



## CASE STUDY: Shipping Media for Fresh Tissue

For biomarker discovery efforts, primary cell assays, and patient-derived xenograft work, among others, access to fresh human surgical tissue is an essential component in obtaining reliable results. BioIVT aims to support your research goals by ensuring that the

human tissue we provide is in the freshest possible state and closely mimics the function of the *in vivo* environment.

### ■ The Problem

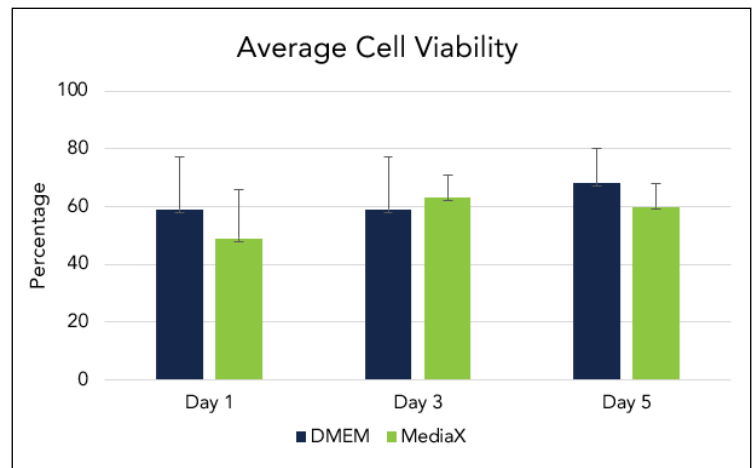
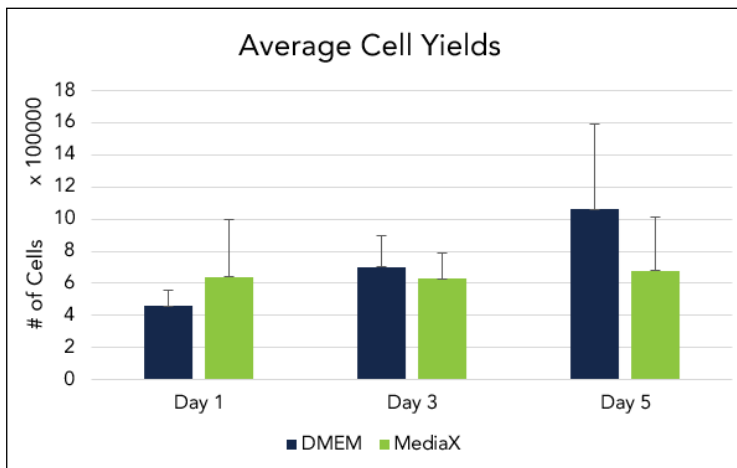
Fresh tissue must be buffered and sustained with quality media designed to support tissue vitality while minimizing microbial growth during the duration of transit from the collection facility to the researcher's lab. BioIVT's choice of media must help tissue retain freshness for an extended period in the unlikely event that a shipping delay occurs. BioIVT has historically used DMEM for fresh tissue shipments, but would a tissue support media specifically designed for transport of fresh tissue prove to be a better solution?

### ■ Fresh Media Comparison

BioIVT's cell culture team worked with the ASTERAND® Human Tissue Procurement team to compare tissue viability and growth after transit in our standard DMEM versus a commercially available media designed specifically for viable transport of fresh tissue (MediaX). Uterine tumor was selected as a middle-of-the-road tumor type in terms of difficulty to culture. Three tumors were collected under similar conditions, divided into equal sized pieces and placed immediately into either MediaX or DMEM for transit to BioIVT. Upon receipt, each sample was further subdivided, and each piece was allowed to remain in its original transport media at 2-7°C for up to five days. Each day, a new piece of tissue was removed from the media, dissociated into single cells by enzyme digestion and plated onto flasks containing DMEM + 10% Fetal Bovine Serum. Cells were then grown under the identical incubatory parameters. Seven days after seeding, viability and total live cell number were measured by Trypan-Blue staining.

### ■ The Results

Cell yield and cell viability were both measured at one, three and five days for cells plated from fresh tissue in both DMEM and MediaX. Average cell yield is dependent on the size of the tissue at each time point and as exact tissue weights were not dissociated and cultured, these data are not comparable across time points or media. However, average cell viability is affected by media and time. The results show there was not a profound difference in average cell viability from day one to day one in either media.



Results show that cell viability is not significantly affected by incubation of tissue in DMEM medium or MediaX for up to five days.

## The Conclusion

Although our study was not statistically significant, it does provide evidence that both standard DMEM media and a commercially available media designed for fresh tissue transport (MediaX) are efficient for tissue viability up to five days after procurement and shipment. BioIVT is able to customize our procurement and shipment of fresh tissue direct to your lab to ensure viable cell recovery in the shortest time possible. Supported by hundreds of shipments from over ten years of experience, BioIVT is ready to partner with you to ELEVATE your science with ASTERAND® Human Fresh Tissue solutions.



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### ABOUT BIOIVT

BioIVT, formerly BioreclamationIVT, is a leading global provider of high-quality biological specimens and value-added services. We specialize in control and disease state samples including human and animal tissues, cell products, blood and other biofluids. Our unmatched portfolio of clinical specimens directly supports precision medicine research and the effort to improve patient outcomes by coupling comprehensive clinical data with donor samples.

Our PHASEZERO® Research Services team works collaboratively with clients to provide target and biomarker validation, phenotypic assays to characterize novel therapeutics, clinical assay development and in vitro hepatic modeling solutions. And as the world's premier supplier of ADME-toxicology model systems, including hepatocytes and subcellular fractions, BioIVT enables scientists to better understand the pharmacokinetics and drug metabolism of newly discovered compounds and the effects on disease processes. By combining our technical expertise, exceptional customer service, and unparalleled access to biological specimens, BioIVT serves the research community as a trusted partner in ELEVATING SCIENCE™.