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0.1xBWT+SDS buffer

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ABSTRACT

Protocol for the preparation of 0.1x BWT+SDS buffer (Bind and wash buffer I) for automated single-stranded DNA library preparation using the ssDNA2.0 method (Gansauge et al. 2020).

References

Gansauge, M.-T., Aximu-Petri, A., Nagel, S., & Meyer, M. (2020). Manual and automated preparation of single-stranded DNA libraries for the sequencing of DNA from ancient biological remains and other sources of highly degraded DNA. *Nature Protocols*, 15, 2279-2300.

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Note

This protocol describes the preparation of 500 ml buffer.

Materials

Reagent/consumable	Supplier	Catalogue number
Reagents		
Water	Sigma Aldrich/Merck	1153332500
5 M NaCl	Sigma Aldrich/Merck	S5150-1L
1 M Tris-HCl, pH 8.0	AppliChem	A4577,1000
0.5 M EDTA, pH 8.0	AppliChem	A4892,1000
Tween-20	Thermo Fisher Scientific	11417160
20% SDS	Thermo Fisher Scientific	AM9820
Consumables		
Square media bottle 500 ml	VWR	391-0630
50 ml serological pipet	Corning BV	357550
10 ml serological pipet	Corning BV	357551
5 ml serological pipet	Corning BV	357543

Equipment

- Serological pipette controller (e.g. battery-powered pipetting aid ROTILABO, cat. no. TC16.1)

Protocol

1. Prepare the buffer in a 500 ml square media bottle by adding the following reagents. Use the glass pipette for transfer of large volumes (> 1 ml). Mix reagents by shaking the bottle.

Reagent	Volume	Final concentration in reaction
Water	471.25 ml	
5 M NaCl	10 ml	2 M
1 M Tris-HCl, pH 8.0	5 ml	10 mM

Reagent	Volume	Final concentration in reaction
0.5 M EDTA, pH 8.0	1 ml	1 mM
100% Tween-20	0.25 ml	0.05%
20% SDS solution	12.5 ml	0.50%
sum	500 ml	

Note

[Note]

It is also acceptable to use the scale of the bottle to fill up to 400 ml with water, then adding the remaining ~71 ml using the glass pipette.

2. Review the protocol in which the buffer is used to determine whether the buffer should be decontaminated using UV treatment. Instructions for UV-decontamination are provided in the Appendix.

Note

[Labeling]

Label the bottle with the buffer name, batch ID, date and the initials of the person who prepared the buffer.

Attention: Every single bottle prepared at the same day gets a new batch ID. Name the batches with Roman numerals (e.g. batch I, batch II, etc.)

3. Store the buffer at room temperature until used. Shelf life is at least two months from preparation.

Note

[Documentation]

Note the lot numbers, date and initials written on the reagents used for buffer preparation in Labfolder (orange fields).

Appendix

Document



NAME

UV decontamination of reagents/buffers

CREATED BY

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PREVIEW