



GenPlates are the core of GenVault's integrated biosample management system.

This simple building block eliminates the need for freezers and

liquid nitrogen tanks while maintaining your biosample in a stable format suitable for long term archiving, automated retrieval and simplified distribution.

GenPlate Design

The 384 well **GenPlate** contains 6 mm disc-shaped elements of Whatman FTA® paper in each well and allows biosamples to be stored at room temperature. Each element within the GenPlate is an experiment-sized aliquot that can be removed without risk of cross-contamination or sample degradation from multiple freeze-thaw cycles. Additionally, the GenPlate is approximately half the height of a standard multi-well plate for maximum storage efficiency.

The basic GenPlate is configured to hold a single patient sample across 384 aliquots and requires about 4ml of biological fluid such as blood, buffy coat, cell suspensions, buccal mouthwash or even already purified genomic DNA to fill the entire plate. The sample is applied directly to each element within the GenPlate and allowed to dry. Cells within the sample lyse upon contact with the FTA material and the extruded DNA binds avidly to the cellulose matrix. Then the GenPlate is sealed and is ready for short or long-term archiving. FTA inactivates bacteria and viruses upon contact, allowing your sample to be easily shipped without biohazard labeling. DNA stored on FTA paper as long as 14 years ago has been recovered in sufficient quantity and quality for current genotyping analysis.

Once a sample is applied to a GenPlate, an indisputable chain of custody is established. Each GenPlate is

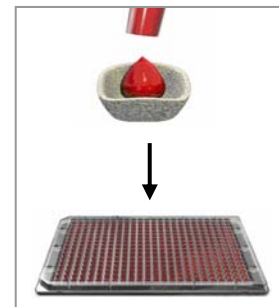
labeled with a unique physical barcode and each element within the GenPlate is labeled with **GenCode** (also unique to each GenPlate), GenVault's biological barcode, which permanently identifies the actual sample regardless of its physical state.

Additional Uses

Genomic DNA that has already been extracted by another method can also be applied to GenVault's GenPlates. These plates can also be stored at room temperature providing a less costly and more time efficient storage and recovery method than conventional cryostorage methods. The DNA that is subsequently eluted from the elements is typically of high quality and well-suited for downstream applications. Finally, this storage method allows researchers to ship materials at room temperature without special handling or labeling, providing a more economical method of distributing samples.

Flexible Format

In addition to the single-sample GenPlate, a six-sample GenPlate is also available. This GenPlate is divided into six regions with 40 aliquots of FTA elements per region. Each of the six regions contains a unique GenCode so each sample will be permanently and uniquely identified.



GenPlate Advantages

- Stable at room temperature for long periods
- Highly automatable and compatible with most laboratory automation
- DNA recovered is high quality
- Storage technology is proven
- Optimal use of sample – up to 384 individually sealed aliquots of DNA
- Redundant and secure sample identification – physical barcode and GenCode on each aliquot