MinION Mk1B (MN19362) Final report

16 Jun 23, 17:24 — 16 Jun 23, 17:49 · RU_test · no_sample · MN19362
Protocol run ID: cf0b707b-477e-454b-82c2-f532dae16fc5

Run summary | Run configuration | Sequence output | Run health | Run log

Run summary

DATA OUTPUT

Estimated bases	77.41 Mb
Data produced	679.25 MB
Reads generated	4.44 k
Estimated N50	38.23 kb

BASECALLING

Reads called	90.74%
Bases called (min Q score: 8)	38.37 Mb Pass 5.16 Mb Fail

RUN DURATION

Run time

0 hrs 22 mins / 72 hrs 0 mins

Elapsed time 🟦 Run limit ☐

Run status

STOPPED · *By user*

View unit abbreviations used in this report

Run configuration

RUN SETUP

Flow cell type	FLO-MIN106
Flow cell ID	sim
Kit type	SQK-LSK109

RUN SETTINGS

Run limit	72h
Active channel selection	On
Pore scan freq.	1.5 hrs
Reserved pores	On
Minimum read length	200 bp
Read splitting	Off
Basecalling	Fast model, 450 bps
Modified basecalling	Off

DATA OUTPUT SETTINGS

FAST5 output	vbz_compress
FAST5 reads per file	4000
FASTQ output	gzip_compress
FASTQ reads per file	4000
BAM output	Off
Bulk file output	Off
Data location	/var/lib/minknow/data/./RU_test/no_sample/20230616_1324_MN19362_sim_cf0b707b

SOFTWARE VERSIONS

MinKNOW	23.04.5
Bream	7.5.9
Configuration	5.5.13
Guppy	6.5.7
MinKNOW Core	5.5.3

Sequence output

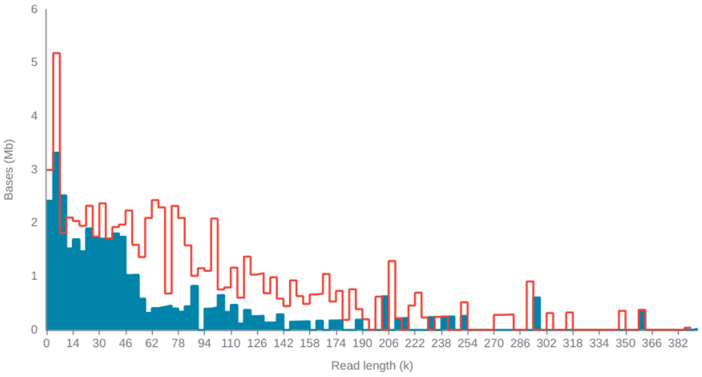
READ LENGTHS · OUTLIERS REMOVED

The read length graph shows the total number of bases vs the read length. The longest 1% of strands are classified as outliers, and excluded to allow focus on the main body of data.

Legend

🟦 Basecalled — Estimated

Estimated N50	% Basecalled
38.23 kb	**90.74%**



OUTLIERS

The longest 1% of strands are classified as outliers, and aggregated into groups to show their relative amounts.

Read length (kb)	Aggregated reads (kb)
392 - 396	383.7

CUMULATIVE OUTPUT

The cumulative output shows the total amount of bases or reads sequenced over time by your device.

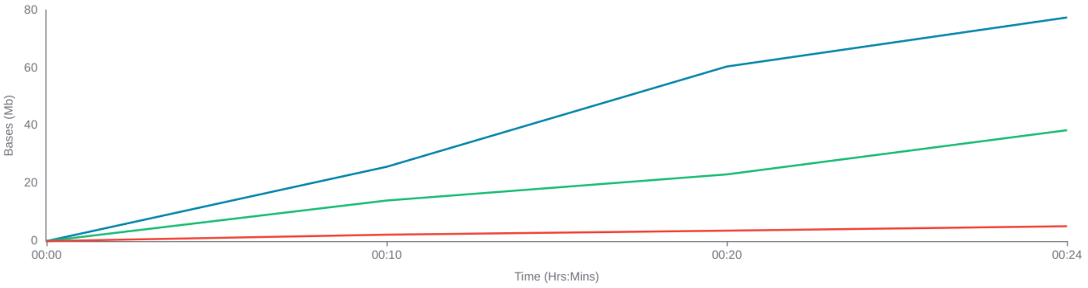
Bases

Legend

— Estimated
Predicted total number of bases, prior to basecalling

— Passed
Bases equal to or above the quality score threshold.

— Failed
Bases below the quality score threshold.



Reads

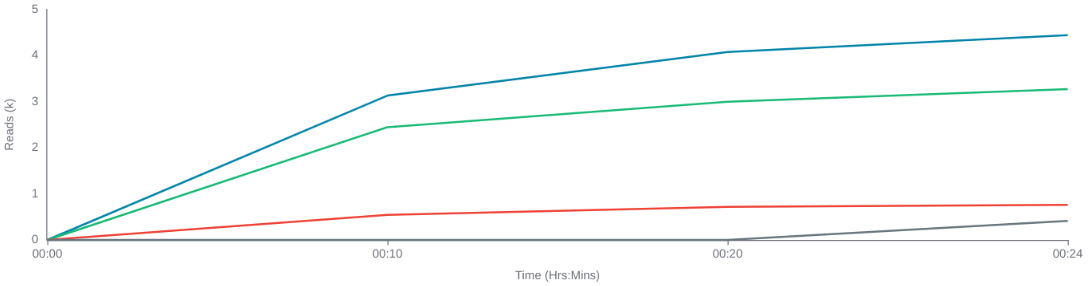
Legend

— Total
Total number of reads, including passed, failed and skipped.

— Passed
Reads equal to or above the quality score threshold.

— Failed
Reads below the quality score threshold.

— Skipped
Reads that will not be basecalled. Post run basecalling is possible.



QUALITY SCORE

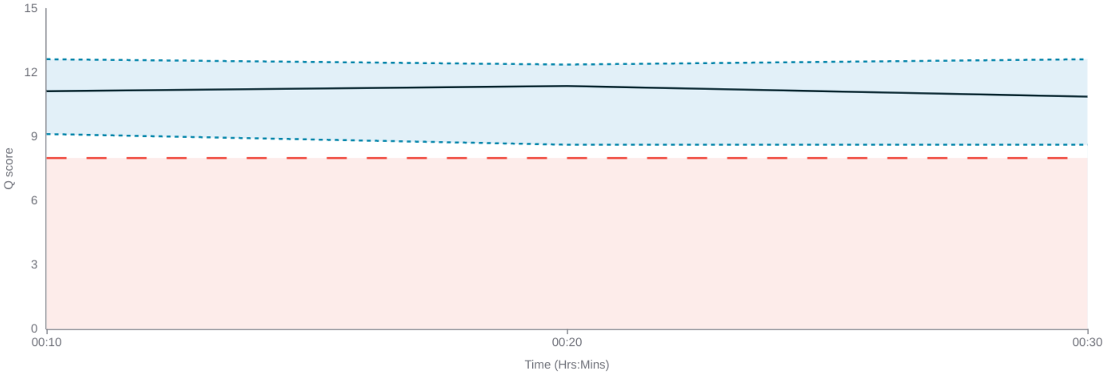
The quality score is calculated as basecalling is performed on your device. Reads that fall below the minimum value of 8 will be classified as failed reads. You can alter the accepted minimum quality score in MinKNOW.

Legend

— Mode
The most frequent quality score of reads in the run.

⬚ Spread
The spread of quality scores, found by calculating full width half maximum.

--- Min. quality score
Minimum quality score to be accepted as a passed read.



Troubleshooting

Quality score low
This can be due to the translocation speed being out of the accepted range, which can correlate to low quality scores. If you see that the translocation speed is out of the accepted range in the below graph, please see the Flow Cell refuelling page linked here for further troubleshooting.

Run health

PORE ACTIVITY

The Pore activity graph shows the performance of your sample as it is being sequenced during a run.

Legend

● Sequencing
Pore currently sequencing

● Adapter
Pore currently sequencing adapter

● Pore available
Pore available for sequencing

● Unavailable
Pore unavailable for sequencing

● Active feedback
Channel ejecting analyte

● No pore
No pore detected in channel

● Out of range-high
Current is positive but unavailable for sequencing

● Out of range-low
Current is negative but unavailable for sequencing

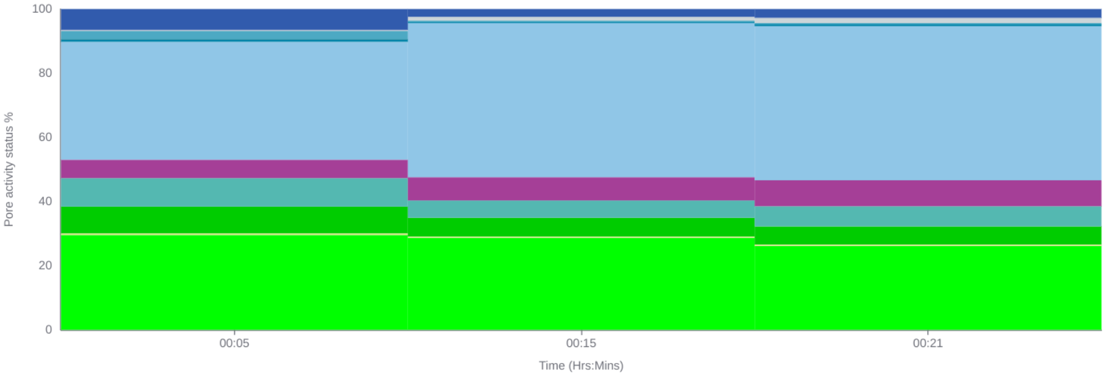
● Multiple
Multiple pores detected. Unavailable for sequencing.

● Saturated
The channel has switched off as current levels exceed hardware limitations

● Zero
Pore currently unavailable for sequencing

● Channel disabled
Channel is disabled and awaiting another pore scan

● Unclassified
Pore status unknown



Troubleshooting

General
Some commonly seen issues are excess pores classified as Recovering, Open Pore, or Free Adapter. To find out what advice is applicable for your run, visit the user guide.

PORE SCAN

A Pore scan is performed at configurable time intervals to determine the current status of pores within channels on a Flow Cell. For this run a Pore scan is performed every 1.5 hrs.

Legend

● Pore available
Pore in channel available for sequencing

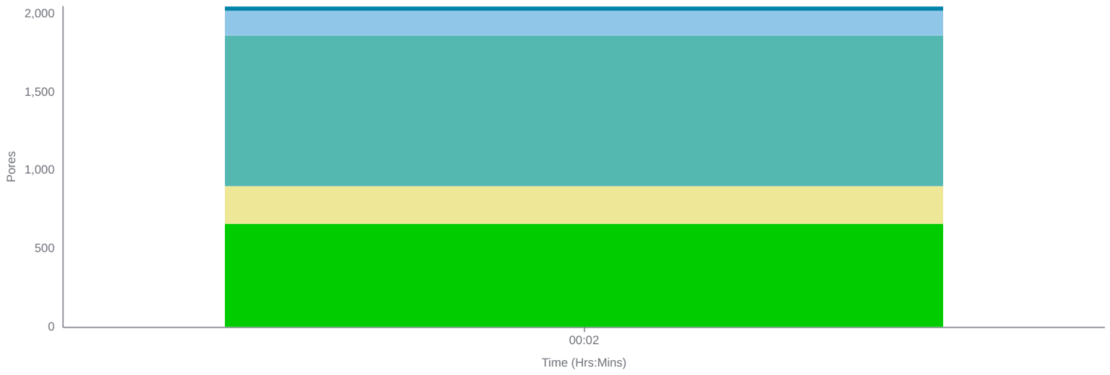
● Reserved pore
Pore in reserve, will return to available when required

● Unavailable
Pore inhibited from sequencing

● Saturated
Possible contamination in the sample

● Zero
No current is passing through this pore, possibly due to bubbles on the membrane

● Inactive
Pore no longer suitable for further sequencing



Troubleshooting

High proportion Unavailable
Possible contaminants in library blocking the pore. Consider using the Flow Cell Wash Kit, and reloading a library.

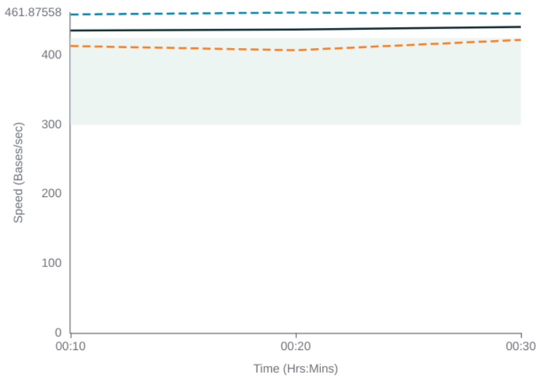
High proportion Inactive
If localised to one area of the Flow Cell, this could indicate that an air bubble has been introduced during the flushing/loading steps. If inactivity is spread across the Flow Cell this could be caused by improper loading of the library, please refer to the user guide for further support.

TRANSLOCATION SPEED

The translocation speed is the rate at which DNA/RNA travels through pores as it is being sequenced.

Legend

— Median --- 75% quartile --- 25% quartile ☐ Accepted range



Troubleshooting

Low speed
Check that the Flow Cell is within the target temperature range.

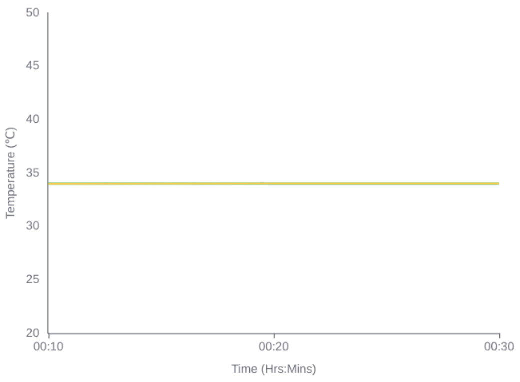
Note
Low-quality and short reads are not included in this graph.

TEMPERATURE

The temperature of the Flow Cell over the run time.

Legend

— Measured — Target



Troubleshooting

Out of range
Check that the Flow Cell is correctly seated and firmly pushed down into the device. Ensure ambient temperature is always within the specified range for your device in the user guide.

Air flow should be good but not excessive. Excessive amounts of cool air blowing on the device could prevent it from reaching target temperature.

Run log

SYSTEM MESSAGES

System messages are a record of the events that occurred in the time covered by this report.

Please view the original run report, which would have been generated at the end of the run, to see the system messages.

UNIT ABBREVIATIONS

Byte	B
Kilobyte	KB
Megabyte	MB
Gigabyte	GB
Terabyte	TB

Base	b
Kilobase	kb
Megabase	Mb
Gigabase	Gb
Terabase	Tb

Minutes	mins
Hours	hrs

Generated using Run Report Template v.5.5.6