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Title

Implementation of a CyBio Integrated System to Aliquot Amplified DNA and Dispense DNA Sequencing Chemistry.

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Implementation of a *** Integrated System to Aliquot Amplified DNA and Dispense DNA Sequencing Chemistry. (***** Company Name Removed until Purchase Confirmed)**

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The ***** , ***** ***** and two integrated ***** have been implemented into the JGI production sequencing line to replace two ageing Hydra-Twister instruments and Cavo dispensers. The ***** disposable tip 25uL head is used to aliquot low volume amplified DNA samples from an Axygen PCR source plate and dry dispense 1-3uL into two new destination plates. The pre-bar-coded destination plate is scanned “on the fly” and forward or reverse primer sequencing chemistry reagent dispensed (2-5uL) using the *****.

The DNA sequencing production line at the Joint Genome Institute (JGI) is characterized by modular machine stations with batches of micro titer plates moving between them. The DNA sequencers determine the throughput for the production line. JGI is currently producing 3 Gb of sequence per month.

The production instrumentation engineering goals focus on increasing the quality and reliability at each process step and allowing for maximum operator efficiency. This instrument integrates what has historically been two independent process steps at the JGI. This poster will discuss the system specification, acceptance testing, production implementation and sequencing results.

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