Automated DNA Cleanup for NGS Workflow

Claire McClain (claire.mcclain@omegabiotek.com), Omega Bio-tek, Brandon Easparro, Omega Bio-tek, Shariya Kennedy, Omega Bio-Tek, Kiranmai Durvasula, Omega Bio-tek, Julie Baggs, Omega Bio-tek, Travis Butts, Omega Bio-tek

Next-generation sequencing (NGS) is an ever-increasingly utilized application in a myriad of fields ranging from basic biological research to pharmacogenetics and clinical medicine. An integral part of the initial steps of a typical NGS workflow involves multiple DNA cleanup steps. To better streamline NGS workflows, a need for advancements in higher throughput processing and turnaround time is crucial. To address this, Omega Bio-tek has developed a fully automatable protocol using Mag-Bind® TotalPure NGS beads (M1378) which can be employed in combination with a liquid handler to perform integral cleanup and size selection steps for library preparation. The capabilities of this method for high throughput cleanup were analyzed by DNA recovery and quality. Here, Omega Bio-tek's Mag-Bind® TotalPure NGS beads are capable of efficiently cleaning up 96 samples in less than 35 minutes on a liquid handler, thereby greatly optimizing throughput and processing time for a more efficient implementation in NGS workflows.