



Cell-Free DNA Storage Tube

Downstream Applications

- Liquid biopsy for cancer.
- Non-invasive prenatal testing (NIPT).
- Early detection research for various diseases.

Introduction

Cell-Free DNA Storage Tube is an advanced cfDNA collection system that integrates sampling, preservation, and transport. It employs a proprietary preservative that maintains extracellular cell viability, effectively stabilizing nucleated blood cells to prevent genomic DNA release and inhibiting nucleases to protect cfDNA from degradation. This tube ensures long-term preservation and minimizes background gDNA contamination, enabling reliable detection of low-frequency mutations in low-volume samples. It facilitates high-yield, high-quality DNA extraction. Without inhibitory effects in downstream applications.

Features

- ◆ **Extended Stability:** Special preservative ensures cfDNA stability for over 14 days at 4-37°C.
- ◆ **Stable Quality:** Over 99.9% vacuum stability, with hemolysis and coagulation rates below 3%, even accounting for sample diversity.
- ◆ **Flexible Options:** Available in both glass and PET materials, with PET suited for automation.
- ◆ **CEcertified:** It can be used for diagnostic procedures.

Product Ordering Information

Product	Catalog#	Product Specs. (50-tube box)
YALEPIC® Vacuette Blood Collection Tube (Cell-Free DNA Storage Tube)	YS21001-B	Glass Tube: 10 ml
	YS20501-B	Glass Tube: 5ml
	YS21001-P	PET Tube: 10 ml
	YS20502-P	PET Tube: 5 ml

To apply for samples or learn more about product information, please contact:

Evan@yalibiotech.com; hector.liu@yalibiotech.com

www.yalibiotech.com

Evaluation of the preservation of cfDNA

Prevent Hemolysis

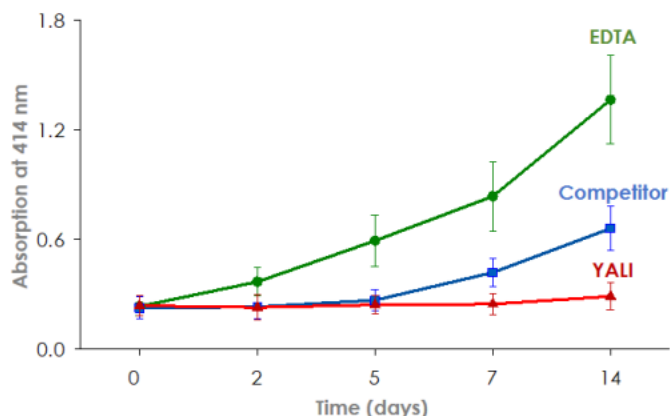


Figure 1. Hemolysis of collected blood measured over time. Blood samples were drawn into either YALI's cfDNA Storage Tubes, Competitor tubes or EDTA Tubes and stored for up to 14 days. Hemolysis was assessed by measuring the absorption of free hemoglobin in plasma at 414 nm at multiple time points, using samples from three subjects. A marked increase in free hemoglobin levels was observed over time in both EDTA and competitor tubes, indicating progressive hemolysis. In contrast, hemoglobin levels remained relatively stable in samples stored in YALI's cfDNA Storage Tubes.

Stable at high shipping temperatures (37°C)

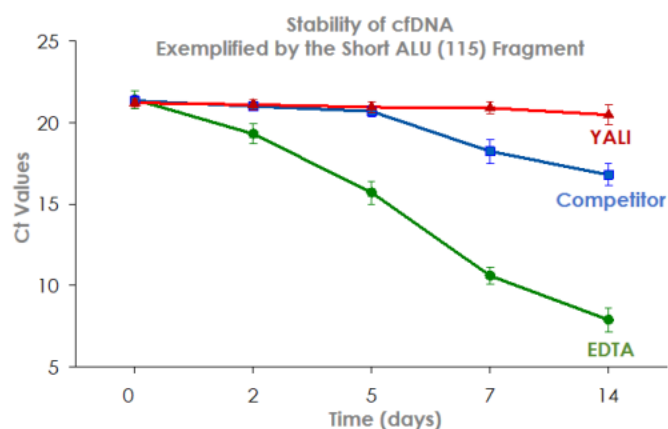
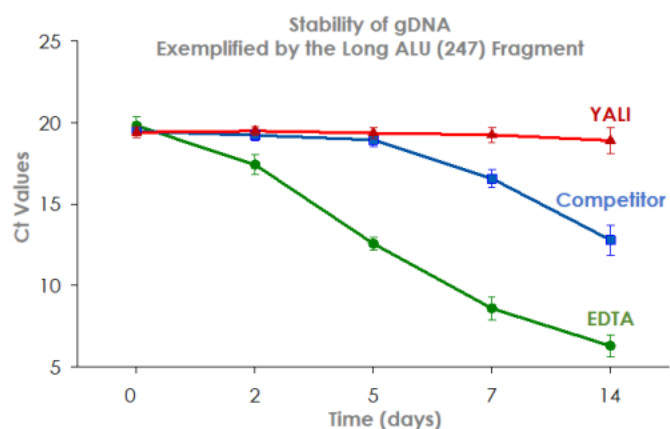


Figure 2. Effect of high-temperature (37°C) storage for 14 days. Storage on cfDNA exemplified by the short Alu (115bp) fragment, and genomic DNA (gDNA), exemplified by the large Alu (247 bp) fragment. Blood samples were drawn into either YALI's cfDNA Storage Tubes, Competitor tubes or EDTA Tubes and stored at 37°C. Aliquots of blood were removed at the indicated time points, the plasma was separated and DNA was isolated. cfDNA and gDNA concentrations were quantified by real-time PCR using a short ALU gene target (115 bp) representing the cfDNA and a long ALU gene (247 bp) representing the gDNA. Stable Ct values of these two fragments over time indicating effective DNA preservation and minimal hemolysis. As expected, samples stored in EDTA tubes showed no cfDNA stabilization and exhibited extensive hemolysis. In competitor tubes, Ct values for both fragments remained stable until day 5, followed by a significant decrease after day 7, indicating poor stabilization beyond day 7. Whereas YALI's cfDNA Storage Tubes stabilized samples for 14 days.