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Authors

Daum, Christopher
Tighe, Damon
Philips, Lena
et al.

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The Joining of Competitors: The Dual Operation of the ABI 3730xl & GE MegaBACE4500 DNA Sequence Analyzers at the DOE Joint Genome Institute

Christopher Daum, Damon Tighe, Lena Philips, Danielle Mihalkanin, Cailyn Spurrell, Don Miller, Alex Copeland, Susan M. Lucas, JGI Sequencing Team

U.S. DOE Joint Genome Institute, Walnut Creek, CA 94598

At the center of the Department of Energy's (DOE) Joint Genome Institute (JGI) Production Genomics Facility (PGF), lies a highly efficient and automated production line devoted to the generation of high-quality genomic DNA sequence. The JGI utilizes a dual platform of DNA sequence analyzers: Applied Biosystems 3730xl and GE Healthcare's MegaBACE 4500. The operation of these high-throughput fluorescence-based DNA sequence analyzers at the JGI will be assessed on the strengths and benefits of each platform, instrument overviews of operation parameters and mechanical/component specifications. In addition, instrument setups for production operation, operation schedules, loading, and maintenance strategies as well as the various sequencing strategies for each platform. Throughput numbers and sequencing quality results will be presented.

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