

## Appendix 5: Extraction Protocols and Sample Extraction Sheets

### Centre for Forensic Science Department of Pure and Applied Chemistry

Shanan Tobe, PhD Project  
QIAamp® Extraction Record from Blood Sample.

Date \_\_\_\_\_

Sample Info								
Tube ID								

1. Cut a 3mm section of the blood stain and place into 1.5mL tube ☐
2. Aliquot 180µL ATL Buffer into tube ☐
3. Add 20µL Proteinase K solution 10mg/mL ☐
4. Vortex ☐
5. Incubate at 56°C for 1 hour ☐
6. Add 200µL of Buffer AL ☐
7. Vortex immediately ☐
8. Incubate at 70°C for 10 minutes ☐
9. Add 800µL to spin column ☐
10. Centrifuge at 8000rpm for 1 minute ☐
11. Remove and discard fluid from bottom of tube ☐
12. Remove the spin column to a fresh tube ☐
13. Add 500µL AW1 to the spin column ☐
14. Centrifuge at 8000rpm for 1 minute ☐
15. Remove the spin column to a fresh tube ☐
16. Add 500µL AW2 to the spin column ☐
17. Centrifuge on full for 3 minutes ☐
18. Place spin column in a fresh 1.5mL tube ☐
19. Add 20 – 100µL AE to the spin column ☐
20. Incubate at room temperature for 5 minutes ☐
21. Centrifuge on full for 1 minute ☐
22. Store at 4°C ☐

**Centre for Forensic Science**  
**Department of Pure and Applied Chemistry**

Shanan Tobe, PhD Project  
 QIAamp® Extraction Record from Buccal Swab Sample.

Date\_\_\_\_\_

Sample Info								
Tube ID								

1. Cut swab tip off and place into 1.5mL tube ☐
2. Aliquot 400µL ATL Buffer into tube ☐
3. Add 20µL Proteinase K solution 10mg/mL ☐
4. Vortex ☐
5. Incubate at 56°C for at least 1 hour ☐
6. Add 400µL of Buffer AL ☐
7. Vortex immediately ☐
8. Incubate at 70°C for 10 minutes ☐
9. Add 300µL Ethanol (95%) ☐
10. Vortex ☐
11. Add 800µL to spin column ☐
12. Centrifuge at 8000rpm for 1 minute ☐
13. Remove and discard fluid from bottom of tube ☐
14. Remove the spin column to a fresh tube ☐
15. Add 500µL AW1 to the spin column ☐
16. Centrifuge at 8000rpm for 1 minute ☐
17. Remove the spin column to a fresh tube ☐
18. Add 500µL AW2 to the spin column ☐
19. Centrifuge on full for 3 minutes ☐
20. Place spin column in a fresh 1.5mL tube ☐
21. Add 20 – 50µL AE to the spin column ☐
22. Incubate at room temperature for 5 minutes ☐
23. Centrifuge on full for 1 minute ☐
24. Store at 4°C ☐

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**Department of Pure and Applied Chemistry**

Shanan Tobe, PhD Project  
 QIAamp® Extraction Record from Hair Sample.

Date\_\_\_\_\_

Sample Info								
Tube ID								

1. Cut sample hair into small pieces and place into 1.5mL tube ☐
2. Aliquot 300µL ATL Buffer into tube ☐
3. Add 20µL Proteinase K solution 10mg/mL and 20µL of 1M DTT ☐
4. Vortex ☐
5. Incubate at 56°C for 12 – 48 hours ☐
6. Add 300µL of Buffer AL ☐
7. Vortex immediately ☐
8. Incubate at 70°C for 10 minutes ☐
9. Add 800µL to spin column ☐
10. Centrifuge at 8000rpm for 1 minute ☐
11. Remove and discard fluid from bottom of tube ☐
12. Remove the spin column to a fresh tube ☐
13. Add 500µL AW1 to the spin column ☐
14. Centrifuge at 8000rpm for 1 minute ☐
15. Remove the spin column to a fresh tube ☐
16. Add 500µL AW2 to the spin column ☐
17. Centrifuge on full for 3 minutes ☐
18. Place spin column in a fresh 1.5mL tube ☐
19. Add 20 – 50µL AE to the spin column ☐
20. Incubate at room temperature for 5 minutes ☐
21. Centrifuge on full for 1 minute ☐
22. Store at 4°C ☐

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Shanan Tobe, PhD Project  
 QIAamp® Extraction Record from Tissue Sample.

Date\_\_\_\_\_

Sample Info								
Tube ID								

1. Transfer a tissue sample of less than 10mg and place into 1.5mL tube ☐
2. Aliquot 180µL ATL Buffer into tube ☐
3. Add 20µL Proteinase K solution 10mg/mL ☐
4. Vortex ☐
5. Incubate at 56°C until tissue is completely dissolved ☐
6. Add 200µL of Buffer AL ☐
7. Vortex immediately ☐
8. Add 200µL Ethanol (95%) ☐
9. Vortex ☐
10. Incubate for 5 minutes at room temperature ☐
11. Add 800µL to spin column ☐
12. Centrifuge at 8000rpm for 1 minute ☐
13. Remove and discard fluid from bottom of tube ☐
14. Remove the spin column to a fresh tube ☐
15. Add 500µL AW1 to the spin column ☐
16. Centrifuge at 8000rpm for 1 minute ☐
17. Remove the spin column to a fresh tube ☐
18. Add 500µL AW2 to the spin column ☐
19. Centrifuge on full for 3 minute ☐
20. Place spin column in a fresh 1.5mL tube ☐
21. Add 20 – 100µL AE to the spin column ☐
22. Incubate at room temperature for 5 minutes ☐
23. Centrifuge on full for 1 minute ☐
24. Store at 4°C ☐

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Shanan Tobe, PhD Project  
 QIAamp® Extraction Record from Urine Sample.

Date\_\_\_\_\_

Sample Info								
Tube ID								

1. Transfer 1mL of urine to a sterile 1.5mL microcentrifuge tube ☐
2. Centrifuge at 8000rpm for 2 minutes ☐
3. Discard supernatant and repeat steps 1 and 2 if needed ☐
4. Add 500µL Buffer AE ☐
5. Vortex ☐
6. Centrifuge at 8000rpm for 2 minutes ☐
7. Discard supernatant ☐
8. Add 300µL ATL Buffer into tube ☐
9. Add 20µL Proteinase K solution 10mg/mL and 20µL of 1M DTT ☐
10. Vortex ☐
11. Incubate at 56°C for 60 minutes ☐
12. Add 300µL of Buffer AL with RNA and 50µL ethanol ☐
13. Vortex immediately and briefly centrifuge ☐
14. Add 800µL to spin column ☐
15. Centrifuge at 8000rpm for 1 minute ☐
16. Remove and discard fluid from bottom of tube ☐
17. Remove the spin column to a fresh tube ☐
18. Add 500µL AW1 to the spin column ☐
19. Centrifuge at 8000rpm for 1 minute ☐
20. Remove the spin column to a fresh tube ☐
21. Add 500µL AW2 to the spin column ☐
22. Centrifuge on full for 3 minutes ☐
23. Place spin column in a fresh 1.5mL tube ☐
24. Add 20 – 50µL AE to the spin column ☐
25. Incubate at room temperature for 5 minutes ☐
26. Centrifuge on full for 1 minute ☐
27. Store extract at 4°C ☐