

A boost for sequencing workflows



The Applied Biosystems SOLiD System genetic sequencing platform performs next-generation sequencing

Tecan has been working with Applied Biosystems, part of Life Technologies Corporation to develop an off-the-shelf system for automated bead washing, based on a Freedom EVO® 75 workstation equipped with a Te-MagS™ separation module.

The power of next-generation sequencing methods comes from simultaneous, massively parallel analysis of small DNA fragments. Because of this, meticulous sample preparation is essential to get the maximum information from an analysis run. Preparation of templated beads for the Applied Biosystems' SOLiD™ System genetic sequencing platform is a multi-step process, requiring several washes of magnetic beads for ePCR product purification. In a close collaboration between Tecan and Life Technologies, a new system based on the Freedom EVO 75 workstation has been carefully developed to eliminate the variation commonly associated with manual techniques, minimizing loss of beads and ensuring complete removal of chemicals which could interfere with results.

Automation of the bead washing protocol using the Freedom EVO 75 is particularly attractive for customers with a high sample throughput, as Karen Poulter, a staff scientist at Life Technologies, explained: "Automation of ePCR purification for the SOLiD System eliminates a lot of the time-consuming and laborious work associated with manual techniques. This not only reduces hands-on time, allowing users to

concentrate on more challenging tasks, but also improves consistency."

The Freedom EVO 75 bead washing station is equipped with a two-channel liquid handling (LiHa) arm, a TeMagS magnetic separation module and all the racks and carriers required for parallel preparation of 24 templated bead samples. In addition, the system's Freedom EVOware® software features washing protocols specifically developed by Life Technologies' Genetic Systems Division for optimal sequencing performance of the SOLiD System.

"We chose the Freedom EVO 75 platform to automate templated bead washing for a combination of reasons," said Kathy Perry, science director at Life Technologies. "Tecan is a very easy company to work with, and the instrument represents a compact, cost-effective solution for automation of bead washing protocols. This allows us to offer our customers a validated, off-the-shelf solution for genetic sample preparation, helping to streamline laboratory workflows and improve consistency of results."

To find out more on Tecan's Freedom EVO 75, visit www.tecan.com/freedomevo75

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