Supplementary Table 1. Cost of SDSI+AmpSeq

Processing Step	Reagent	Vendor	Item Number	Cost (dollars)	Number of Reactions	Cost per Reaction
Biosample Extraction	MagMAX™ mirVana™ Total RNA Isolation Kit	Thermo Fisher Scientific	A27828	495	96	5.16
	SSIV RT master mix	Thermo Fisher Scientific	18090050	383	50	7.66
cDNA Synthesis	Random hexamers (50ng/ul)	Thermo Fisher Scientific	N808127	91	100	0.91
	dNTPs (10nM)	Thermo Fisher Scientific	18427-013	99	100	0.99
	5x RT buffer	Thermo Fisher Scientific	18090050	x	x	x
	DTT (100mM)	Thermo Fisher Scientific	18090050	x	x	x
	Superase rnase inhibitor	Thermo Fisher Scientific	10777-019	188	125	1.50
ARTIC PCR	Q5 Hot Start High-Fidelity 2X Master Mix	New England BioLabs	M0494L	845	500	1.69
	Artic Primers Pool#1 and Pool#2	IDT		30	500	0.06
Spike-ins	Spike in Primers (Forward/Reverse)	IDT		500	1000000	0.00
	Spike-in targets n=96	IDT		5821	1000000	0.01
Post Artic Pooling Quantification	Qubit™ dsDNA HS Assay Kit	Thermo Fisher Scientific	Q32854	308	500	0.62
Library Construction	Nextera DNA flex Library Prep (n=96)	Illumina	20018705	4153	190	21.86
	Nextera index UD Set A (n=96)	Illumina	20027213	672	384	1.75

Library Quantification	High Sensitivity D1000 ScreenTape	Agilent	5067-5584	362	112	3.23
	High Sensitivity D1000 Sample Buffer	Agilent	5067-5603	59.14	112	0.53
TOTAL:						45.96

Supplementary Table 2. Final library quantification for enzyme optimization experiment

PCR Enzyme	Quant (nM)
Q5 2X MM	85.3
Q5 2X MM + 0.01% SDS	0.258
Q5 Ultra	34.5
KAPA	56.0
KOD	8.1

Supplementary Table 4. Library size DNA Flex

Sample	CT Dilution	Standard DNA Flex Library Size (bp)	.5X DNA Flex Library Size (bp)	Standard DNA Flex Library Concentration (nM)	.5X DNA Flex Library Concentration (nM)
MA_MGH_00109	15.39	340	332	92	54.3
MA_MGH_00110	26.39	293	271	13.4	6.84
MA_MGH_00113	31.93	211	207	3.05	1.84