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DNA extraction with Modified GenoLyse kit

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We use this protocol and it's working

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Abstract

This document describes the standard operating procedure for a fast and easy way to isolate bacterial DNA from patient specimens and culture samples using the GenoLyse kit. The simple procedure allows for a fast and efficient DNA extraction in less than 20 minutes. Since the DNA extraction only takes a short amount of time, the whole test procedure is reduced. The procedure requires minimal instrumentation.

Materials

- Hain Genolyze kit (Hain, Germany)
- Phosphate buffer solution
- 1.5 ml/ 2 ml DNase/RNase free centrifuge tubes (Eppendorf, Germany)
- 100 µl, 1000 µl pipette filter tips, DNase/Rnase free (Biozym, Germany).
- Mini-Centrifuge
- Dry block heater
- Vortexer
- Tube racks

General considerations

1 This document describes the standard operating procedure for a fast and easy way to isolate bacterial DNA from patient specimens and culture samples using the GenoLyse kit. The simple procedure allows for a fast and efficient DNA extraction in less than 20 minutes. Since the DNA extraction only takes a short amount of time, the whole test procedure is reduced. The procedure requires minimal instrumentation.

Preparations

2 GenoLyse kits should be stored at 2-8 °C. All other solutions could be stirred at room temperature.

Procedure

3 Elute samples into GenoLyse buffer (250 µl for swabs or 100 µl for FNA).
Vortex vigorously for 20 sec.
Incubate samples for 10 min at 95 °C (Remove swabs before incubation).
Add equal volume of neutralization buffer.
Centrifuge at high speed for 5 mins.
The extracted DNA (supernatant) may be directly used for amplification or stored at -20 °C.

Protocol references

Frimpong M, Ahor HS, Sakyi SA, Agbavor B, Akowuah E, Phillips RO. Rapid Extraction Method of Mycobacterium ulcerans DNA from Clinical Samples of Suspected Buruli Ulcer Patients. Diagnostics (Basel). 2019;9(4). Epub 20191126. doi: 10.3390/diagnostics9040204. PubMed PMID: 31779247; PubMed Central PMCID: PMCPMC6963521.