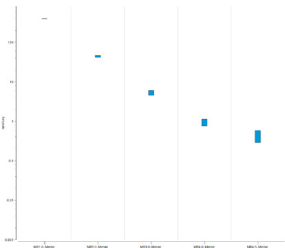
MR 4.5



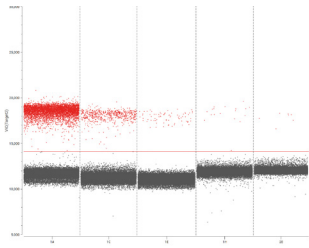
MR 3.0



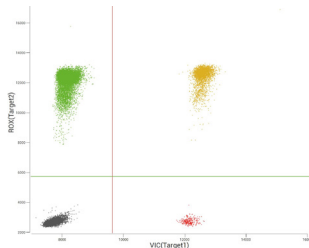
MR 2.0



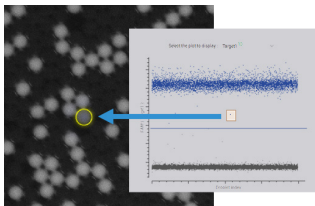
Concentration Graph



1D Plot



2D Plot



Single droplet quality control

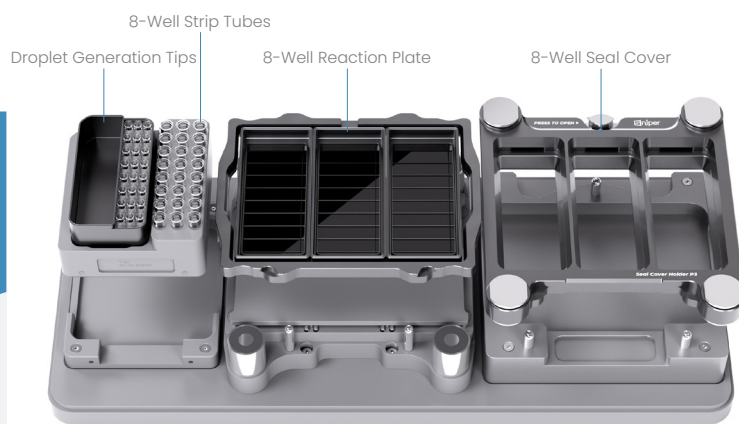
Work Flow

1 min

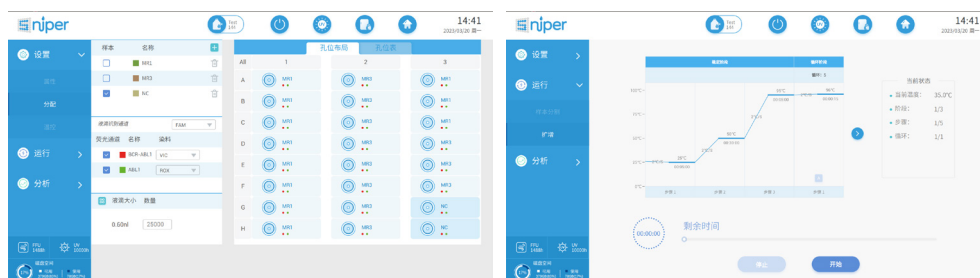
Hands-on Time

Manual

Prepare Instrument



Place reaction tubes and consumables into the instrument.



Manual

Program set up

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

Auto 1

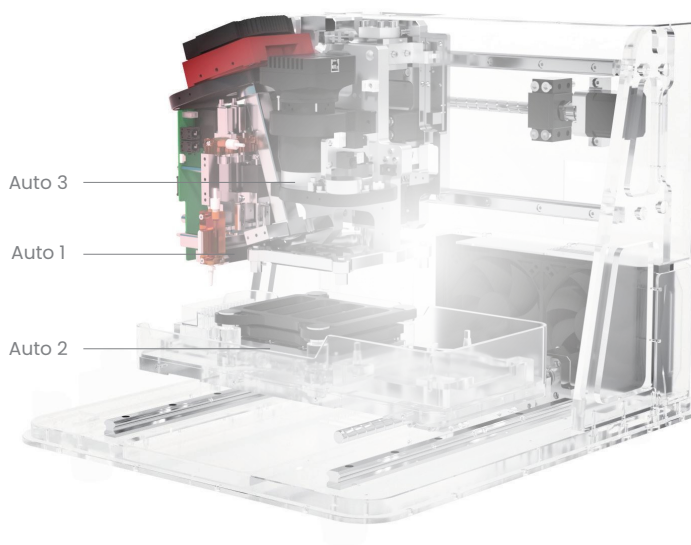
Droplet Generation

Auto 2

Cycling

Auto 3

Imaging

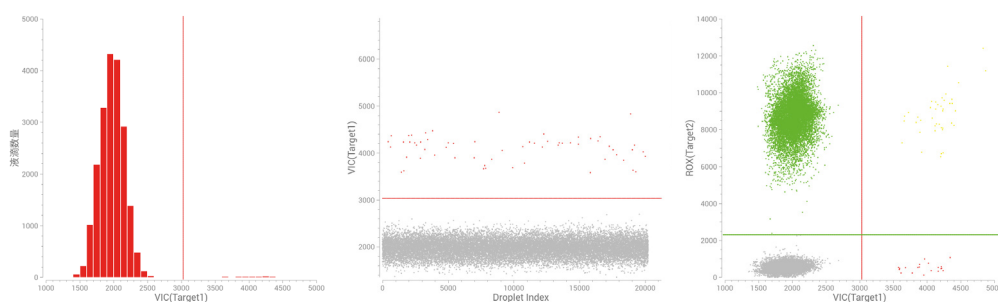


Auto

Data Analysis

90min

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 II
- * IQ/OQ service for all-in-one Digital PCR system is provided



Applications

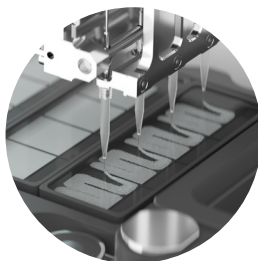


Features and Benefits

All-in-one Instrument

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

Droplet Generation Module



PCR Amplification Module



Fluorescence Detection Module



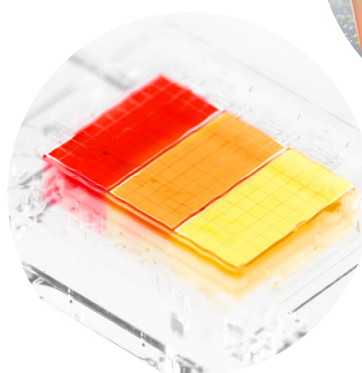
Easy to Use

8-tube strips
Highly automated



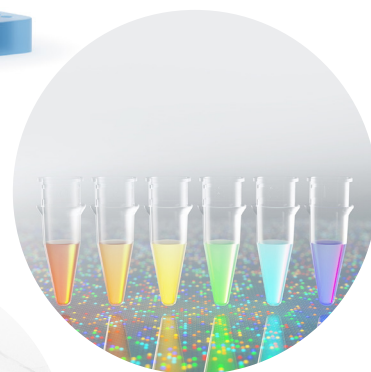
Flexible

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

Hematological Malignancy Solution

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

Solid Tumor Solution

LT080048E	Human EGFR Gene Mutation Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
LT001048C	Human EGFR Gene L858R Mutation Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
LT002048E	Human EGFR Gene T790M Mutation Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
LT003048C	Human EGFR Gene L861Q Mutation Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
LT004048E	Human EGFR Gene L858R & 19DEL Mutation Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit

Multiple Pathogen Infection Solution

LT110048C	Plasma Mycobacterium tuberculosis Complex cfDNA Nucleic Acid Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
RK081048C	Multiplex Viral encephalitis Pathogens Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
RK082048C	Multiplex Bloodstream Infection Pathogens Pathogens Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
RK001048C	Multiplex Respiratory Pathogens Detection kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
RK002048C	Enterovirus Universal Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit
RK003048C	2019-nCoV Detection Kit (Digital PCR)	Digital PCR Method	48 Tests/Kit

Specifications

Dimensions	495mm×500mm×560mm	Droplet Generation Method	VibroJect™
Weight	60kg	User Interface	17.3-inch internal touchscreen
Work Conditions	Temperature 15-40℃ Humidity≤80%	Chemistries	Dye Method; Probe Method; One-step Method
Power	100-240VAC, 50/60Hz	Quality Control	Standalone QC software module that automatically performs quality control on each droplet. Editing functions are available
Contamination Control	FFU, UV lamp		



Company Introduction

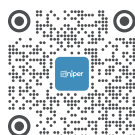
Sniper Medical Technology Ltd., founded in 2018, is dedicated to providing fast, sensitive, accurate and intelligent diagnostic solutions for the medical industry. Taking a novel droplet generation technology as the breakthrough, our company has developed a droplet generation method with global independent intellectual property rights—Vibration Injection Technology (VibroJect®). It completely solves the two key pain points, high cost and complicated operation, for microfluidic technology in practical application at the source. Our system is expected to bring a disruptive revolution in the field of precision medicine.

Based on this technology, Sniper has launched the world's first all-in-one digital PCR system, Sniper DQ24 Plus, which requires only 8-tube strip for sampling. It not only realizes the automation of whole workflow of experiment without the needs of human participation, but also significantly reduces the cost of consumables for a single test compared to similar products, which is expected to realize the landing and popularization of digital PCR technology in various application scenarios.

Currently, our company has completed a hundreds of million yuan fourth funding round. We have established a 6100 m² R&D center and a 7900 m² production base. A strong and complete R&D and production team for instruments and supporting reagents has been set up to provide solutions for the development of life science research, clinical diagnostics, applied testing and new therapeutic/drug.



DQ24 Plus
Principle Demo



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