

Steel vs. Plastic – Implementation of reusable tips in an automated liquid handling platform

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During screening for NANOBODY® molecules, large amounts of clones are tested for desired binding and functional properties. Because this is a labour-intensive step, an automated liquid handling platform has recently been installed to maximize the throughput and efficiency of the screening campaigns. Liquid handling is performed by a precise and fast Tecan Fluent® robot. The higher screening capacity of the platform, however, goes hand in hand with an increased need for tips. The worldwide shortage of plastic tips during 2021 made us reconsider the liquid handling steps in the automated process. Without any investment there was a significant risk of downtime and lower screening capacity on the automated platform. The implementation of reusable steel tips on the Tecan Fluent® is presented and important steps, such as the optimization of wash protocols to clean the tips, are highlighted. A small investment completely removed the dependence on disposable tips in automated assays and reduced the plastic waste significantly.