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DNA Extraction Using forensicGEM™ Tissue

Zygem Quick-Start Guide

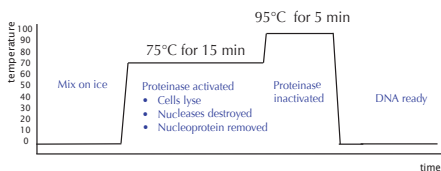
forensicGEM™ Tissue

forensicGEM™ is specifically formulated and validated for forensic DNA extractions. Validation data can be obtained from www.zygem.com

The following method is recommended for extracting DNA from forensic tissue samples and hair follicles.

- All manipulations should be performed in a clean-room or a PCR hood.
- Use only certified DNA-free tubes and reagents.
- Wash any equipment that will come into contact with the sample in 0.05% hypochlorite bleach. Rinse thoroughly with DNA-free water.

Procedure Outline



Preparation

1. Cut the tissue into cubes of approximately 1.5 mm³, mash with the side of the scalpel and place in a thin-walled PCR tube.
2. With hair follicles, cut the shaft 5 mm above the follicle and place in a thin-walled PCR tube

Extraction Method

1. Add:
 - 89 µl DNA-free water.
 - 10 µl of 10x Buffer **PINK**
 - 1 µl forensicGEM™
2. Incubate at:
 - 75°C for 15 minutes
 - 95°C for 5 minutes

A thermal cycler can be used for this step

3. Aspirate the extract away from the tissue

The DNA is in this solution. **Do not discard.**

The sample is now ready for quantification and analysis.

Technical tips for sample management

- forensicGEM™ Tissue is a preparative method for DNA extraction from various tissue types. The forensicGEM™ method lyses cells and removes nucleoproteins from the DNA. Extracted DNA can be used for many types of genotyping including SNP and STR analysis as well as quantitative, multiplex and end-point PCR.
- DNA extracted using forensicGEM™ is largely single-stranded because of the 95°C heat step.
- For accurate yield assessment, a qPCR is recommended. The DNA produced by forensicGEM™ is approximately 90% single-stranded. If standard fluorescent chelating dyes are to be used for quantification, then this factor should be taken into consideration.
- As with any preparative method for nucleic acid extraction, for best results prepare and manage samples at 4°C, or on ice, before and after extraction.
- As with any preparative method for nucleic acid extraction, best results are obtained when samples are handled at 4°C, or on ice, before and after extraction.
- The forensicGEM™ reagents are stable at 4°C but after tubes have been opened and for longer term storage, reagents should be stored at -20°C.
- Zygem Corp Ltd: Research Use Only. All products are subject to a limited use license. See the product documentation and information at www.zygem.com

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