Tip utilization test — Save resources

ecotoxchip

BACKGROUND INFORMATION

QPCR is an extremely sensitive molecular biological approach to determine gene expression. It is important to characterize various technical factors associated with experimental set-up and source nucleic acid to ensure peak performance across multiple use case scenarios.

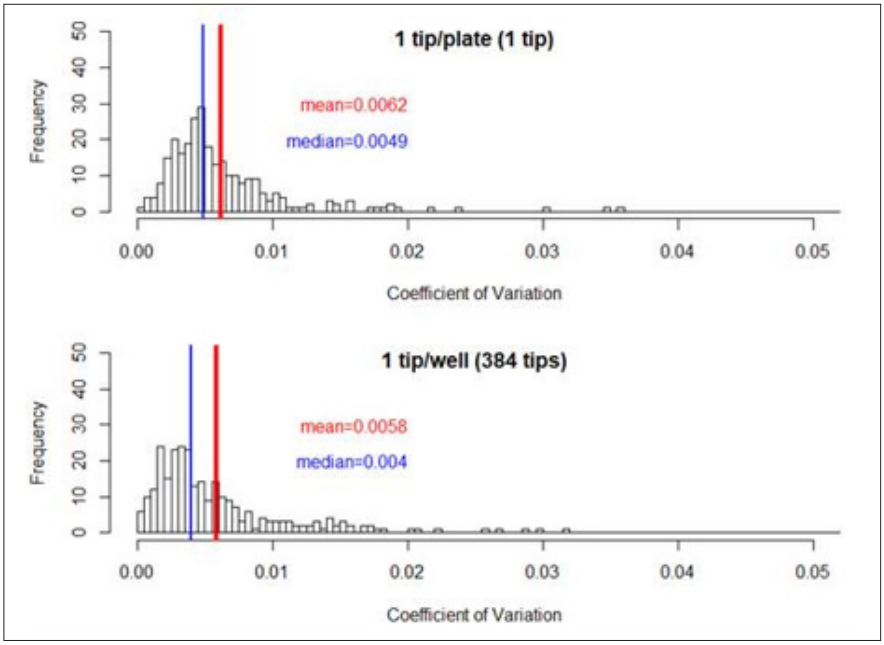
OBJECTIVE

To perform a comparison of different settings on the liquid handling robot, QIAgility, to maximize efficiency and minimize plastic tip usage usage and decrease time.

METHODS & RESULTS

A total of 6 JQv0.1 EcoToxChips were used, where 3 of them were loaded with reference cDNA using 1 tip and the other 3 using 384 tips per plate.

- Density plot of CV variance of 1 tip vs 384 tips per plate were similar between the two, where the mean CVs were both less than 1%.
- Additionally, it took less time to load a plate with 1 tip vs 384 tips per plate (20 min vs 1.5 hrs).



TAKEAWAYS

This technical test provides confidence that an EcoToxChip can be loaded with a single tip without cross-contamination between wells. These findings support a method that can help reduce the generation of plastic waste and the time it takes to load a single plate.

Notes

To learn more about the EcoToxChip project, please read our introductory paper.