Oct 13, 2022

DNA extraction from mouthwash samples using Qiagen DNeasy PowersoilPro Kit

Ahmed A Shibl[1], Anique Ahmad[1], Tsedenia Denekew[1], Mamon Abd AlBaqi[1], Aashish R Jha[1]

[1]New York University, Abu Dhabi

Aashish R Jha: jhaar@nyu.edu

dx.doi.org/10.17504/protocols.io.eq2ly7dyrlx9/v1

nyuad.geneticheritagegroup

ABSTRACT

This protocol describes how to extract DNA from mouthwash samples.

DOI

dx.doi.org/10.17504/protocols.io.eq2ly7dyrlx9/v1

PROTOCOL CITATION

Ahmed A Shibl, Anique Ahmad, Tsedenia Denekew, Mamon Abd AlBaqi, Aashish R Jha 2022. DNA extraction from mouthwash samples using Qiagen DNeasy PowersoilPro Kit. **protocols.io** https://dx.doi.org/10.17504/protocols.io.eq2ly7dyrlx9/v1

CREATED

Sep 18, 2022

LAST MODIFIED

Oct 13, 2022

PROTOCOL INTEGER ID

70195

MATERIALS TEXT

QIAGEN -DNeasy PowerSoil Pro Kit
Ice
Vortex
Omni Bead Ruptor Elite bead beater
Centrifuge
Liquid N_2

BEFORE STARTING

Set centrifuge to 4ºC
Keep CD2 solution on ice or at 4ºC
Prepare and label collection tubes, microcentrifuge tubes, MB spin columns, and powerbead tubes

1 Thaw the sample on ice for **00:30:00** 30m

1.1 Transfer the desired sample volume **1-2 mL** into a 1.5mL or 2mL eppendorf tube

2 Centrifuge the transferred sample at maximum speed (**17000 x g**) at 4°C for **00:10:00** 10m

3 Discard the supernatant carefully without disturbing the pellet

3.1 Repeat Step 1.1 if more volume is needed to see a pellet or a higher yield of DNA is required

4 Add **800 µL** of CD1 and vortex to resuspend pellet

4.1 Spin down briefly

Citation: Ahmed A Shibl, Anique Ahmad, Tsedenia Denekew, Mamon Abd AlBaqi, Aashish R Jha DNA extraction from mouthwash samples using Qiagen DNeasy PowersoilPro Kit https://dx.doi.org/10.17504/protocols.io.eq2ly7dyrlx9/v1

5 Transfer entire eppendorf content in a PowerBead Pro Tube

6 Secure PowerBead Pro tube onto the bead beater and run at maximum speed (**17000 x g**) for **00:05:00** 5m

7 Centrifuge the PowerBead Pro tube at maximum speed (**17000 x g**) for **00:01:30** 1m 30s

8 Transfer the supernatant carefully, without disturbing the pellet, into a clean 2mL microcentrifuge tube

9 Add **200 µL** of CD2 into the 2mL microcentrifuge tube and vortex for **00:00:10** 10s

10 Centrifuge the 2mL microcentrifuge tube at maximum speed (**17000 x g**) for **00:01:30** 1m 30s

11 Transfer the supernatant carefully without disturbing the pellet, into a clean 2mL microcentrifuge tube

12 Add **600 µL** of CD3 into the 2 mL microcentrifuge tube and vortex for **00:00:10** 10s

13 Load **650 µL** of the lysate onto MB spin columns and centrifuge at maximum speed (**17000 x g**) for **00:01:30** 1m 30s

13.1 Discard flow-through and repeat step 13 to consume all the lysate

Citation: Ahmed A Shibl, Anique Ahmad, Tsedenia Denekew, Mamon Abd AlBaqi, Aashish R Jha DNA extraction from mouthwash samples using Qiagen DNeasy PowersoilPro Kit https://dx.doi.org/10.17504/protocols.io.eq2ly7dyrlx9/v1

14 Place the spin column onto a new collection tube, add **500 µL** of EA, and centrifuge at maximum speed (**17000 x g**) for **00:01:30** 1m 30s

15 Discard flow-through and place the spin column back into the collection tube

16 Add **500 µL** of C5 onto the spin column and centrifuge at maximum speed (**17000 x g**) for **00:01:30** 1m 30s

17 Discard flow-through and place the spin column back into the collection tube

18 Centrifuge at maximum speed (**17000 x g**) for **00:02:00** and place spin column into 1.5mL eppendorf (elution) tube 2m

19 Add **50-100 µL** of nuclease-free water to the center of the spin column and leave at room temperature for **00:05:00** 5m

20 Centrifuge at maximum speed (**17000 x g**) for **00:01:00** , quantify using Qubit, flash freeze, and store at -20/80 °C 1m

Citation: Ahmed A Shibl, Anique Ahmad, Tsedenia Denekew, Mamon Abd AlBaqi, Aashish R Jha DNA extraction from mouthwash samples using Qiagen DNeasy PowersoilPro Kit https://dx.doi.org/10.17504/protocols.io.eq2ly7dyrlx9/v1