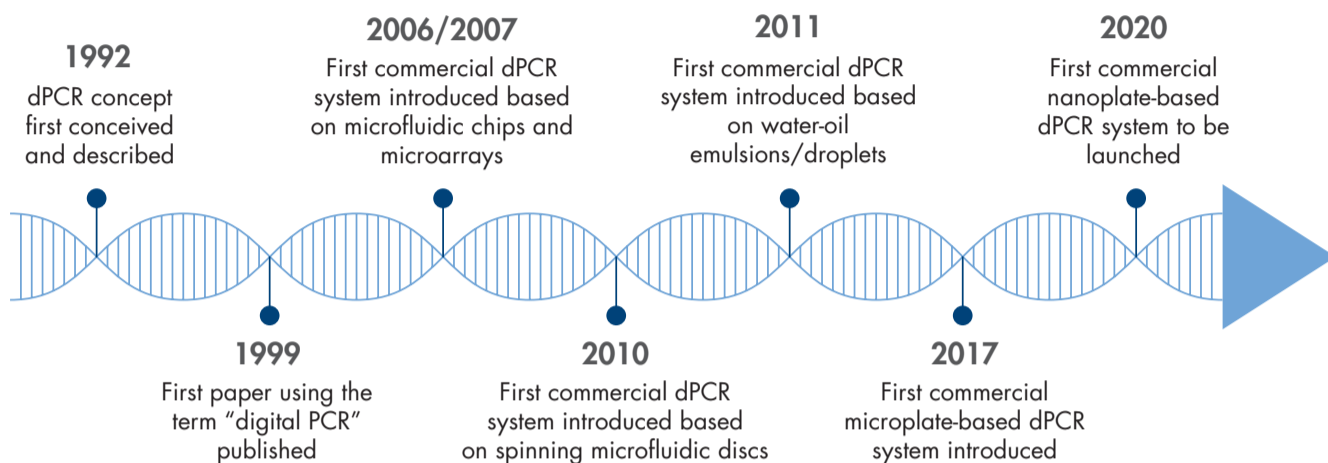


Did you know?

The power of digital PCR

Digital PCR breakthroughs



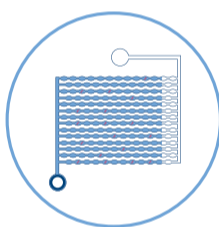
How it works?

Sample preparation



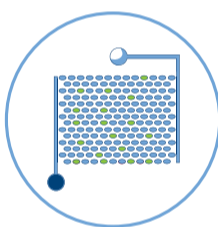
Pipette reaction mixture
Seal plate

Partitioning



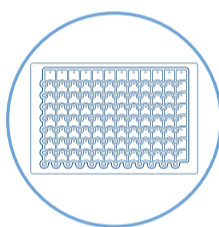
Discretize into partitions

Thermal cycling



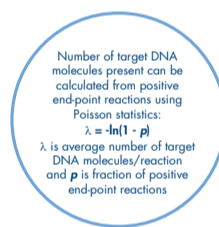
Amplify target DNA in the presence of fluorescent dyes or probes

Imaging



Detect fluorescent signals in partitions

Analysis



Number of target DNA molecules present can be calculated from positive end-point reactions using Poisson statistics:
 $\lambda = -\ln(1 - p)$
 λ is average number of target DNA molecules/reaction and p is fraction of positive end-point reactions

Calculate absolute copies using Poisson distribution

Top 5 benefits



Absolute target quantification

No need for references or standard curves



High tolerance to inhibitors

Due to partitioning and endpoint measurement



Superior precision

Detect very small fold change differences



Increased sensitivity

Detect rare mutations and low abundance targets



High reproducibility

Eliminate amplification efficiency bias

Top 5 applications



Copy number variation

Rare mutation detection

NGS library quantification

Viral load detection

Gene expression analysis

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual.

Trademarks: QIAGEN®, Sample to Insight® (QIAGEN Group).

PROM-14951-001 09/2019 © 2019 QIAGEN, all rights reserved.

Ordering www.qiagen.com/shop | Technical Support support.qiagen.com | Website www.qiagen.com