STILLA

Naica™ System

for Crystal Digital™ PCR

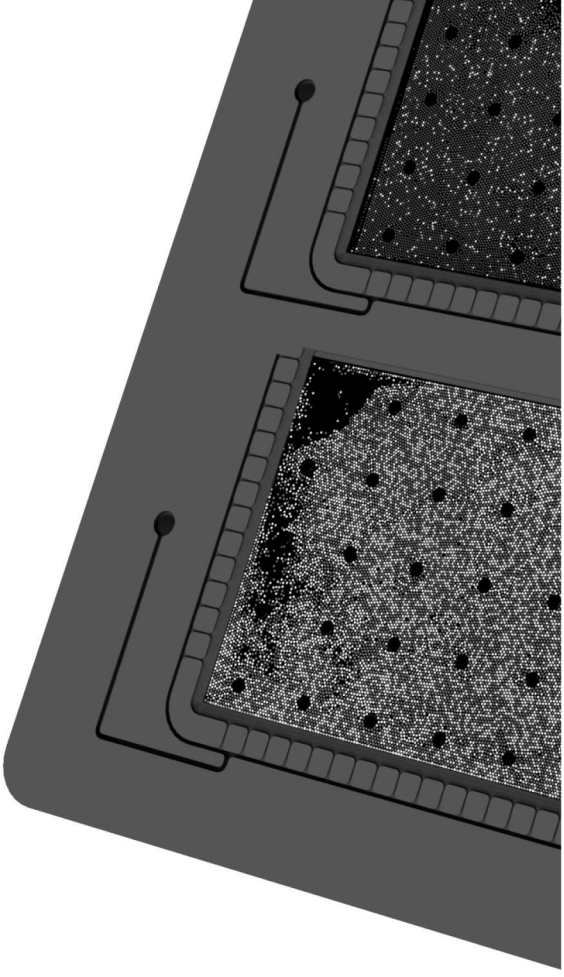
3-color digital PCR
within 2h30

Crystal Digital PCR

Crystal Digital PCR is Stilla's next-generation technology for absolute quantification of nucleic acids.

Using cutting-edge microfluidic innovations, this technology integrates the digital PCR process in a single consumable. The sample is first flowed through a network of microchannels and partitioned into a large 2D array of 30,000 individual droplets, also called a droplet crystal. PCR is then performed on-chip and the crystal is imaged to reveal the droplets that contain amplified targets. The last step consists in counting the number of these positive droplets to precisely extract the absolute quantity of nucleic acids.

With Crystal Digital PCR, the combination of powerful image analysis and intuitive visual inspection offers an unmatched level of confidence in the digital PCR measurement, yielding data you can truly trust.



What is the Naica System ?

The Naica System leverages the key assets of Crystal Digital PCR in a compact, easy-to-use, fast and reliable digital PCR solution.

An easy-to-use and integrated solution

A single consumable per experiment

Two instruments for the entire workflow

The fastest time-to-result on the market

Digital PCR results within 2h30, including thermocycling

Less than 5 min hands-on time

Reliable multiplex digital PCR

A unique 3-color detection

User-friendly analysis software

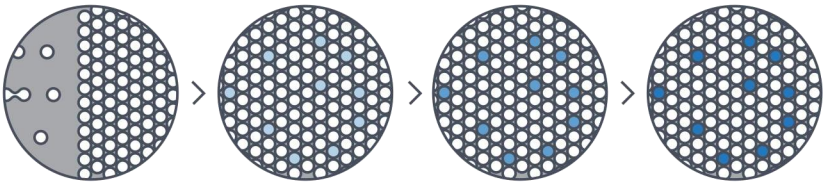
1 | Generate crystals & Amplify

10 min + 2 h

- Load the reaction mixes into the wells of the Sapphire chips
- Place the chips into the Naica Geode
- Launch the Crystal Digital PCR program

Crystals of 30,000 droplets are created from each sample

PCR amplification is performed immediately after crystal generation



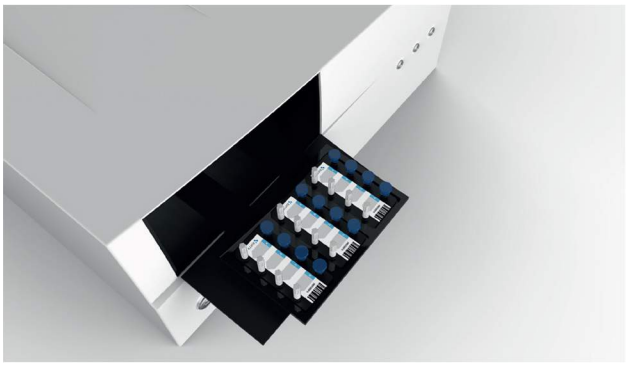
2 | Read & Analyze

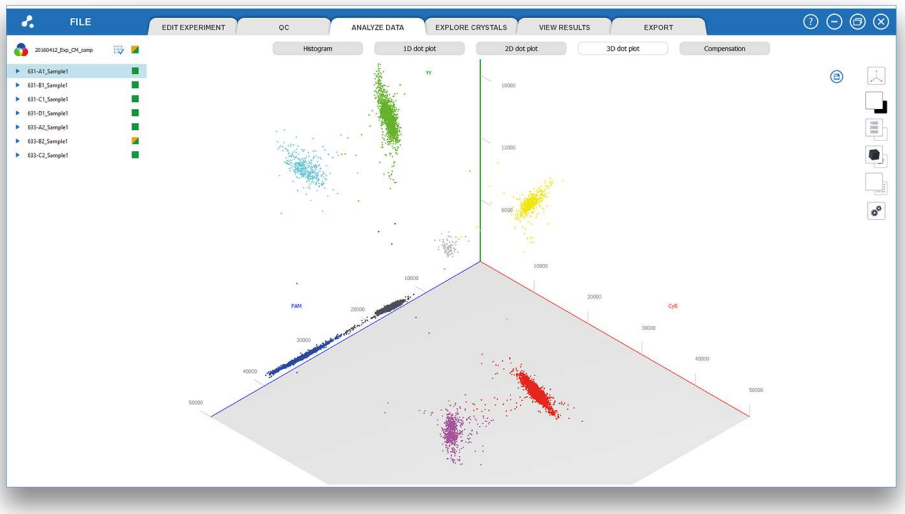
10 min + 5 min

- Transfer the chips to the Naica Prism3 crystal reader

  Crystals are read using 3 fluorescent channels

- Measure the concentrations of targeted nucleic acids with Crystal Miner™ software





Sapphire chip

Specifications

Capacity	Up to 4 samples / chip
Input volume	25 µL / sample
Droplets per sample	25 000 - 30 000
Droplet volume	0.44 nL
Dynamic range	5 logs
Precision at 95% CI	10%

Naica Geode

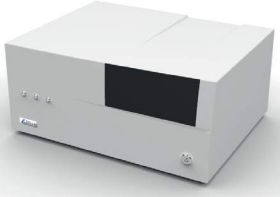
Specifications

Capacity	Up to 12 samples (3 chips) / run
Thermo block temperature range	4 °C to 98 °C
Block uniformity (at 72 °C)	± 0.5 °C
Adjustable ramping	0.1 to 1.0 °C

Technical information

Dimensions (W x D x H)	35 x 37 x 29 cm (14 x 15 x 11 inch)
Weight	18 kg
Power supply	110 - 220 V // 50 - 60 Hz
Pressure input	1.3 bar (19 psi)
Pressurizing gas	Air or N_2

Naica Prism3



Specifications

Capacity	Up to 12 samples (3 chips) / run
Scan time	1 min 15 s / sample
Sample illumination	High power LED
Excitation wavelengths	415-480 nm (blue) // 530-550 nm (green) // 615-645 nm (red)
Detection wavelengths	495-520 nm // 560-610 nm // 655-720 nm
Compatible fluorophores	FAM, ... // Cy3, VIC, HEX, ... // Cy5, Quasar® 705, ...

Technical information

Dimensions (W x D x H)	44 x 34 x 21 cm (17 x 13 x 8 inch)
Weight	15 kg
Power supply	100 - 240 V // 50 - 60 Hz

Contact

STILLA Technologies

Villejuif Biopark
1 mail du professeur Georges Mathé
94 800 Villejuif // France

info@stilla.fr
www.stilla.fr

+33 9 82 29 50 50

STILLA