TE Buffer

Ms Alex Aitken

Abstract

TE is a commonly used buffer solution in molecular biology, especially in procedures involving DNA or RNA. "TE" is derived from its components: Tris, a common pH buffer, and EDTA, a molecule that chelates cations like Mg2+. The purpose of TE buffer is to solubilize DNA or RNA, while protecting it from degradation: 10 mM Tris, bring to pH 8.0 with HCl, 1 mM EDTA

Citation: Ms Alex Aitken TE Buffer. **protocols.io**
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Guidelines

Component	For 500ml
1M Tris pH 8*	5ml
0.5M EDTA pH 8	1ml
dH2O	496ml

*the pH is usually adjusted to RNA 8.0 for DNA and 7.5 forThe respective DNA and RNA nucleases are supposed to be less active at these pH values, but pH 8.0 can safely be used for storage of both DNA and RNA. EDTA further inactivates nucleases, by binding to metal cations required by these enzymes. Genomic and plasmid DNA can be stored in TE Buffer at 4ºC (39.2ºF) for short-term use, or -20ºC (-4ºF) to -80ºC (-112ºF) for long-term storage.

Protocol

Step 1.
Prepare 5ml of 1M Tris

AMOUNT
61 g Additional info:

PROTOCOL

. 1M Tris

CONTACT: VERVE Team
Step 1.1.
60.57 g of Tris (hydroxymethyl) aminomethane in 0.5L Milli-Qwater

Step 1.2.
Bring pH to 8.0 using HCl

Making 0.5M EDTA

Step 2.

Prepare 1ml 0.5M EDTA

AMOUNT
19 g Additional info:

PROTOCOL

. 0.5M EDTA

CONTACT: VERVE Team
Step 2.1.
Mix 18.6 g EDTA in 100ml Milli-Q water

AMOUNT
19 g Additional info:

Step 2.2.
Bring pH to 8.0 using NaOH

NOTES
VERVE Team 22 Jun 2015
EDTA will not be soluble until pH reaches 8.0–this will take time (hours)

Making 0.5M EDTA

Step 3.
Combine 5ml of 1M Tris and 1ml of 0.5M EDTA in 496ml dH_2O

Making 0.5M EDTA

Step 4.
Autoclave to sterilize.

NOTES
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It is best to remove a working aliquot and not repeatedly access the stock

Warnings

Repeated freeze-thaw cycles should be avoided