ISOLATION OF DNA FROM HAIR FOLLICLE

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Modified from a Edvotec protocol: “PCR-based VNTR Human DNA Typing”

EQUIPMENT:
- 1.5 mL test tube holders (> 10 holes)
- fine tipped permanent marker
- 1000 µL micropipettors + sterile tips
- 200 µL micropipettors + sterile tips
- 56°C water bath
- floating microfuge tube holder
- vortex
- boiling water bath
- microcentrifuge

SUPPLIES PER STUDENT:
- razor blade, 1 per student
- microfuge tubes, sterile, 2 per student
- lysis buffer*
- ice bucket with ice

1. **Pull out several hairs**, keep 3-4 which possess bulbs with a thickened, moist “sheath” at the root.
2. **Trim the bulbs** by cutting off excess shaft (all but 5 mm), place in the bottom of a 1.5 ml centrifuge tube.
3. **Mix and add 150 µL lysis buffer** to the hair bulbs: The buffer must be thoroughly mixed first by pipetting up and down with a “mochos” prepared pipet tip **). Before the chelating agent settles, immediately remove withdraw the 150 µl and add it to the hair bulbs.
4. Push the bulbs down below the surface of the lysis buffer.
5. **Incubate at 56°C** in a water bath for 15 minutes Place in a floating tube holder, and incubate in a.
6. **Remove and cool for 30 seconds** at room temp.
7. **Vortex** the tube for 15 seconds.
8. Ensure that the hair sheaths are still submerged in lysis buffer, replace in floating tube holder.
9. **Incubate at 100°C for 10 minutes**: float in a boiling water bath for 10 minutes.
10. **Cool on ice for 2 minutes** by removing the rack and placing on a bed of ice.
11. **Vortex** for 10 seconds.
12. **Spin in a microcentrifuge, top speed for 30 seconds**.
13. **Withdraw 50 µL of supernatant and transfer to a clean 1.5 mL tube**. Do not disturb the pellet. Label with your initials and the date.
14. **Store frozen** until ready for use in PCR.

* Lysis buffer contains 25 mM Tris HCl pH 8.0, 10% chelating agent, 50 µg/ml of proteanase K.

**) Cut off about 2 mm from the tip of a 1000 uL tip to widen the aperture.