Manual of use for the latex set

Application

It is often not a simple task to take post-mortem fingerprints from skin surfaces damaged by burns, burial, or decomposition. In these cases, the latex set can be a good alternative for the more traditional methods. With the fluid latex, an accurate cast of the skin can be made, even when little skin or dermis is still present. Several methods can be used to make prints of the latex cast.

Materials and equipment needed

1. Jar of latex, a solution of natural rubber in water (present in the set, in a glass bottle) stabilized with ammonia and other stabilizing chemicals. Distilled water can be used to thin the solution if necessary.
2. Hair dryer*
3. Tray containing Dettol/water solution (desinfectant*)
4. Talcum powder*
5. Tweezers*
6. Paper towels*
7. Cotton wool*
8. Rubber gloves
9. Disposable oversuit* (optional)
10. Fume hood*
11. Exsiccator*

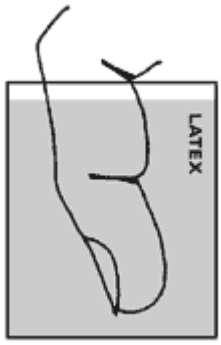
*Not present in set

Method

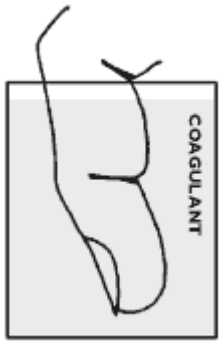
All operations with the exception of the final drying and mounting of the casts should be carried out in the fume hood. Always wear protective clothing (including rubber gloves).

1. Shake the bottle with latex solution **well in advance** (for example several hours) to dissolve any lumps of latex that might have been formed on storage and give the resultant air bubbles and foam the opportunity to dissipate.
2. Fill one of the plastic jars carefully with the latex solution (tilt the jar at first, to not introduce foam or air bubbles). Place the jar in the fume hood being careful not to shake the jar as this may cause air bubbles to be formed in the solution, which could adversely affect the final result. Fill the other plastic jar with coagulant (do not breathe in the vapors) in the fume hood.
3. Carry out a visual inspection of the hands. If they are in a satisfactory condition, thoroughly clean each finger and palm with cotton wool and water. If inking and rolling has been attempted before, ensure that all traces of the ink is removed using cotton wool and white spirit. Dry the hands thoroughly using the disposable paper towel.

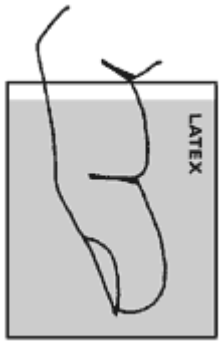
1. **2.** **3.**



Slowly immerse and slowly withdraw.



Slowly immerse and slowly withdraw.



Dip finger slowly, pause 30 seconds and then slowly withdraw.

4. Dip the finger slowly into the latex, up to the first flexure and then slowly withdraw.
5. Dip the finger slowly into the coagulant, again immersing up to the first flexure and withdraw slowly.
6. Slowly reimmerse the finger in the latex, up to the first flexure and hold it in the solution for 30 seconds. Then withdraw slowly, turning the finger so that excess solution drains to and off the nail side.
7. Use the hair dryer to dry the latex film for approximately 2 minutes. Heavy creasing of the finger will have caused a thickening of the latex and drying time should be extended.
8. A small amount of talcum powder, applied onto the cast, may help to remove any stickiness.
9. Loosen the cast using tweezers ensuring that the two latex layers are sealed together.
10. Peel the cast away from the finger, turning it inside out at the same time.
11. Wash the cast in the Dettol/water solution to kill any bacteria.
12. Place the washed cast in a suitably marked container and place it into the drying cabinet for approximately 30 minutes. The cast will change from its original whitish color until, when it is completely dry, it will become opaque. When no exsiccator is at hand, one can be improvised by putting the container in a bigger one containing (for example as a thin layer on the bottom) calcium chloride (the drying agent used in the iodine fumer).
13. Dispose of the latex and coagulant jars and contents (chemical waste!) after each case is dealt with.

Recording of casted fingerprints

The cast of fingerprints can be recorded using the following:

1. Photography.
2. Inking and rolling, using fingerprint ink or (almost) colorless ink.
3. Powdering with aluminum or soot powder and lifting with a gellifter.