QIAGEN Supplementary Protocol:

Handling instructions for multiple sample preparations using the QIAamp® DNA Mini Kit

For parallel preparation of genomic, bacterial, or viral DNA or viral RNA from more than 24 samples, we recommend using QIAamp® Spin Columns with 4–6 ml collection tubes. Any tube with an inner diameter of 9–10 mm (outer diameter 11–12 mm) is suitable.

- Following the handling recommendations below, and using two sets of disc-type adapters (as described in the Appendix), 96 samples can be purified in parallel in under 2 hours.
- For information about recommended centrifuges, rotors, buckets and adapters, please refer to the attached selection guide. The selection guide was written in accordance with the specifications given in the manufacturers' catalogs. We do however recognize that these specifications are not always accurate and therefore we can not guarantee that they will perform as stated. Please ensure that the centrifuge you intend to use is capable of reaching at least 3000 x *g* when fitted with the recommended rotor, buckets and adapters. Using *g*-forces below 3000 x *g* may cause clogging of the QIAamp Column, and give rise to low yields and purity of DNA. A Beckman GS-6(K)R centrifuge with a GH-3.7 rotor and blue adapters (Beckman, cat. no. 359148) was used to develop this protocol.
- Use a Multipette (Eppendorf) or equivalent repeating pipet for addition of all buffers (ATL, AL, AW1, and AW2) and reagents (Proteinase, ethanol, water).
- Follow all recommendations regarding buffer volumes, temperature, and timing of steps for the specific QIAamp protocol that you are using. The changes below are in regard to the physical handling of the columns only.
- Samples are lysed and prepared for loading onto the QIAamp Spin Column as described in the appropriate protocol of the QIAGEN® *QIAamp DNA Mini and DNA Blood Mini Handbook*. ***Note:*** *Do not prepare a master mix of Proteinase in Buffer AL.*
- QIAamp Spin Columns should be inserted into the 4–6 ml collection tubes in the correct adapters before beginning.
- Apply the sample to the QIAamp Spin Column without moistening the rim, close the cap, and centrifuge 5 minutes at room temperature.
- Centrifugation of QIAamp Spin Columns at each step should always be at ≥ 3000 x *g*, at room temperature. Do not use g-forces below 3000 x *g*. Centrifugation at higher g-forces is recommended whenever possible, but force should not exceed 15,000 x *g*.
- Wash samples on the QIAamp Columns with Buffer AW1 and Buffer AW2 in the same manner. Centrifuge for 5 min for the first wash, and for 10 minutes for the final wash before elution. The extended centrifugation ensures that Buffer AW1 and Buffer AW2 are completely removed from the QIAamp Column prior to elution. Caps may be removed after sample loading, if desired, to further facilitate handling.
- QIAamp Spin Columns should be transferred into clean collection tubes for elution (see Appendix). Centrifugation for 5 min is sufficient. Follow the specific elution recommendations from your particular QIAamp Protocol.

Appendix: Collection tubes for elution

There are several options for handling QIAamp Spin Columns during elution. Samples can be eluted in standard 1.5 ml or 2 ml collection tubes, or another tube of choice which fits your centrifuge and handling preference.

1. Disc-type adapters

The use of swinging bucket rotors with adapters built up by discs (e.g., Beckman #359148, Heraeus #75005321) will greatly facilitate handling. We recommend using two sets (2 x 4) of these adapters. The first set should be used for sample loading and washing, whereas the second set of adapters should be used for elution into the smaller volume tubes.

- Remove the top discs of the second set of adapters, so that they fit standard 1.5 ml or 2 ml collection tubes.
- After the last wash step, transfer the top discs of the first set of adapters —which will carry the QIAamp Spin Columns —and place it over the second set of adapters loaded with 1.5 or 2 ml collection tubes. Take care that the QIAamp Spin Columns fit into the correct collection tubes.

2. Regular adapters

Depending on the size of available adapters, and the internal diameter of the 4–6 ml tubes, it may be possible to support 1.5 ml or 2 ml collection tubes in the regular adapters in some way e.g., by placing a solid support in the base of the 4–6 ml tubes, or in the holes of the adapter itself.