

Protocol for Short-Term evaluation of Biomatrix Sample Stabilization Technology- **Validation of RNA stable/ DNA stable/Clone stable through accelerated aging procedure**

Stability Test: Accelerating aging study

When temperature increases so does the rate of a chemical reaction. Supported by the Arrhenius equation, a historically conservative and useful generalization was derived for many common chemical reactions at room temperature, the reaction rate doubles for every 10 degree Celsius increase in temperature. For example, a sample placed at 50 degrees for 4 weeks would have the same degree of degradation as a sample left at ambient temperature (20°C) for 32 weeks. We do not recommend using temperature above 50 degrees as the nucleic acid configuration starts to change and do no longer reflect the nucleic acid configuration observed at room temperature.

Test Sample Types: Purified Genomic DNA, Purified Plasmid DNA, and/or purified total RNA, Poly(A) mRNA or miRNA.

Test Concentrations:

Genomic DNA: use ≥ 20 ng

Plasmid DNA: use ≥ 1 ng

RNA: use ≥ 100 pg

We recommend to set up 5 experimental conditions:

1. Control: Traditional Cold Storage (Liquid Nitrogen, -80 °C, -20 °C or 4 °C)
2. Ambient Room Temperature, in Biomatrix technology
3. Ambient Room Temperature, unprotected
4. Stress, 50°C, in Biomatrix technology
5. Stress, 50°C, unprotected

Protocol: (See individual Biomatrix manuals for specific handling of samples stored in SampleMatrix/Clonestable/RNAstable)

1. Quantitate samples before test begins.
2. Spectrophotometer (DNA, RNA; blank with reconstituted DNAstable or RNAstable, respectively) or qPCR/qRT-PCR (DNA, RNA).
3. Apply biological samples in identical manner to Biomatrix technology, unprotected and for conventional cold storage conditions.
4. Store samples for three to four weeks, in triplicate (preferred) in the five different conditions listed above.
5. Recovery (See Biomatrix Protocols for handling of samples stored in DNAstable/Clonestable/RNAstable)
6. Quantitate your samples (see Appendix A for accurate UV measurement of your samples)

RNA stable To view Product pictures; hand book; Protocol; application

notes please click http://lifetechindia.com/RNA_Stable.htm