

Fast and Gentle Cell Isolation from Human Lung Tumor Biopsy Sample

INTRODUCTION

MARS® technology utilizes active-microfluidics acoustics for the separation of tissue sample particles without labeling, based only on the difference in their physical parameters. The system allows for the efficient removal of lysed cell debris, dead cells, and other small particles. The isolated cells are ready for single-cell phenotypic and genomic analysis as well as expansion.

MARS® Acoustic workflow for cell separation from a Human Lung Tumor Biopsy sample provides Dead Cell and Debris removal efficiency superior to Centrifuge workflow.

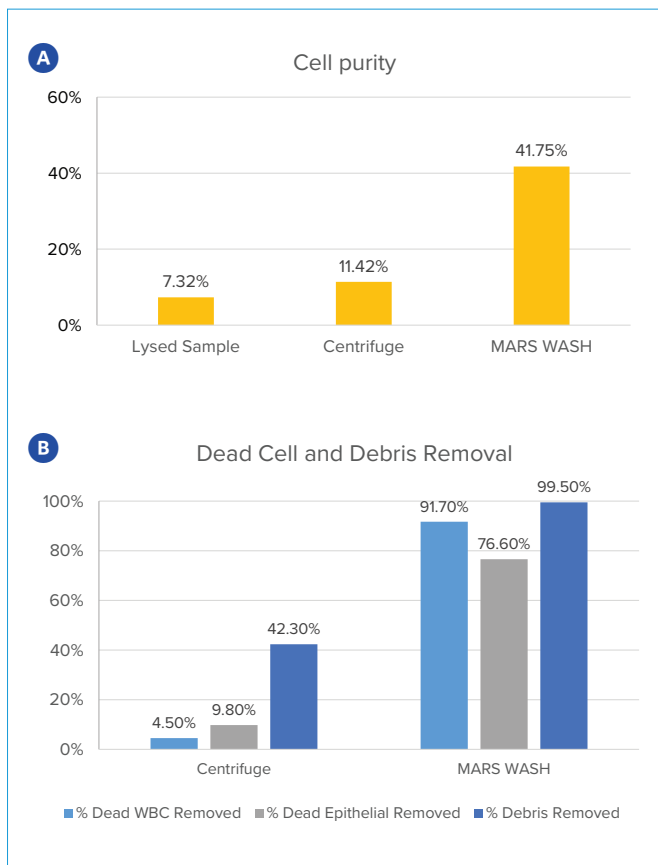


Figure 1. WBC and Epithelial Cell enrichment from a human lung tissue biopsy sample using Centrifuge or MARS® Acoustic wash workflow. Data shows superior MARS® performance in **(A)** Cell purity and **(B)** Dead Cell & Debris removal.

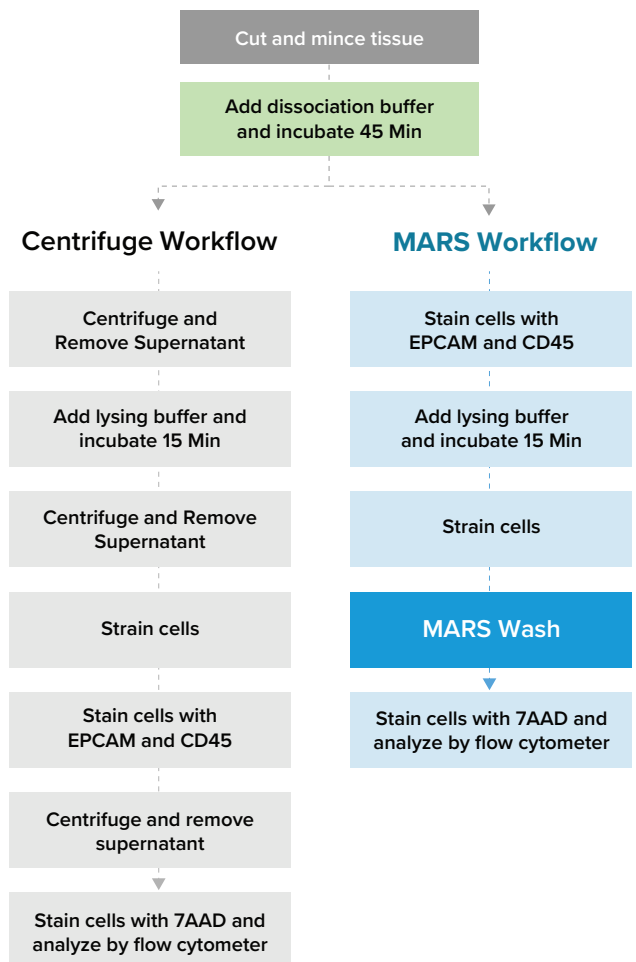
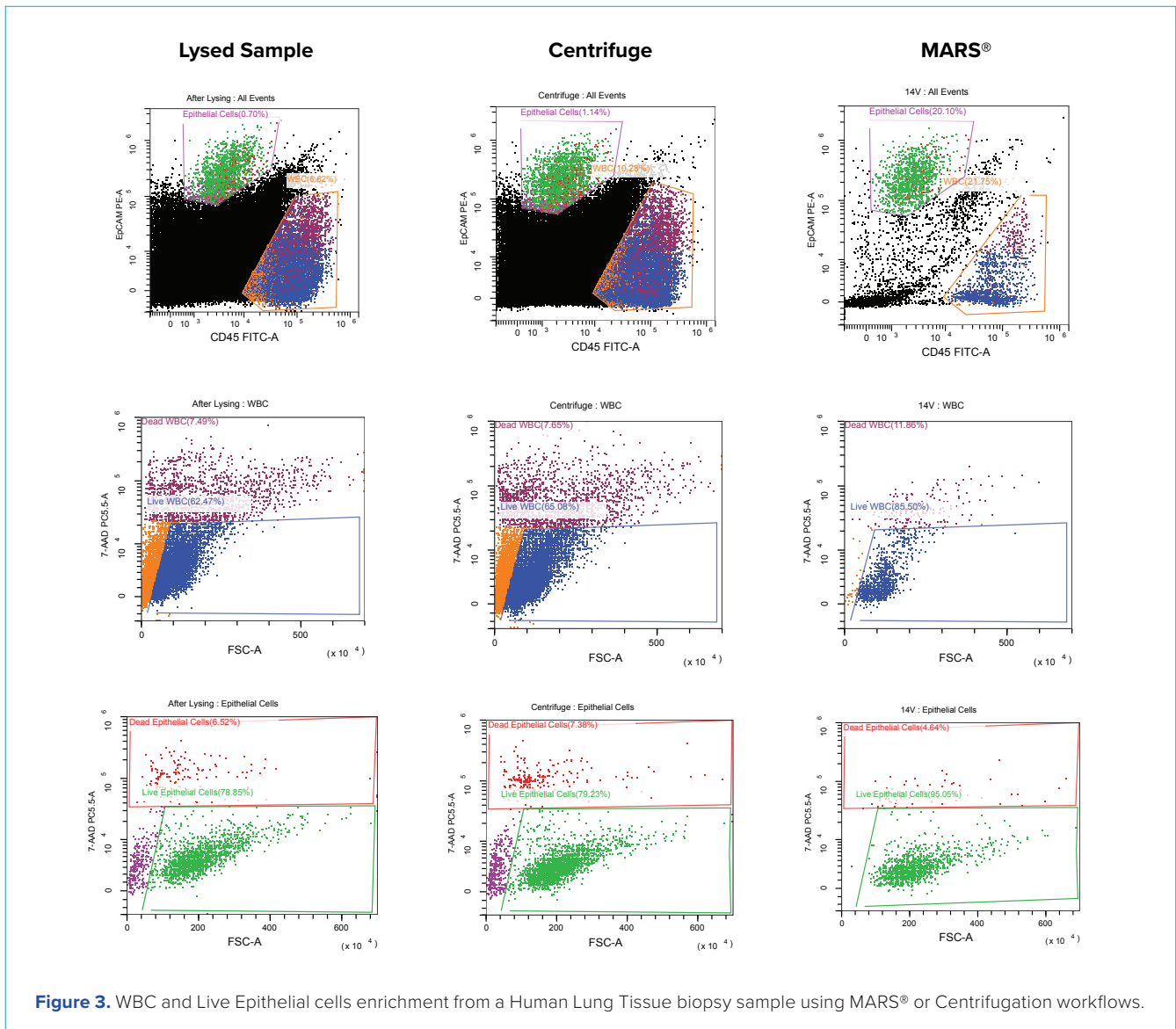


Figure 2. Comparison between MARS® Acoustic Wash and Centrifuge workflows.



RESULTS

MARS® technology is a solution to gently and rapidly isolate cells from a tissue sample with:

- ☑ **Gentle** treatment
- ☑ **Label-free** Acoustic separation
- ☑ Very high cell **purity**
- ☑ **High cell viability** after isolation
- ☑ **Minimal hands-on** sample manipulation
- ☑ **No centrifugation**
- ☑ **Fast and easy workflow** for assay optimization
- ☑ An option to **preferably enrich** the cell population of interest by tuning the acoustic separation parameters

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