

**Supplementary materials Figure S1. Process scheme of time-consumption (in minutes) for library preparation by three approaches NEB+TWIST, Illumina and Paragon (extrapolation to 20 samples).** The calculation of time was performed based on the manufacturer’s manual and personal experience with workflow, including also relevant QC. First column reflect the particular steps of the workflow (grey rectangles); 2-4 column (NEB+TWIST, Illumina and Paragon) reflect the particular NGS library preparation steps with presented time consumptions (in minutes) related to particular QC (white rectangles with green border line) and workflow steps (white rectangles with grey border line).

	NEB+TWIST	ILLUMINA	PARAGON
Number of samples Sample quality requirement Sample type	20 1-100 ng, RIN 2-7 SARS-Cov-2 RNA/DNA	20 10 ng cDNA, RIN n.spec. SARS-Cov-2 RNA/DNA	20 50-100 ng cDNA, RIN n.spec. SARS-Cov-2 RNA/DNA
Workflow in minutes	hands on/instrument	hands on/instrument	hands on/instrument
QC: dCt of samples (qPCR)	30/90	30/90	30/90
Fragmentation First Strand Synthesis Second Strand Synthesis Purification (beads)	5/3 20/40 20/60 20/-	5/1 sec 20/60 20/60 20/-	- 20/95  20/-
End Prep of cDNA Library Adaptor Ligation Tagmentation Multiplex PCR reaction Purification (beads)	20/60 20/30 -/- -/- 20/-	-/- -/- 10/5 -/- 20/-	-/- -/- -/- 20/65 20/-
PCR Enrich. of Adaptor Ligated DNA Amplification of Tagmented DNA Digestion Reaction Purification (beads) Second PCR Reaction Purification (beads)	20/23 -/- -/- 20/- - -	-/- 20/20 -/- 20/- - -	-/- -/- 20/10 20/- 20/50 20/-
QC: Quantification of pre-enriched libraries (Qubit, ng/μl)	20/20	20/20	20/20
QC: Distribution of fragments of pre-enriched libraries (Bioanalyzer, bp)	40/80	40/80	40/80
Plexing, concentrating, resuspending	40/60	40/-	
Hybridization	20/960	20/960	
Capturing of Hybridized Probes Post-capture PCR amplification Purification (beads)	20/20 30/20 20/-	20/45 30/20 20/-	
QC: Quantification of post-enriched libraries (Qubit, ng/μl)	5/5	5/5	
QC: Distrib. of fragments of post-enriched libraries (Bioanalyzer, bp)	10/40	10/40	
TOTAL time (h, min)	6h 42min/26h 54min	6h 6min/23h 24min	4h 12min/6h 30min
TOTAL time (minus hybridisation)	6h 42min/10h 54min	6h 6min/7h 24min	-