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UV decontamination of reagents/buffers V.1

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MPI EVA Ancient DNA C...



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Abstract

Protocol for reducing DNA contamination of reagents and buffers used in the ancient DNA cleanroom by UV treatment.

Note

The effectiveness of UV treatment for DNA decontamination strongly depends on the permeability of material for UV light. Falcon tubes, plastic bottles and regular glass bottles absorb UV light and are therefore poorly suitable for UV-based DNA decontamination. Thus, UV treatment of reagents and buffers should be performed in quartz glass bottles. Perform UV treatment only if indicated in the respective protocols/documents for reagent usage or preparation.

Materials

	Material	Supplier	Cat. no.	Decontamination *
	Quartz glass bottles with plastic screw cap	Quarzglas Komponenten und Service (custom produced)	-	Bleach + UV
	250 ml squared plastic bottles	VWR	391-0629	-
	50 ml Falcon tubes	Greiner Bio-one	210261	-

* See documents in the Appendix for decontamination instructions

Equipment

- UV Crosslinker (e.g., Bio-Link UV Crosslinker, Labortechnik, cat. no. 110.0079)
- aluminum foil (e.g., Roth, cat. no. AA76.1)

Procedure

1. For decontamination of reagents/buffers, pour the reagent/buffer from the stock bottle into a clean quartz glass bottle. Make sure the stock bottle is not touching the quartz glass bottle while pouring.

Note

[Labeling]

Label the quartz glass bottle with the name of the reagent, date and your initials.

2. Close the quartz glass bottle properly to avoid any leaking during UV treatment.

3. UV treat the glass bottles in the UV Crosslinker set to 7.000 J (approximate time of irradiation is 40 min).



4. Refill the reagent into a bottle that is appropriate for long-term storage (e.g. 50 ml Falcon tube, 250 ml squared bottle).

Note

[Labeling]

Label the storage bottle with the name of the reagent, date (JJJJMMDD), 'UV treated' and your initials.

Note

[Note]

Never store reagents/buffers in the quartz glass bottle, because the lids are not closing tightly. Never pipette out of the quartz glass bottle.

5. Bleach and UV treat the silica bottle following the procedure described in the Appendix before putting it back into the stock.

Appendix

Document

NAME

Bleaching and UV decontamination of materials

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Preview