magtivio

MagSi-NA Pathogens MSP

Magnetic Sample Pooling

Automated Nucleic Acid Extraction

for Covid-19 testing

Magnetic Sample Pooling: saving costs while maintaining sensitivity

In the current status of the Covid-19 pandemic (high levels of testing; low infection prevalence) sample screening becomes less cost-effective. A solution to overcome this issue might be pooling: adding multiple samples together in one well and analyse them as one, after which only the positive wells' samples need to be reanalysed. While saving money on extractions and PCR reactions, traditional sample pooling will still dilute your samples and therefore cause less sensitive and false negative results. Our solution, **Magnetic Sample Pooling (MSP)** does not only save reagents, but maintains your test sensitivity as it pools in a sequential and non-dilutive manner.

Key Features and Benefits

- Save up to 80% in extraction and PCR costs
- MSP does not lower the sensitivity of your tests
- MSP is easily automated on a PurePrep instrument
- Pooling ratios of up to 6:1 possible

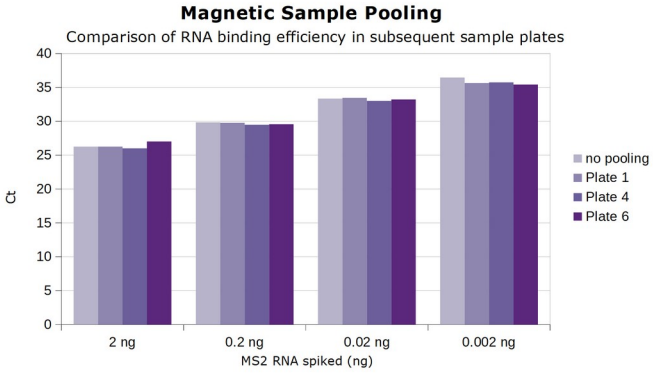


Fig.1: Four concentrations of MS2 RNA were spiked at different positions in sample plates 1, 4 and 6 and used for the extraction protocol. qPCR results generated with the eluted RNA samples demonstrate that there is no significant difference in RNA recovery between the binding steps of MagSi-NA Pathogens MSP, and compared to the standard MagSi-NA Pathogens procedure without pooling.

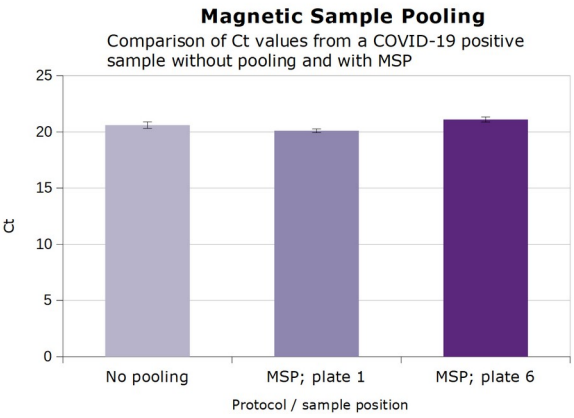


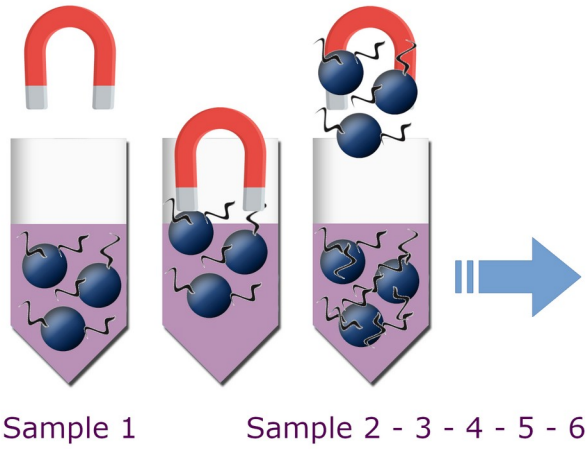
Fig.2: Ct values obtained by RT-qPCR from a COVID-19 positive saliva sample after RNA extraction without pooling and with MSP. The same sample was added to the first and last sample plates to evaluate sensitivity. No difference could be determined.

Procedure

Up to 6 times 96 samples are added to the wells of up to 6 deepwell plates. First, all samples are lysed under denaturing conditions by addition of lysis buffer including proteinase K and Poly-A-RNA. Magnetic MSP beads and binding buffer are then added to every sample.

During the isolation procedure the magnetic MSP beads will bind the nucleic acids from all (up to 6) samples by transferring them in a serial manner to the next sample plate, until all (up to 6) samples have been incubated with magnetic MSP beads.

After this, the magnetic MSP beads are washed in 3 deepwell plates containing alcoholic buffers. Finally, the nucleic acids are collected from the sample plates and released into an elution plate using a low-salt elution buffer. They can then be directly used for downstream applications.



Ordering information

Art. No.	Description	Amount
MDKT0021P06K	MagSi-NA Pathogens MSP	up to 6000 samples*

* in case of 6:1 pooling ratio

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