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LifeGuard[®] Soil Preservation Handbook

For ambient temperature stabilization of
microbial RNA in soil

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Kit Contents

LifeGuard Soil Preservation Kit	(100)	(1000)
Catalog no.	12868-100	12868-1000
Number of preps	100	1000
LifeGuard Soil Preservation Solution	100 ml	1000 ml

Storage

The LifeGuard Soil Preservation Solution can be stored at room temperature (15–25°C).

Intended Use

All LifeGuard products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

All due care and attention should be exercised in the handling of the products. We recommend all users of QIAGEN products to adhere to the NIH guidelines that have been developed for recombinant DNA experiments, or to other applicable guidelines.

Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves and protective goggles. For more information, please consult the appropriate safety data sheets (SDSs). These are available online in convenient and compact PDF format at www.qiagen.com/safety where you can find, view and print the SDS for each QIAGEN kit and kit component.

Quality Control

In accordance with QIAGEN's ISO-certified Quality Management System, each lot of LifeGuard Soil Preservation Solutions is tested against predetermined specifications to ensure consistent product quality.

Introduction

The LifeGuard Soil Preservation Solution is a specially formulated treatment that protects the viability of bacteria in soil while keeping them in stasis. This Solution can be used for the collection and transport of soils needed for RNA or DNA extraction. RNase and DNase activity is prevented, which allows for accurate, full length cDNA synthesis and 16s rRNA profiling on samples collected in the field under many conditions. Microbial community profiles are maintained in soils stabilized with LifeGuard Soil Preservation Solution for up to 30 days at -15°C to -30°C , 2 weeks at $2-8^{\circ}\text{C}$, and 1 week at room temperature. RNA integrity is maintained for up to 30 days at room temperature.

Equipment and Reagents to Be Supplied by User

When working with chemicals, always wear a suitable lab coat, disposable gloves and protective goggles. For more information, consult the appropriate safety data sheets (SDSs) available from the product supplier.

- Centrifuge capable of spinning 15 ml tubes (to a minimum of 2500 x *g*)
- Pipette for large volumes
- Vortex

Protocol

Procedure

1. Add 2–2.5 volumes of LifeGuard Soil Preservation Solution per 1 g of soil. If collecting the soil directly in an RNeasy® PowerSoil® 15 ml PowerBead Tube, add 5 ml of LifeGuard Soil Preservation Solution to 2 g of soil.
Note: If you are working with sediment samples, use 3 volumes of LifeGuard Soil Preservation Solution per gram of wet sample weight.
2. Vortex or hand-mix the solution and soil until the entire sample is saturated with solution. Excess LifeGuard Soil Preservation Solution should be on top of the soil sample.
3. Store at room temperature, at 2–8°C or at –15°C to –30°C. When ready to process the RNA, centrifuge sample at 2500 x *g* for 5 min to collect the soil. Remove the LifeGuard Solution from the tube.
4. If you collected soil directly in an RNeasy PowerSoil 15 ml PowerBead Tube, you can remove the LifeGuard Solution after centrifugation and continue from Step 2 of the RNeasy PowerSoil Total RNA Isolation Kit protocol.
5. If you stabilized soil in another vessel, weigh the amount of soil you need and transfer to an RNeasy PowerSoil 15 ml PowerBead Tube, or a conical tube, and then centrifuge to remove the LifeGuard Solution.

Troubleshooting Guide

This troubleshooting guide may be helpful in solving any problems that may arise. For more information, see also the Frequently Asked Questions page at our Technical Support Center: www.qiagen.com/FAQ/FAQList.aspx. The scientists in QIAGEN Technical Services are always happy to answer any questions you may have about either the information and/or protocols in this handbook or sample and assay technologies. For contact information, visit www.qiagen.com.

Comments and suggestions

Sample Processing

- a) Using different soil types
- A number of different soils have been tested using the LifeGuard Soil Preservation Kit. Each type of soil will differ in its biomass and saturation with water. Sediment samples require a higher volume of LifeGuard Soil Preservation Solution (3:1) due to dilution of the reagent.
- Biomass content may affect the stabilization of soils at different temperatures and the ability of the LifeGuard Soil Preservation Kit to freeze the microbial community profile. For a soil with unknown microbial content or where temperatures may exceed room temperature (15–25°C), it may be preferable to store the soil at –15°C to –30°C or 2–8°C to ensure the original community profile is maintained, and to use more than 2.5 ml of LifeGuard Soil Preservation Solution per gram of soil.
- For long term storage and transport (more than 30 days), store stabilized soil at –15°C to –30°C.

Ordering Information

Product	Contents	Cat. no.
LifeGuard Soil Preservation (100 ml)	Stabilize ambient temperature of microbial RNA in soil	12868-100
LifeGuard Soil Preservation (1000 ml)	Stabilize ambient temperature of microbial RNA in soil	12868-1000
RNeasy PowerSoil Total RNA Kit (25)	For 25 preps: Isolate high-quality total RNA from all soil types	12866-25
RNeasy PowerSoil DNA Elution Kit (25)	For 25 preps: Co-isolate DNA and RNA from soil using the RNeasy PowerSoil Total RNA Kit	12867-25

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

Notes

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Limited License Agreement for LifeGuard Soil Preservation Solution

Use of this product signifies the agreement of any purchaser or user of the product to the following terms:

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