

Menarini Silicon Biosystems launches VRNxT volume reduction instrument

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The VRNxT adds precision and accuracy to rare-cell and single-cell analysis, minimizing the loss of precious samples and increasing workflow throughput



Menarini Silicon Biosystems, the pioneer of liquid biopsy and rare cell technologies, announced that it will launch the new VRNxT^(TM), a volume reduction instrument optimized to remove manual sample volume reduction steps in cellular biology workflows.

By standardizing sample volume reduction, the VRNxT adds precision and accuracy to rare-cell and single-cell analysis, minimizing the loss of precious samples and increasing workflow throughput. While the VRNxT has been developed to standardize the DEPArray workflow, broader applications in volume reduction are possible.

The VRNxT automated volume reduction instrument removes manual pipetting steps, reducing hands-on time up to 90% and eliminating operator variability. No specific skill sets or training are required for operation, thereby delivering user-independent results with high reproducibility and success, with 99% of single cells retained after volume reduction.

"The instrument helped us to reduce our error rate and processing time," said Matija Snuderl, M.D., Department of Pathology Director, Molecular Pathology NYU Langone Health, who tested the new instrument in his laboratory. "We handle rare cell types isolated from FFPE specimens. With the VRNxT, we were able to lower the chance of error in the volume reduction step, which is especially important when single-cell samples are collected, and decrease the time required to process these samples."

The VRNxT uses rotational motion for sample volume reduction and can process up to four samples at once, decreasing the time required for sample preparation. Starting from any volume in a PCR tube, the VRNxT consistently reduces sample volume to approximately 12.5 μ L in 25 seconds and approximately 2 μ L in about eight seconds.

The DEPArray System is the only image-based sorting and isolation platform that combines microfluidics with microelectronics and microscopy to isolate and manipulate individual rare cells with 100% precision.