Automated processing for COVIDSeq[™] workflow flexibility

With the rapidly shifting COVID-19 pandemic, surveillance of evolving SARS-CoV-2 variants has become a top priority for researchers and government agencies around the world. Illumina COVIDSeq Assay (96 Samples) and COVIDSeq Test (RUO Version) are amplicon-based, next-generation sequencing (NGS) assays that offer fast, accurate SARS-CoV-2 sequence information for labs meeting the challenges of this pandemic.

COVID-19 surveillance to match your needs

Illumina COVIDSeq Assay and COVIDSeq Test procedures scale up or down to accommodate the sample numbers on hand. Sequence prepared libraries on any Illumina sequencing system (Figure 1).



Figure 1: COVIDSeq Assay and COVIDSeq Test workflow overview

Automation adds flexibility to your sequencing workflow

For even greater flexibility, COVIDSeq Assay and COVIDSeq Test workflows are compatible with available automation solutions (Table 1). Automation frees up time for laboratory personnel and decreases chances of human error. Automation systems are configurable for batch sizes from 8 to 96 samples to meet the requirements of local SARS-CoV-2 monitoring.

Automated processing times are similar to manual processing and will vary slightly depending upon level and type of automation being used. Automated methods are owned, distributed, and supported by the respective manufacturers.

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Table 1: Compatible automation solutions for Illumina COVIDSeq Assay and COVIDSeq Test

Vendor	Agilent	Beckman Coulter	Eppendorf	Hamilton	PerkinElmer	Tecan
System ^a	Bravo Option A	Biomek i7	epMotion 5075t	STAR NGS	Sciclone	Fluent DreamPrep
Samples/ batch (minimum)	8	8	8	8	8	8
Samples/ batch (maximum)	96	192	192	384	192	96
Estimated hands-on time	60 min	45 min	45 min	45 min	60 min	60 min
Steps supported	Steps from RNA sample input through sequencing ready libraries ^b					

a. Contact individual vendors for additional system information and workflow options

Support for future research

Illumina continuously works to expand library preparation applications that are compatible with these automation solutions. This allows laboratories to get the most out of their capital expenditure investment in research applications beyond SARS-CoV-2 surveillance.

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Learn more

Supporting global COVID-19 efforts, www.illumina.com/company/supporting-covid-19-efforts. html

COVIDSeq Test (RUO Version), www.illumina.com/products/by-type/clinical-researchproducts/covidseq.html

COVIDSeq Assay (96 samples), www.illumina.com/products/by-type/clinical-researchproducts/covidseq-assay.html

Library preparation automation, www.illumina.com/techniques/sequencing/ngs-libraryprep/automation.html

b. Various automated RNA isolation procedures are available, check with individual vendors for options