Oct 03, 2024

Zymo OneStep PCR Inhibitor Removal Kit

DOI
dx.doi.org/10.17504/protocols.io.5qpvokmrbl4o/v1

Shannon Fitz[1], Alex Shaw[1], michael Owusu[2], Dilip Abraham[3]

[1]Imperial College London; [2]Kwame Nkrumah University of Science and Technology; [3]CMC Vellore

GEMS - Genomic Environ…

Shannon Fitz
Imperial College London

OPEN ACCESS

DOI: dx.doi.org/10.17504/protocols.io.5qpvokmrbl4o/v1

Protocol Citation: Shannon Fitz, Alex Shaw, michael Owusu, Dilip Abraham 2024. Zymo OneStep PCR Inhibitor Removal Kit. **protocols.io** https://dx.doi.org/10.17504/protocols.io.5qpvokmrbl4o/v1

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

Created: October 03, 2024

Last Modified: October 03, 2024

Protocol Integer ID: 108988

Keywords: PCR, PCR inhibitor removal, Purification

Funders Acknowledgement:
The Gates Foundation
Grant ID: INV-049092 PA4273

Abstract

Features:

• For high quality DNA or RNA that is free of enzymatic inhibitors including polyphenolics, humic/fulvic acids, tannins, melanin, etc.

• Fast, one-step procedure for “cleaning” impure samples prior to PCR, sequencing, RT, etc.

Description:

The OneStep™ PCR Inhibitor Removal Kit contains all the components needed to efficiently remove contaminants from DNA/RNA preparations that can inhibit downstream enzymatic reactions such as PCR and RT. The column matrix has been specifically designed for efficient removal of polyphenolic compounds, humic/fulvic acids, tannins, melanin, etc. from most impure DNA and RNA preparations. Sample cleanup is as simple as: applying, spinning and recovering a sample from the column.

The steps and abstract for this protocol consist entirely of the manufacturer's instructions with no deviations, as per https://files.zymoresearch.com/protocols/_d6030_onestep_pcr_inhibitor_removal_kit.pdf.

Materials

Zymo OneStep PCR Inhibitor Removal Kit **Zymo Research Catalog #**D6030

Total cost per sample:

£0.5

Approximate time needed per sample:

<10 minutes

Column Preparation

1 Insert column into a Collection Tube.

**Please note that matrix in the column may appear dehydrated, or powdery. This is normal.*

2 Open the cap, add 600 µl of Prep-Solution and centrifuge at 8,000 x g for 3 minutes.

3 Inhibitor Removal:

Transfer the prepared column to a clean 1.5 ml microcentrifuge tube. Add 50 - 200 µl DNA or RNA (in water, TE, or similar) to the Zymo-Spin™ III-HRC Column and centrifuge at 16,000 x g for 3 minutes.

The filtered DNA (or RNA) is suitable for PCR, (RT), and other downstream applications.

Protocol references

Zymo Research Version 2.0.2-last update*, OneStep™ PCR Inhibitor Removal Kit Cat. No. D6030 (50 spin columns/purifications) Protocol*.
Available: https://files.zymoresearch.com/protocols/_d6030_onestep_pcr_inhibitor_removal_kit.pdf [2024, October 3].