



OCT 30, 2023

OPEN ACCESS



DOI:
dx.doi.org/10.17504/protocols.io.j8nlkww45l5r/v1

Protocol Citation: Carlos Goller 2023. Quick-Start Protocol for DNeasy® PowerSoil® Pro Kit.
protocols.io
<https://dx.doi.org/10.17504/protocols.io.j8nlkww45l5r/v1>

License: This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working
 We use this protocol and it's working

Created: Oct 18, 2022

Quick-Start Protocol for DNeasy® PowerSoil® Pro Kit

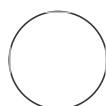
Carlos Goller¹

¹NC State University

BIT Metagenomics

Delftia and SCoOP

[1 more workspace](#) ↓



nrgrover

ABSTRACT

This protocol will allow users to operate the DNeasy® PowerSoil® Pro Kit.

GUIDELINES

Solution CD2 should be stored at 2–8°C upon arrival. All other reagents and kit components should be stored at room temperature (15–25°C).

Further information

- DNeasy® PowerSoil® Pro Kit Handbook: www.qiagen.com/HB-2495
- Safety Data Sheets: www.qiagen.com/safety
- Technical assistance: support.qiagen.com

MATERIALS

The DNeasy® PowerSoil® Pro Kit. All requirements included within.

SAFETY WARNINGS



Use caution when operating the vortex. Ensure tubes are balanced before turning on the instrument. Dispose of materials in appropriate waste containers.

BEFORE START INSTRUCTIONS

- Ensure that the PowerBead Pro Tubes rotate freely in the centrifuge without rubbing.
- If Solution CD3 has precipitated, heat at 60°C until the precipitate dissolves.
- Perform all centrifugation steps at room temperature (15–25°C).



Last Modified: Oct 30, 2023


PROTOCOL integer ID:
71497

Keywords: PowerSoil,
metagenomics, soil

Using the DNeasy® PowerSoil® Pro Kit

18m 10s

- 1 Spin the PowerBead Pro Tube briefly to ensure that the beads have settled at the bottom. Add up to  250 mg of soil and  800 µL of Solution CD1. Vortex briefly to mix.



- 2 Secure the PowerBead Pro Tube horizontally on a Vortex Adapter for 1.5–2 ml tubes (cat. no. 13000-V1-24). Vortex at maximum speed for  00:10:00

10m

Note

If using the Vortex Adapter for more than 12 preps simultaneously, increase the vortexing time by 5-10 min

For more information about other bead beating methods, see the “Protocol: Detailed” section of DNeasy® PowerSoil® Pro Kit Handbook.

- 3 Centrifuge the PowerBead Pro Tube at  15000 x g for  00:01:00



1m







- 4 Transfer the supernatant to a clean 2 ml Microcentrifuge Tube (provided)

Note

Expect 500–600 µl. The supernatant may still contain some soil particles

- 5 Add  200 µL of Solution CD2 and vortex for  00:00:05




5s

- 6 Centrifuge at  15000 x g for  00:01:00 at  Room temperature . Avoiding the pellet, transfer up to  700 µL of supernatant to a clean 2 ml Microcentrifuge Tube (provided) 1m

Note

Expect 500–600 µl.

- 7 Add  600 µL of Solution CD3 and vortex for  00:00:05 . 5s




- 8 Load  650 µL of the lysate onto an MB Spin Column and centrifuge at  15000 x g for  00:01:00 1m

- 9 Discard the flow-through and repeat step 8 to ensure that all of the lysate has passed through the MB Spin Column.



- 10 0. Carefully place the MB Spin Column into a clean 2 ml Collection Tube (provided).

Safety information


Avoid splashing any flow-through onto the MB Spin Column

- 11 Add  500 µL of Solution EA to the MB Spin Column. Centrifuge at  15000 x g for  00:01:00 1m



- 12 . Discard the flow-through and place the MB Spin Column back into the same 2 ml Collection Tube.

13 Add  500 μL of Solution C5 to the MB Spin Column. Centrifuge at  15000 x g for  1m








 00:01:00

14 Discard the flow-through and place the MB Spin Column into a new 2 ml Collection Tube (provided).

15 Centrifuge at up to  16000 x g for  00:02:00 . Carefully place the MB Spin Column into a new 1.5 ml Elution Tube (provided)  2m



16 . Add  50 mL -  100 mL of Solution C6 to the center of the white filter membrane.

17 Centrifuge at  15000 x g for  00:01:00 . Discard the MB Spin Column. The DNA is now ready for downstream applications  1m



Note

We recommend storing the DNA frozen (-30 to -15°C or -90 to -65°C) as Solution C6 does not contain EDTA. To concentrate DNA, please refer to the Troubleshooting Guide.