

COVID-19 PCR testing figures

High demand which caused delays in PCR testing in the early stage of the COVID-19 Omicron outbreak resulted in some swabs being sent to Australia for processing to support New Zealand laboratories.

The Ministry of Health received requests under the Official Information Act 1982 about the processing of PCR tests from 23 January 2022 until early May, the time taken to process these tests, the number sent to Australia and the costs involved. Given the public interest and to enhance transparency, the information below is being proactively released.

8,691 samples from the Auckland region were referred to Queensland, Australia, for processing from 23 January 2022. The samples and test results were managed by the referring laboratory in New Zealand, and a breakdown of results for these samples is not held by the Ministry.

The total cost to process COVID-19 tests in Australia was \$627,924.75 (AUD). The total cost for transporting the test samples to Queensland and returning them to New Zealand was \$42,681.84 (NZD).

The transportation costs covered sending all tests to Australia for processing and back to New Zealand after this. It is part of the protocols around sending human tissues or samples overseas for processing that they are returned to the country of origin.

Table 1 provides a breakdown of the PCR tests processed between 23 January and 3 May 2022. The results are broken down by those that were negative, positive and indeterminate, invalid or unprocessed. Invalid is the failure of the internal test control which can be due to a substance in the sample interfering with the test, insufficient sample being present or a failure during testing. An indeterminate result may be where it is a very weak result. An unprocessed sample is due to a sample integrity issue or a labelling error (e.g., insufficient information or sample and patient information does not match). These inconclusive or invalid results were not related to delays in PCR testing processing during the testing surge earlier this year.

Table 2 provides a breakdown of the days taken to process PCR tests between 23 January and 3 May 2022. As noted above, the processing of some tests was delayed by a significant surge in demand that laboratories were unable to process in a timely manner. Given this surge in demand, laboratories triaged the processing of tests to focus on priority cases based on the most clinically urgent such as those taken from border workers with direct contact with international travellers and household contact. Samples with a lower priority, such as those from people at low-risk location of interest, were more likely to be delayed

Table 3 provides the turnaround times (TAT) for PCR tests processed from 23 January to 12 April 2022. The turnaround time is the time interval taken from when the specimens are received in the laboratory to the time a result is released.

The Ministry does not hold information does not hold this level of information and cannot easily differentiate the processing times by DHB area as this level of detail is held by the laboratories.

Table 1. Breakdown of PCR tests processed between 23 January 2022 to 3 May 2022, by test result

Lab result	Number of tests processed
Negative	609,402
Positive	56,571
Indeterminate/Invalid or unprocessed	46,093

Table 2. Number of PCR tests that were positive, negative, or indeterminate or invalid, broken down by processing days between 23 January 2022 to 3 May 2022

Days to report	Negative result	Positive result	Inconclusive, invalid or unprocessed result	Total
0	183,233	13,358	22,657	219,248
1	250,807	15,865	14,024	280,696
2	77,400	6,446	3,510	87,356
3	35,455	5,069	1,818	42,342
4	22,007	5,472	65	27,544
5	10,377	2,883	79	13,339
6	6,293	2,040	37	8,370
7	3,659	1,302	296	5,257
8	3,359	686	51	4,096
9	2,208	600	63	2,871
10	2,301	451	44	2,796
11	2,286	462	269	3,017
12	2,295	516	722	3,533
13	2,346	574	774	3,694
14	2,016	535	663	3,214
15	650	176	468	1,294
16	968	55	286	1,309
17	1,557	60	237	1,854
18	22	9	4	35
19	3	4	26	33
20	1	2	-	3
21	1	2	-	3
22	1	-	-	1
23	1	-	-	1
25	6	-	-	6
28	3	-	-	3
29	2	1	-	3
31	1	-	-	1
34	1	-	-	1
35	1	-	-	1
36	5	1	-	6
37	3	-	-	3
38	1	-	-	1

Days to report	Negative result	Positive result	Inconclusive, invalid or unprocessed result	Total
39	1	1	-	2
40	2	-	-	2
42	2	-	-	2
43	4	-	-	4
44	2	-	-	2
45	1	-	-	1
46	1	-	-	1
47	2	-	-	2
50	2	-	-	2
51	2	-	-	2
55	3	-	-	3
56	2	-	-	2
57	2	-	-	2
58	1	-	-	1
68	1	-	-	1
76	1	-	-	1
83	1	-	-	1
92	1	-	-	1
Total tests	609,300	56,570	46,093	711,963

Table 3: Turnaround testing times for processing PCR tests from 23 January to 12 April 2022.

First message event date	Number of tests completed	Average turn-around time (hours)
23/01/2022	9,787	13
24/01/2022	12,421	13
25/01/2022	27,710	14
26/01/2022	22,456	14
27/01/2022	21,464	14
28/01/2022	22,425	14
29/01/2022	18,698	15
30/01/2022	13,145	15
31/01/2022	17,772	18
1/02/2022	19,618	19
2/02/2022	24,735	16
3/02/2022	20,130	18
4/02/2022	21,182	20
5/02/2022	16,455	19
6/02/2022	12,610	20
7/02/2022	13,407	19
8/02/2022	15,594	18
9/02/2022	27,316	17

First message event date	Number of tests completed	Average turn-around time (hours)
10/02/2022	22,696	17
11/02/2022	24,444	19
12/02/2022	21,247	21
13/02/2022	17,262	23
14/02/2022	20,900	23
15/02/2022	27,958	21
16/02/2022	31,460	26
17/02/2022	32,244	30
18/02/2022	30,093	33
19/02/2022	26,753	39
20/02/2022	26,530	45
21/02/2022	23,831	47
22/02/2022	27,297	59
23/02/2022	32,774	53
24/02/2022	30,063	53
25/02/2022	30,767	60
26/02/2022	27,570	68
27/02/2022	22,722	88
28/02/2022	16,275	84
1/03/2022	20,043	71
2/03/2022	20,432	88
3/03/2022	19,848	129
4/03/2022	14,693	143
5/03/2022	6,044	122
6/03/2022	5,174	136
7/03/2022	4,645	91
8/03/2022	5,186	25
9/03/2022	5,313	11
10/03/2022	5,037	11
11/03/2022	4,821	10
12/03/2022	3,578	10
13/03/2022	2,199	7
14/03/2022	3,105	23
15/03/2022	4,828	9
16/03/2022	4,498	11
17/03/2022	4,000	8
18/03/2022	4,038	9
19/03/2022	2,898	9
20/03/2022	1,787	7
21/03/2022	2,627	7
22/03/2022	3,996	10
23/03/2022	4,492	36
24/03/2022	3,617	10
25/03/2022	3,605	8

First message event date	Number of tests completed	Average turn-around time (hours)
26/03/2022	2,689	8
27/03/2022	1,840	6
28/03/2022	2,686	11
29/03/2022	3,690	9
30/03/2022	3,778	8
31/03/2022	3,241	15
1/04/2022	3,402	9
2/04/2022	2,207	7
3/04/2022	1,517	6
4/04/2022	2,381	18
5/04/2022	3,673	9
6/04/2022	2,756	8
7/04/2022	2,863	14
8/04/2022	2,963	9
9/04/2022	3,931	5
10/04/2022	2,325	3
11/04/2022	2,388	9
12/04/2022	3,314	8