### DNA/RNA Protocol

#### Whole Blood (RNA)

**Preparation**
- Add 600 μl Buffer 1A to a Small Dry Bead Tube.
- Add 20 μl VIBE Protease and 30 μl Carrier RNA.
- Add 400 μl spin plasma sample to the tube and invert to mix. (See specific protocol details.)

**Lysis**
- No bead beating is required.
- Incubate in dry heat block set to 65°C for 10 minutes and pulse centrifuge to eliminate foam.

**Bind**
- Add 300 μl of Buffer 1B and invert to mix.
- Load spin filter with mixture using small transfer pipet twice. Centrifuge each load 2 minutes and pour off flow-through between loads. After the final load, transfer spin filter to new receiver tube.

**Wash**
- Fill a small transfer pipet with Buffer 1C and add it to the spin filter.
- Centrifuge for 2 minutes and pour off flow-through.
- Fill a small transfer pipet with Buffer 2 and add it to the spin filter.
- Centrifuge for 2 minutes and move spin filter to a new Receiver tube.
- Centrifuge for 3 minutes and move spin filter to a new Receiver tube.
- Incubate uncapped tube for 5 minutes in a dry heat block at 68-95°C.

**Elute**
- Using a Pipettor, add 100 μl of Buffer 3 to the spin filter.
- Let sit for 2 minutes, then centrifuge for 2 minutes.

**Re-Elute**
- Using a pipettor, pipet the spin-through liquid back onto the small spin filter.
- Let sit for 2 minutes, then centrifuge for 2 minutes.

Keep receiver tube containing purified sample and test as soon as possible.

#### Nasal Swab (RNA)

**Preparation**
- Add 400 μl Buffer 1A to a Small Dry Bead Tube.
- Add 20 μl VIBE Protease and 30 μl Carrier RNA.
- Add cut nasal swab into the tube and invert to mix. (See specific protocol details.)

**Lysis**
- Bead beat for 1 minute.
- Incubate in dry heat block set to 65°C for 10 minutes and pulse centrifuge to eliminate foam.

**Bind**
- Add 200 μl of Buffer 1B and invert to mix.
- Load spin filter with mixture using small transfer pipet.
- Centrifuge for 2 minutes and transfer spin filter to new receiver tube.

**Wash**
- Fill a small transfer pipet with Buffer 1C and add it to the spin filter.
- Centrifuge for 2 minutes and pour off flow-through.
- Fill a small transfer pipet with Buffer 2 and add it to the spin filter.
- Centrifuge for 2 minutes and move spin filter to a new Receiver tube.
- Centrifuge for 3 minutes and move spin filter to a new Receiver tube.
- Incubate uncapped tube for 5 minutes in a dry heat block at 68-95°C.

**Elute**
- Using a Pipettor, add 100 μl of Buffer 3 to the spin filter.
- Let sit for 2 minutes, then centrifuge for 2 minutes.

**Re-Elute**
- Using a pipettor, pipet the spin-through liquid back onto the small spin filter.
- Let sit for 2 minutes, then centrifuge for 2 minutes.

Keep receiver tube containing purified sample and test as soon as possible.

#### Sputum (DNA/RNA)

**Preparation**
- Add 800 μl Buffer 1A to a Small Dry Bead Tube.
- Add 20 μl VIBE Protease and 30 μl Carrier RNA.
- Add 400 μl sputum sample to the tube and invert to mix. (See specific protocol details.)

**Lysis**
- Bead beat for 5 minutes.
- Incubate in dry heat block set to 65°C for 15 minutes (mixing every 5 minutes) and pulse centrifuge to eliminate foam.

**Bind**
- Add 400 μl of Buffer 1B and invert to mix.
- Load spin filter with mixture using small transfer pipet three times. Centrifuge each load 2 minutes and pour off flow-through between loads. After the final load, transfer spin filter to new receiver tube.

**Wash**
- Fill a small transfer pipet with Buffer 1C and add it to the spin filter.
- Centrifuge for 2 minutes and pour off flow-through.
- Fill a small transfer pipet with Buffer 2 and add it to the spin filter.
- Centrifuge for 2 minutes and move spin filter to a new Receiver tube.
- Centrifuge for 3 minutes and move spin filter to a new Receiver tube.
- Centrifuge for 3 minutes and move spin filter to a new Receiver tube.
- Incubate uncapped tube for 5 minutes in a dry heat block at 68-95°C.

**Elute**
- Using a Pipettor, add 200 μl of Buffer 3 to the spin filter.
- Let sit for 2 minutes, then centrifuge for 2 minutes.

**Re-Elute**
- Using a pipettor, pipet the spin-through liquid back onto the small spin filter.
- Let sit for 2 minutes, then centrifuge for 2 minutes.

Keep receiver tube containing purified sample and test as soon as possible.