

SBG Sequencing Costs – Non-UMN (External) Clients

Run Type	Read Type	Combined Read Length	Yield Per Lane (GB)	Cost Per Lane	Plexity Per Lane ³	Reads Per Sample (M) ⁴	MB Per Sample ⁵	Cost Per Sample ⁶	Cost Per Million Reads ⁷	Cost Per MB ⁸	NGS Turnaround Time ⁹
High Output Run ¹	1x100 bp SR	100 bp	18.0	\$ 2,247.83	376	0.48	48	\$5.98	\$12.49	\$0.125	Slower
					188	0.96	96	\$11.96			
					94	1.91	191	\$23.91			
					48	3.75	375	\$46.83			
	2x125 bp PE	250 bp	45.0	\$ 3,955.85	752	0.24	60	\$5.26	\$ 21.98	\$0.088	Faster
					376	0.48	120	\$10.52			
188					0.96	239	\$21.04				
Rapid Run ²	1x100 bp SR	100 bp	10.0	\$ 2,904.39	376	0.27	27	\$7.72	\$29.04	\$0.290	Fastest
					188	0.53	53	\$15.45			
					94	1.06	106	\$30.90			
					48	2.08	208	\$60.51			
	2x100 bp PE	200 bp	20.0	\$ 4,164.89	752	0.13	27	\$5.54	\$41.65	\$0.208	Fastest
					376	0.27	53	\$11.08			
					188	0.53	106	\$22.15			
					94	1.06	213	\$44.31			
	2x150 bp PE	300 bp	30.0	\$ 5,152.76	752	0.13	40	\$6.85	\$51.53	\$0.172	Fastest
					376	0.27	80	\$13.70			
					188	0.53	160	\$27.41			
					94	1.06	319	\$54.82			

Notes

¹High output sequencing generates ≥ 220 M reads per lane, of which ≥ 180M will pass high-quality filters. There are 8 lanes per high output flow cell.

²Rapid run sequencing generates ≥ 120 M reads per lane, of which ≥ 100M will pass high-quality filters. There are 2 lanes per rapid run flow cell

³Plexity Per Lane = number of samples run per sequencer lane. Any plexity desired is possible. The common plexities shown in the table serve to illustrate the relationship between plexity, depth, yield, and cost (per sample, per read, or per MB). For any desired plexity, use the formulas below to calculate these relative costs.

⁴Reads Per Sample (M) = Reads Per Lane / Plexity Per Lane

⁵MB Per Sample = (Reads Per Sample (M) x Combined Read Length)

⁶Cost Per Sample = Cost Per Lane / Plexity

⁷Cost Per Million Reads = Cost Per Lane / Reads Per Lane (M)

⁸Cost Per MB = Cost Per Sample / MB Per Sample

⁹Actual turnaround time for a project depends on a number of factors, the principle one being the scale of the project. By filling ≥ 1 flow cells, clients will be ensured faster NGS turnaround. High output flow cells, with 8 lanes to fill, can sometimes result in a delay as we wait for enough samples to accumulate to fill a flow cell. Rapid run flow cells, with only two lower-output lanes, are typically associated with shorter turnaround times, especially for smaller projects. However, turnaround on all platforms may be fast, depending on other projects running through the facility, or the scale of your own project. Hence, please speak with UMGC staff about timing on your own project