Phenol/chloroform extraction

OpenWetWare

Abstract

Phenol/chloroform extraction is an easy way to remove proteins from your nucleic acid samples and can be carried out in a manner that is very close to quantitative. Nucleic acids remain in the aqueous phase and proteins separate into the organic phase or lie at the phase interface. Please see the OpenWetWare website for more details.

Citation: OpenWetWare contributors, 'Phenol/chloroform extraction', *OpenWetWare, ,* 13 September 2010, 13:37 UTC, <http://openwetware.org/index.php?title=Phenol/chloroform_extraction&oldid=453981> [accessed 21 January 2015]

Citation: OpenWetWare Phenol/chloroform extraction. **protocols.io** dx.doi.org/10.17504/protocols.io.cdts6m
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Protocol

Step 1.
Dilute your nucleic acid sample to 100–700 µL or divide your samples into tubes such that you have no more than 700 µL per tube.

Step 2.
Add an equal volume of phenol to the tube, vortex vigorously to mix the phases.

Step 3.
Spin in a microfuge at top speed for 1–2 min to separate the phases.

DURATION
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Step 4.
Remove the aqueous phase to a new tube, being careful not to transfer any of the protein at the phase interface.

Step 5.
Repeat the phenol extraction from step 4.

Step 6.
Repeat the phenol extraction from step 4.

Step 7.
Extract the sample with an equal volume of chloroform:isoamyl alcohol to remove any trace phenol.

Step 8.
Extract the sample again with an equal volume of chloroform:isoamyl alcohol to remove any trace phenol.

Step 9.
Precipitate the nucleic acid.

NOTES

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See the eppendorf or 96-well plate protocols for precipitation.