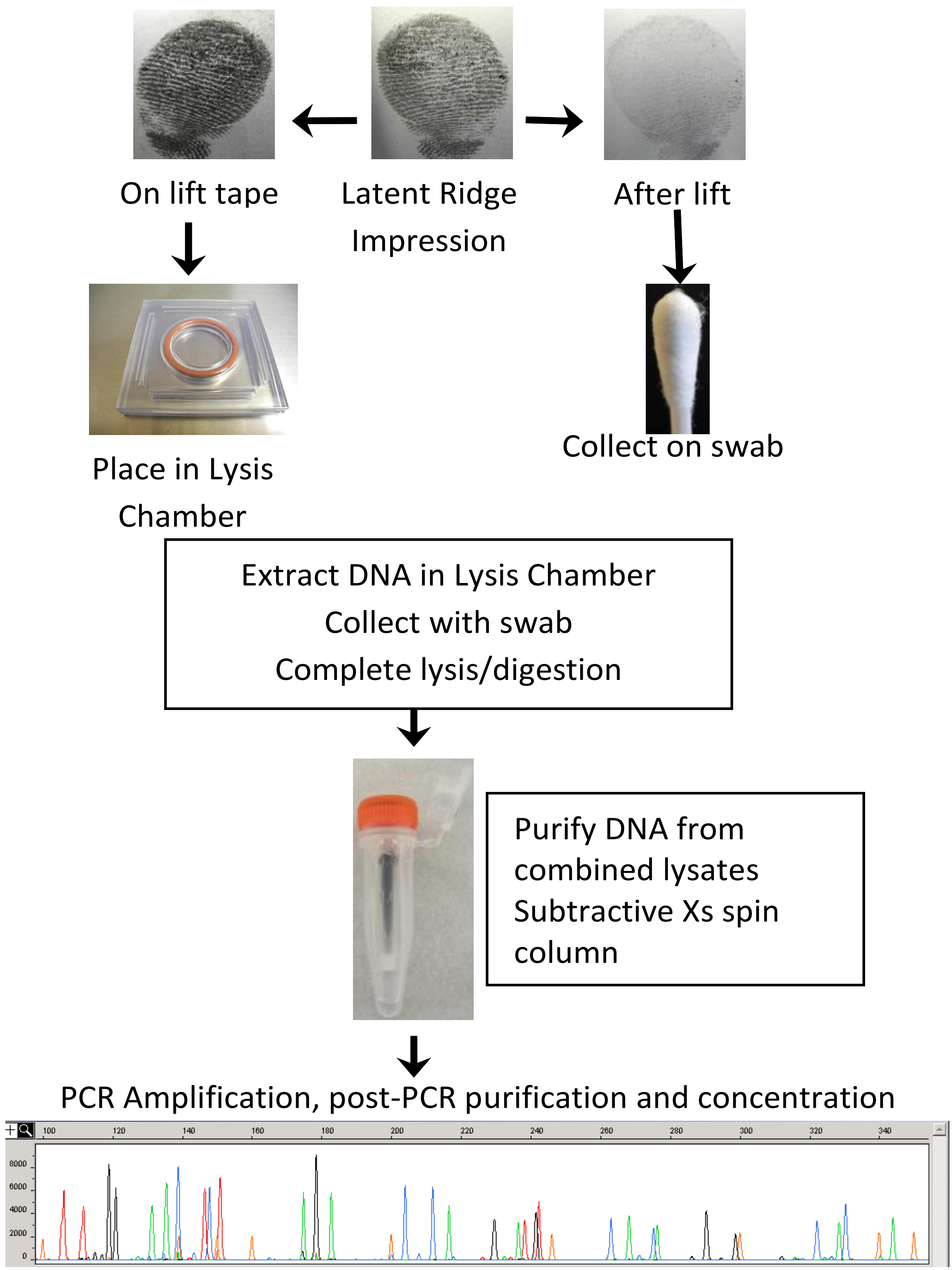


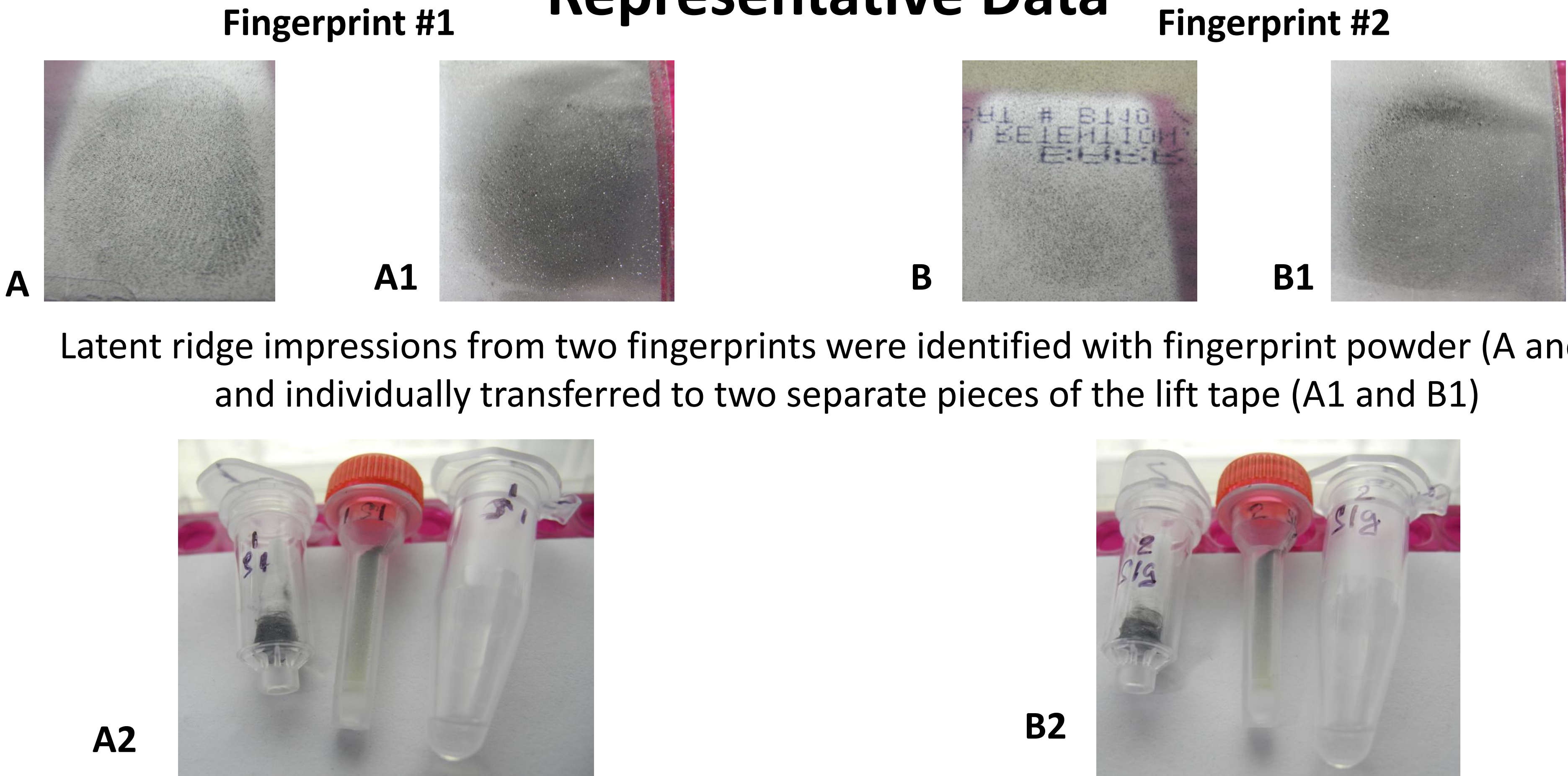
## Workflow Overview



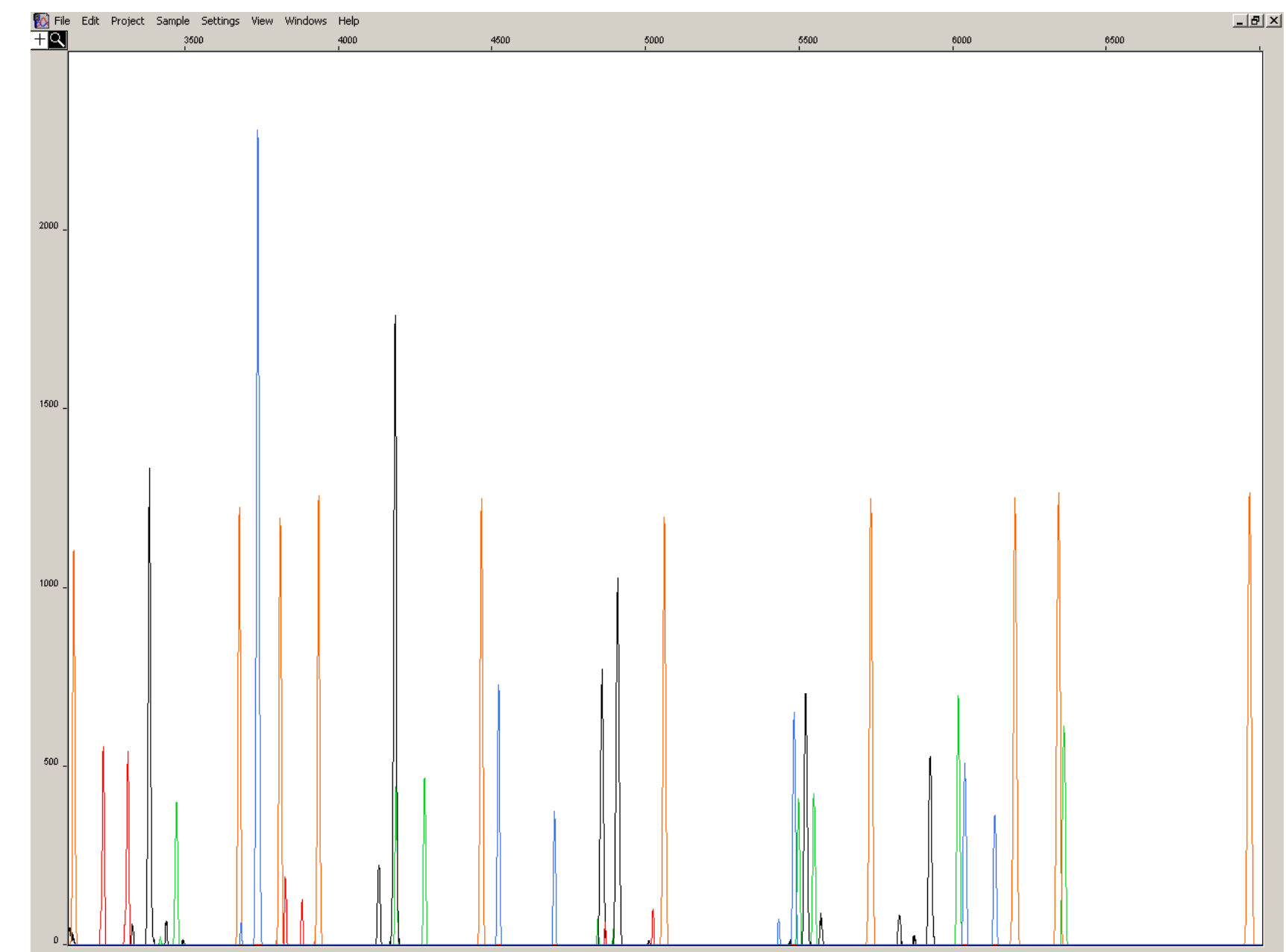
## SOP Summary

1. Identify individual fingerprint on surface of questioned item using fingerprint powder;
2. Lift the identified ridge details on a sticky tape/hinge card and collect the ‘leftover’ of the fingerprint using a sterile cotton swab wet with 10  $\mu$ L collection buffer (retain cotton swab for further processing – step 4);
3. After ridge impression details transferred to tape/hinge card are photographed, immobilize sticky tape in the sticky tape lysis chamber so that the fingerprint on the adhesive side of the tape is exposed; cover tape with adhesive taming material;
4. Add 120  $\mu$ L lysis buffer to tamed tape, close chamber and incubate 1 hr at 56°C; collect lysate with the retained swab (step 2);
5. Using spin-basket technique, collect all of the biological material from the swab by centrifugation;
6. Incubate recovered material at 56°C for 1 hr to complete digestion of all material;
7. Purify total lysate on OneTouch Xs DNA purification column (subtractive DNA purification);
8. Assess concentration of DNA in the purified lysate and, if necessary, concentrate 3-fold in a vacuum concentrator;
9. Perform multiplex DNA-STR PCR of your choice; if necessary, increase RFU signal by post-PCR cleanup and concentration (AmpliconRx™).

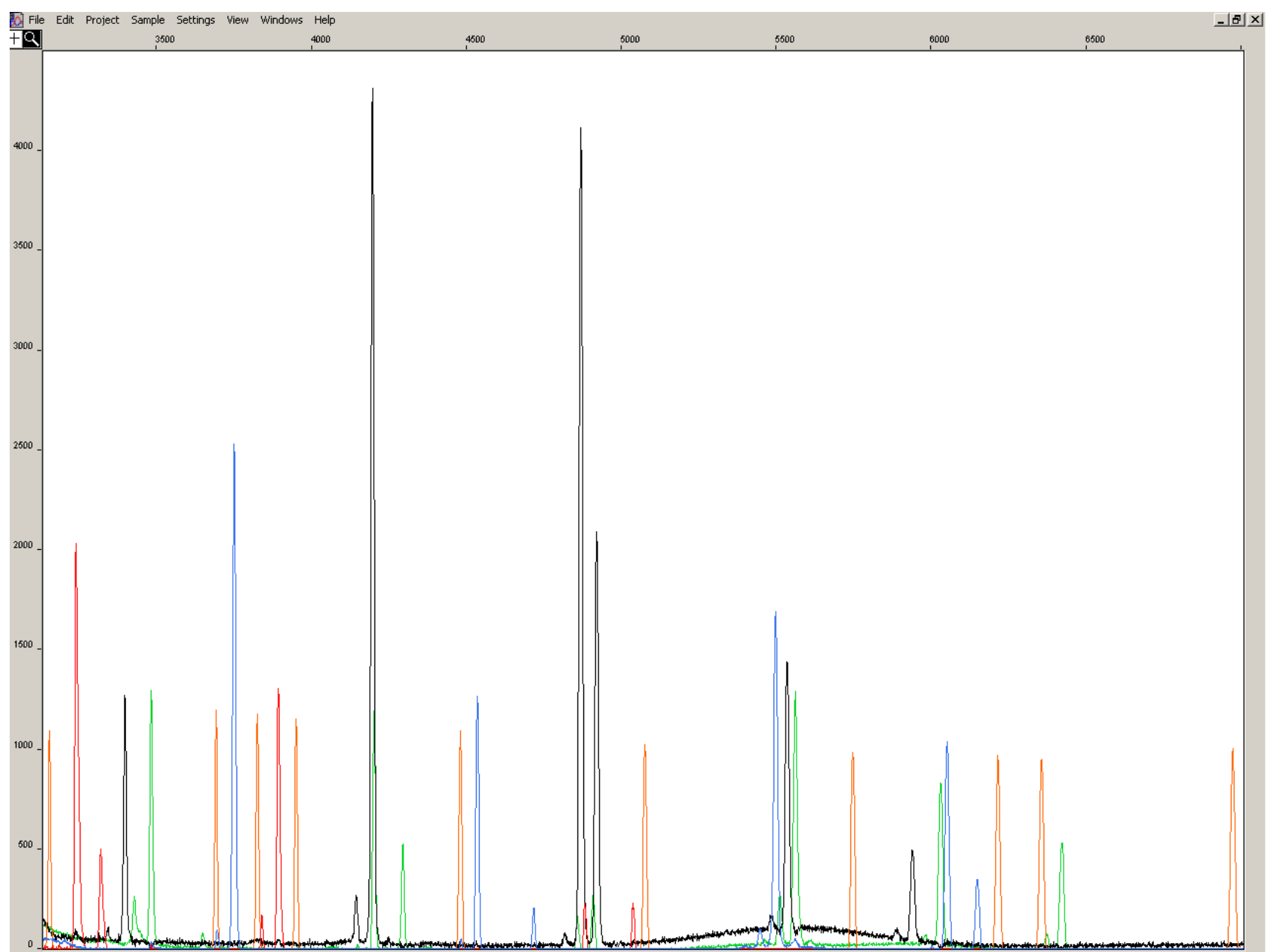
## Representative Data



Each fingerprint was processed separately. Figures A2 and B2 show collection swab in a spin basket, DNA purification column, and final purified lysate .



Lysate from fingerprint #1 was concentrated 3-fold and used in a 25  $\mu$ L PCR (Identifiler) reaction. A full DNA profile (15 STR loci and Amelogenin) of the individual who left the latent fingerprint was obtained



Lysate from fingerprint #2 was concentrated 3-fold and used in a 25  $\mu$ L PCR (Identifiler) reaction. After post-PCR purification (Amplicon Rx), a full DNA profile (15 STR loci and Amelogenin) of the individual who left the latent fingerprint was obtained