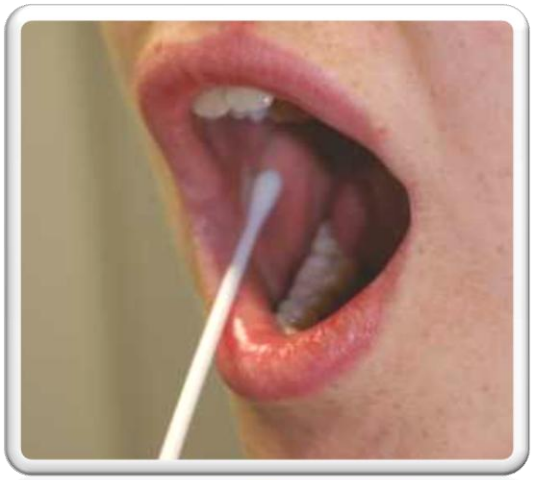
Ministry of Higher Education
King Abdul Aziz University
Faculty of Science
Department of Biological science

DNA extraction from buccal swab



Done By

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DNA extraction from buccal swab

Materials needed for extraction

1. Water bath.
2. Microcentrifuge.
3. Micropipettes with its tips.
4. Buccal swabs or Sterile cottons and Scissor.
5. Eppindorf tubes.
6. Lysis solution (mix 100 µl detergent + 900 µl distilled water)
7. Absolute isopropanol or ethanol**.**
8. Concentrated NaCl (salt).
9. TE buffer.
10. 70% Ethanol.
11. 10 µl protenease K

The procedure

1. Rub the swab over the inside of cheek for 20-30 seconds.
2. Place the swab into eppendorf tube. Then, cut the end of the swab to close the tube
3. With a micropipette, add 4µl of detergent, to lyse the cells and nuclear membrane.
4. Add 10µl of proteinase K, that degrade DNA-associated proteins (Histones).
5. Mix by inverting the tubes several times.
6. Place the tube into the warm bath (37°C) for 1 hour.
7. Add 100µl of concentrated salt (NaCl), to collect the DNA and bring it down. Therefore separating it from the unwanted debris which going to clump together. And mix well.
8. Place the tube in the microcentrifuge, and spin at 12,000 rpm for 10 min.
9. DNA is liquid form. So, use the micropipette carefully to remove the top liquid, and place it into a new centrifuge tube.
10. Add ice cold absolute ethanol or isopropanol about more than half the total volume in the tube to precipitate the DNA. Then, Invert the tube several times.
11. Spin at 12,000 rpm for 10 minutes.
12. Remove the liquid and wash pellet with 500 µl of 70% ethanol.
13. Spin at 12,000 rpm for 10 minutes.
14. Discard the supernatant and allow the pellet to dry at RT.
15. To store DNA (pellet) , we can use TE buffer (prevent DNA digestion by nucleases).