BODE ARMOR™: A DEVELOPMENTAL VALIDATION OF A ROBUST PRESERVATIVE SOLUTION

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Introduction

This is a developmental study to evaluate bacterial growth and degradation can occur over time if not taken to preserve the sample. Degradation of a reference sample can cause interpretation issues if not properly addressed. Bode Armor is a preservative solution that can be applied to reference samples after collection to enhance sample stability by inhibiting nucleases and significantly reducing the growth of bacteria. The adoption of any new method or technology requires careful consideration to ensure that it does not impact any downstream processing in the laboratory. The developmental validation evaluated Bode Armor-trimmed reference samples and their ability to yield a complete DNA profile following both traditional processing (extraction, quantification, and amplification) and direct amplification procedures.

This included the required studies for accuracy, artifacts, contamination, scoring precision, repeatability, reproducibility, sensitivity, and stability. All experiments listed were performed using the Thermo Scientific GlobalFiler®/GlobalFiler™ Express, QIAGEN® Investigator 24plex QS/24plex GO! kits, and Promega PowerPlex® Fusion 6C- amplification kits.

All amplified samples were separated on an Applied Biosystems™ 3500xL capillary electrophoresis instrument and analyzed utilizing appropriate analytical electrophoretic methodologies for each amplification kit in GlobalFiler® Kit.

Stability

DNA is a biological material, cellular breakdown and degradation can occur over time samples are reprocessed and/or reanalyzed for different chemistries.

Sensitivity

➢ 100 µl Bode Armor (1X) is the optimal application.
➢ Applying up to 3X Bode Armor to a sample did not prevent a complete DNA profile from being obtained during traditional and direct amplification in all chemistries.

Reproducibility

➢ On a separate day with a different thermal cycler and 3500xL from the initial amplification, the same samples were re-amplified in triplicate.
➢ Average peak profile heights for both amplifications for each chemistry were within optimal RFUs.