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DNA extraction from Blood

Done By

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DNA extraction from Blood

Materials needed for one extraction

1. Distilled water.
2. Gloves.
3. Syringes 10 ml or pinpoint.
4. Beakers.
5. Table spoon.
6. Paper filter.
7. Isopropanol.
8. Blood sample.
9. Sodium Chloride / or Table salt.

Procedure

1. Get the beaker and add 9 ml of water.
2. add 1 ml of the (dish soap) detergent and a little bit of salt.
3. mix them all together with the spoon.
4. Add few drops of the blood sample to the above solution. Then, mix it.
5. Filter the blood solution by filter paper and wait until all the solution is filtered.
6. Take 10 ml of the blood solution that has been filtered by using pipette and put it in a small beaker. Then, add isopropanol.
7. Finally, DNA will be visible in the supernatant layer at the top.

- **DNA extraction from Blood can be done with advanced kits ..**

1. Add 5ml of blood and 45ml of Lysis buffer to 50ml capped centrifuge tube.
2. Mix the samples using the Vortex for 10min.
3. Put the tubes in the Centrifuge for 10min at 3000rpm.
4. Discard the supernatant.
5. Add 3ml of EDTA salt buffer, 0.3 ml of 10%SDS and 0.1 ml of proteinase K to the pellet.
6. Incubate all the tubes over night at 37ºC in shaking water bath.
7. Add 3ml of chloroform:Isoamyl alcohol to the upper aqueous phase.
8. Put the tubes in the centrifuge for 5 min at 2000rpm.
9. Add 6 ml of ethanol to each tube to precipitate the DNA.
11. Put the tubes upside down until the precipitated DNA is completely dry.
12. Add 0.5 ml of 10mM EDTA buffer in 2 ml eppendorf tube to re-dissolve the DNA over night.

Other way

1. In eppendorf tube, add 200 µl of the blood.
2. Then, add 100 µl of protease and 200 µl of Lysis buffer.
3. Use the thermo mixer device at 56°C for 10 minutes to activate the enzyme.
4. Vortexing
5. Centrifuge for short spin.
6. Transfer it with pasture pipette the filter column tube.
7. Centrifuge at 8000rpm for 1 min.
8. Add 500 µl of washing buffer to the filter column tube that contain DNA.
9. Then, centrifuge at 8000rpm for 1 min.
10. Add 500 µl of washing buffer to the filter column tube again.
11. Add 200 µl of elution buffer to elute DNA to the collection tube.
12. centrifuge at 8000rpm for 1 min.
13. transfer the DNA from the collection tube to eppendorf tube.