
Procedure for Sample Processing Quality Control

1.0 Purpose - To specify the method for using aseptic technique in the DNA Database Section.

2.0 Scope - This procedure applies to all DNA Database employees and trainees.

3.0 Definitions

- **Autoclave** – Exposing an item to heat in excess of 120 °C and pressure for at least 30 minutes.

4.0 Equipment, Materials and Reagents

- Nitrile gloves (or equivalent)
- Disposable lab coats
- Disposable masks
- Deionized water
- 70 % isopropyl alcohol (or equivalent)
- 10 % bleach
- DeconQuat (or equivalent)
- Autoclave

5.0 Procedure

5.1 All DNA Database employees shall wear disposable lab coats when processing database samples (including handling samples, staining, using computers, and making telephone calls in sample processing areas). This protective clothing shall not be worn outside the Laboratory or in office space in the Laboratory.

5.1.1 Disposable lab coats shall be discarded weekly. If a DNA Database employee determines that a lab coat has been compromised, it shall be discarded.

5.1.2 Unless the disposable lab coat comes into contact with biohazard materials (e.g., liquid blood), it shall be discarded in regular trash bins.

5.1.3 A lab coat is not required when transferring capped amplification plates from a pre-amplification laboratory space to a post-amplification laboratory space, spinning the plate on the centrifuge, or placing on the thermocycler.

5.2 DNA Database employees shall wear disposable masks when performing pre-amplification laboratory analysis, performing quality control reagent preparation and calibration, staining liquid blood samples, and punching samples. Used masks shall be discarded weekly, or as soon as the DNA Database Employee determines that the mask has been compromised during use.

5.3 DNA Database employees shall wear nitrile gloves (or equivalent) when processing Database samples (including handling samples, staining, using computers, and making telephone calls in sample processing areas). This protective clothing shall not be worn outside the laboratory or in office space in the Laboratory. Gloves shall be changed when the gloves have been compromised (e.g., material spilled onto glove or contact with a non-clean item).

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- 5.4** In order to maintain a sterile work environment in the sample processing areas, all pertinent equipment shall be wiped down with a 10 % bleach solution followed by 70 % isopropyl alcohol each day of use, and additionally at the discretion of the individual preparing bloodstains. This includes all metal shelves, hoods, bench tops, sink areas, door handles, and keyboards in the sample processing areas.
- 5.5** Liquid blood tubes shall be opened only under the biosafety hood.
- 5.6** The drying hood shall be thoroughly cleaned with a 10 % bleach solution followed by 70 % isopropyl alcohol after removing dried stains.
- 5.7** The biohazard bag that lines the biohazard container under the biosafety hood shall be changed as needed to avoid over-flow or the spattering of blood as blood tubes are discarded.
- 5.8** Biohazard bags shall be tied securely prior to disposal in a biohazard waste container.
- 5.9** The lab benches and hoods shall be cleaned with a 10 % bleach solution (made fresh each day it will be used) under the following circumstances:
- Prior to use.
 - Between samples (or batched samples).
 - When they have been contaminated or soiled (e.g., material spilled onto surface).
- 5.9.1** In addition, the lab benches shall also be dusted weekly.
- 5.10** Instruments used for punching shall be sterilized or cleaned as described in relevant DNA Database section procedures.
- 5.11** All sharps shall be disposed of in a properly marked sharp container after use.
- 5.12** DNA Database Forensic Scientists shall bleach pipettes prior to use by wiping surface with a 10 % bleach solution. This shall be followed by wiping with a 70 % isopropyl alcohol (or equivalent) solution.
- 5.13** All pipette tips are considered single-use only and shall be discarded after use.
- 5.14** Amplified DNA product shall be generated, processed and maintained in a room(s) separate from the DNA PCR setup areas. The doors between the rooms containing amplified DNA and other areas shall remain closed. All equipment, reagents and amplified DNA work product used in the amplified work area shall be dedicated to this area and shall not be used in PCR setup.
- 5.15** If samples are lost through spillage, are inadvertently mixed, or accidentally compromised, the DNA Database Forensic Scientist shall cease all work on that sample immediately, notify the Forensic Scientist Manager and the Technical Leader and document the incident.
- 5.16** Microcentrifuge tubes shall be autoclaved unless sterile.

6.0 Limitations - N/A

7.0 Safety - When using a bleach solution, gloves shall always be used. Safety glasses are recommended unless working in a safety hood or cabinet.

8.0 References

DNA Database Section Procedure for DNA Analysis and Technical Review of Database Samples Amplified with PowerPlex® Fusion

DNA Database Section Procedure for DNA Database Operations

DNA Database Section Procedure for DNA Reagent Quality Control

DNA Database Section Procedure for Instrument and Equipment Quality Control

DNA Database Section Procedure for Sample Accessioning and Processing

9.0 Records - N/A

10.0 Attachments - N/A

Revision History		
Effective Date	Version Number	Reason
08/03/2015	1	Original Document
4/18/2016	2	5.1 and 5.2 clarified use of lab coats; 5.6 changed drying cabinet to hood; 5.16 clarified for autoclave tubes not received sterile