

		ILLUMINA TruSeq	ILLUMINA Nexterra	LifeTech IonXpress	LifeTech NEBNext	Improvements
Purify DNA	Minimum Input	1µg	5ng	50ng	100ng	
	DNA Extraction	1 hr	1 hr	1 hr	1 hr	Non-phenol methods
	Sample QC	1 hr	1 hr	1 hr	1 hr	NA
Library Synthesis	Reaction Set Up	5 min	5 min	5 min	5 min	Robotics
	Fragmentation	15 min	10 min	1 hr	15min	G-tubes can make this faster
	End repair reaction	1.5 hr		15 min	30 min	3'-5' exonuclease & polymerase
	A-tailing reaction	1 hr		NA	NA	double-A tail
	Adapter ligation	1.5 hr		15 min	15min	Faster Ligase Enzyme
	Purify Ligation Mixture (Size Selection)	3 hr		10 min	1 hr	1 hr
	Template Enrichment (PCR)	30 min	30 min	30 min	45 min	NA
	Clean up	1 hr	30 min	15 min	15 min	NA
	<b>Total Library. Prep.</b>	<b>9.5 hr</b>	<b>1.5 hr</b>	<b>3.5 hr</b>	<b>2.5 hr</b>	
Sequence	Library QC and Pooling	1 hr	1 hr	1 hr	1 hr	AATI Analyzer
	Template Annealing (Clustering)	cBot cluster 3h	cBot cluster 3h	IonExpress 3.5 h	IonExpress 3.5 h	NA
	Sequencing	27 hours	27 hours	3 hours	3 hours	
Analysis	Base Calling	realtime	realtime	realtime	realtime	NA
	Move Data	0-2 days	0-2 days	0-2 days	0-2 days	NA
	Alignment	2-3 days	2-3 days	2-3 days	2-3 days	Isaac/ HPC
	Variant Calling	2-4 hrs	2-4 hrs	2-4 hrs	2-4 hrs	Isaac/ HPC
	SNP annotation	1 hr	1 hr	1 hr	1 hr	NA
<b>~ Shortest Total Time</b>		<b>50 hrs</b>	<b>42 hrs</b>	<b>21 hrs</b>	<b>20 hrs</b>	