

FloraPrep™ Collection and Preservation

FloraPrep™ Collection and Preservation Tube (Figure 1) contains two components: 1) tubular body with attached spoon, 2) preservation solution. The process includes sealing the sample, storing, and transporting all while fully inactivating degradation activities under ambient temperatures.

- 1) The collection contains non-toxic, tasteless, odorless, polypropylene medical material. It is uniquely designed for convenience with a spoon attached to the cap.
- 2) The sample preservation solution under normal temperatures maintains integrity and stability of DNA samples which in turn favors batching of one sample source at multiple time points.



Figure 1: FloraPrep™ Collection & Preservation

Product	Tube Dimension	Package Units
FloraPrep™ Collection and Preservation Tube	85mm X 16mm (diameter)	20 tubes/box, 50 tubes/box

FloraPrep™ Collection and Preservation Tube

- Sample storage in room temperature has effective inactivation of bacterial growth and inhibition of nuclease activity to ensure stability of DNA samples;
- DNA can be extracted with the sample preservation solution with a variety of extraction kits without a pre-treatment step;
- Storage in room temperature for samples (e.g. feces, soil, and other samples) collected at different time points for batch convenience;
- Flora composition analysis such as 16S rRNA gene sequencing and gene amplification experiments.



FloraPrep™ Collection and Preservation

Stool samples were collected (g/ml) and mixed with FloraPrep™ preservative buffer in different ratios (1:3 to 1:15) while saline was extracted immediately as a control sample. Samples were stored in room temperature. Using FloraPrep™ Collection and Preservation Tube, samples were stored for one week. The extracted DNA was subjected to gel electrophoresis analysis, the results are shown in Figure 2. Compared to the saline group, the various ratios of the samples in preservative buffer treated with the same DNA profile proved FloraPrep™ can effectively maintain the integrity of DNA samples.

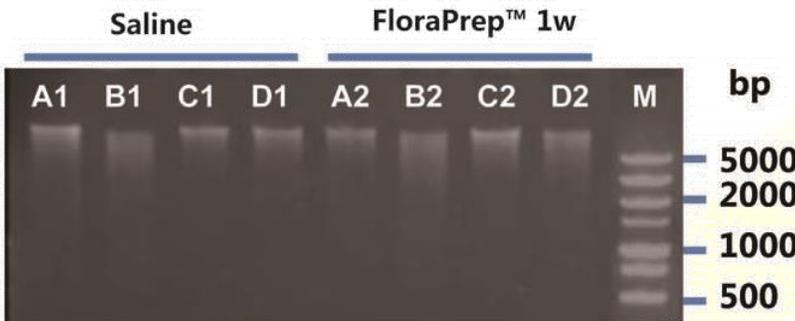


Figure 2:
 *Sample and the preservative buffer volume ratio: A, 1:15; B, 1:10; C, 1:6; D, 1:3
 *Each DNA sample contains about 100ng
 FloraPrep™ Collection & Preservation Tube effectively ensures the integrity of DNA samples.

Freshly collected samples were immediately extracted (0d), another stored in room temperature for one day (1d), for 2 days (2d), and for 3 days (3d). Complete DNA extraction was performed for the purposes of 16S metagenomic sequencing (FloraCheck™ flora testing services recommended). Flora composition information for each sample was calculated using the Pearson correlation coefficient. Results of bacterial distribution similarity between each sample are shown in Figure 3.

The same sample stored at room temperature for up to one week was also processed by similar products of other manufacturers. DNA was extracted from fresh samples (0d) for 16S metagenomics sequencing and the consequent results of microflora similarity between the samples are shown in Figure 4. FloraPrep™ treated sample (FP) has greater concordance than the samples treated by product N.

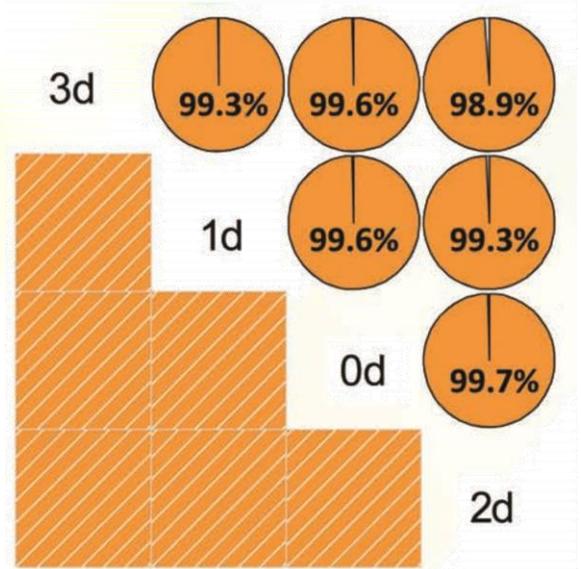


Figure 3: Various storage times do not affect sample flora composition.



Figure 4: Comparison of FloraPrep™ with commercially available products (correlation coefficients shown)

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