Jan 12, 2024 Version 1

Bleaching and UV decontamination of materials V.1

DOI
dx.doi.org/10.17504/protocols.io.x54v9p4m1g3e/v1

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MPI EVA Ancient DNA C...

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DOI: https://dx.doi.org/10.17504/protocols.io.x54v9p4m1g3e/v1

Document Citation: Elena Essel, Matthias Meyer, Merlin Szymanski 2024. Bleaching and UV decontamination of materials. **protocols.io** **https://dx.doi.org/10.17504/protocols.io.x54v9p4m1g3e/v1**

Created: January 11, 2024

Last Modified: April 10, 2024

Document Integer ID: 93370

Keywords: ancient dna cleanroom by sodium hypochlorite, dna contamination on material, uv decontamination of materials protocol, reducing dna contamination, uv decontamination of material, uv decontamination, ancient dna cleanroom, bleach, dna, uv treatment, sodium hypochlorite, quarz glass bottle, bottle, materials protocol

Funders Acknowledgements:
Max Planck Society

Abstract

Protocol for reducing DNA contamination on materials (e.g. quarz glass bottles, spatulas) used in the ancient DNA cleanroom by sodium hypochlorite (bleach) and UV treatment.

Troubleshooting

Note
Perform bleaching and UV decontamination of materials only if indicated in the respective protocols/documents for material usage or preparation.

Materials

	Material	Supplier	Cat. no.
	Material to be decontaminated (e.g. quarz glass bottles, spatulas)	various	-
	Sodium hypochlorite solution (bleach), 12%	Roth	9062
	Zip lock bag/ storage container	various	-
	Glass bottle	Kisker Biotech GmbH & Co. KG	090347

Equipment

- Plastic basin (e.g., Roth, cat. no. 1598.1)

Protocol

1. Put plastic basin into a chemical fume hood and fill with the material you want to decontaminate.

2. Pour bleach (12% Sodium hypochlorite) on top of it until it is fully submerged.

Safety information

Caution when working with sodium hypochlorite (bleach)
Sodium hypochlorite (bleach) is corrosive, which means it can irritate or burn your skin or eyes. It can also corrode metals. When mixed with certain other chemicals (e.g. Guanodinethiocynate) or cleaners, it can produce toxic gases. Only use sodium hypochlorite (bleach) in well ventilated rooms while wearing protective gear (gloves, goggles).

3. Incubate the material ~15 min in bleach. Occasionally shake the basin to ensure all surfaces are in contact with the bleach solution.

4. After incubation, carefully take out the material and rinse it thoroughly with tap water. Then leave it for drying on a clean surface (e.g. aluminum foil, laboratory tissue) in a chemical fume hood (2-3 days).

Note

[Note]
For spatulas: Store spatula vertically on the draining rack so that the remaining liquid can drain out. If some liquid stays in the spatula, try to remove it mechanically via flipping the spatula with your fingers.

5. Pour bleach back into a glass bottle and rinse the plastic basin with tap water. Then leave it for drying on a clean surface (e.g. aluminum foil, laboratory tissue) under in a chemical fume hood (2-3 days).

Note

[Labeling]
Label the glass bottle with '12 % sodium hypochlorite for decontamination', date (YYYYMMDD) and initials. Since bleach can be used several times, add date and initials after every use.

Note

[Note]
Bleach can be reused up to 10 times. Exchange the bleach after ten uses or when you start seeing impurities.

6. UV-treat the dried material following the protocol in the Appendix.

7. Put the cleaned and UV-treated material into an appropriate, clean storage container.

Note

[Labeling]
Label your storage container with date (YYYYMMDD), initials and 'bleached and UV treated'.

Note

[Note]
Silica bottles do not need a storage container. Close them properly and put them into the stock storage.

8. Label the storage container with content, date and your initials.

Appendix

Document

NAME

UV decontamination of materials

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Preview