Manual protocol: **Nose and throat swabs**

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Materials:

ZR-96 MagStand (#P1005)
96-well block (#P1001; capacity 2 ml/well)
isopropanol 100% (recommended); ethanol 100% (alternatively)
multichannel pipette (recommended)

Reagents – modifications:

- ✓ Addition of β-mercaptoethanol to the **Viral DNA/RNA Buffer** is not required for nose swab processing.
- ✓ 100% ethanol may be used instead of 100% isopropanol, to prepare the **wash buffers** (step 5 and 6 below).

Compatible sample inputs:

DNA/RNA Shield™
Universal transport medium (UTM)
Viral transport medium (VTM)
PBS, etc.

DNA/RNA Purification

✓ For the 96-well plate/block processing: Keep maximum sample input at 200 µl to avoid cross-contamination.

1. Add 2 µl **Proteinase K** to each 200 µl sample and mix well.

   For all buffer additions and incubation steps, mix well by pipetting the beads up and down several times.

2. Add 400 µl **Viral DNA/RNA Buffer** and mix well.

3. Add 10 µl **MagBinding Beads** and mix well for 10 minutes.

   Important: **MagBinding Beads** settle quickly, ensure that beads are kept in suspension while dispensing.

4. Transfer plate/tube to a magnetic stand until beads have pelleted. Then aspirate and discard the cleared supernatant.

   Remove the liquid slowly in order to allow all beads to be pulled to the magnet. If beads are aspired accidentally, transfer the liquid back to the well, let it settle for 20 second, and then carefully aspirate.

5. Add 250 µl **MagBead DNA/RNA Wash 1** and mix well. Pellet the beads and discard the supernatant.

6. Add 250 µl **MagBead DNA/RNA Wash 2** and mix well. Pellet the beads and discard the supernatant.

7. Add 250 µl ethanol (100%, absolute) and mix well. Pellet the beads and discard the supernatant completely.

8. Repeat step 7.

9. Dry the beads at room temperature (20-30°C) for 10 minutes.

   Beads will change in appearance from glossy black when still wet to a dull brown when fully dry. Ensure that no liquid is left in the well, as residual ethanol in the elution fraction might inhibit downstream applications such as qRT-PCR.

10. To elute DNA/RNA, add ≥30 µl **DNase/RNase-Free Water** to the beads and mix well. Transfer the plate to the magnetic stand until beads have pelleted. Then aspirate and dispense the eluted DNA/RNA to a new plate/tube.