

**Table 1 – Coverage sequencing depth of the minor variants found showing the amount of reads support per strand.**

GENOME	POS	REGION	DEPTH	A_DEPTH	A_PLUS	A_MINUS	C_DEPTH	C_PLUS	C_MINUS	G_DEPTH	G_PLUS	G_MINUS	T_DEPTH	T_PLUS	T_MINUS	PUTATIVE_MINOR	MAJOR	MINOR
20140055FN_BR_AM_Manau	2130	ORFIAB	6241	4369	2295	2074	0	0	0	1868	948	920	0	0	0	A/G	A	G
20140055FN_BR_AM_Manau	2252	ORFIAB	2765	728	306	422	2037	899	1138	0	0	0	0	0	0	A/C	C	A
20140055FN_BR_AM_Manau	9661	ORFIAB	1013	0	0	0	423	218	205	0	0	0	590	294	296	T/C	T	C
20140055FN_BR_AM_Manau	14322	ORFIAB	1505	0	0	0	1202	620	582	0	0	0	303	157	146	T/C	C	T
20140055FN_BR_AM_Manau	20859	ORFIAB	4342	0	0	0	0	0	0	443	278	165	3899	2482	1417	T/G	T	G
20140055FN_BR_AM_Manau	21810	S	6824	0	0	0	702	328	374	0	0	0	6122	2786	3336	T/C	T	C
20140055FN_BR_AM_Manau	23285	S	7781	0	0	0	0	0	0	6667	3586	3081	1114	597	517	T/G	G	T
20140055FN_BR_AM_Manau	24933	S	4011	0	0	0	0	0	0	3487	1348	2139	524	235	289	T/G	G	T
20140055FN_BR_AM_Manau	25797	ORF3A	1729	261	110	151	1468	608	860	0	0	0	0	0	0	A/C	C	A
20140055FN_BR_AM_Manau	26846	M	7786	0	0	0	6564	4204	2360	0	0	0	1222	747	475	T/C	C	T
20140055FN_BR_AM_Manau	27179	M	7322	2	0	2	1	1	0	6475	2830	3645	844	377	467	T/G	G	T
20140283VA_BR_AM_Manau	12331	ORFIAB	5306	552	262	290	0	0	0	4742	2253	2489	12	6	6	A/G	G	A
20140451EL_BR_AM_Manau	8841	ORFIAB	3560	2	1	1	3100	1649	1451	0	0	0	446	219	227	T/C	C	T
20140451EL_BR_AM_Manau	16915	ORFIAB	2780	0	0	0	1892	930	962	0	0	0	888	426	462	T/C	C	T
20140481LB_BR_AM_Manau	14402	ORFIAB	4656	11	6	5	473	233	240	8	5	3	4164	2207	1957	T/C	T	C
20140481LB_BR_AM_Manau	14403	ORFIAB	4618	522	264	258	4064	2154	1910	24	15	9	8	5	3	A/C	C	A
20140481LB_BR_AM_Manau	14404	ORFIAB	4636	8	4	4	4074	2154	1920	552	274	278	2	2	0	C/G	C	G
20140481LB_BR_AM_Manau	14740	ORFIAB	7787	0	0	0	1	1	0	1427	753	674	6359	3047	3312	T/G	T	G
20140481LB_BR_AM_Manau	14745	ORFIAB	7874	1518	818	700	2	1	1	1	1	0	6352	3009	3343	A/T	T	A
20140481LB_BR_AM_Manau	14750	ORFIAB	7900	2	2	0	1607	900	707	2	2	0	6289	2950	3339	T/C	T	C
20140488MF_BR_AM_Manau	8290	ORFIAB	1901	0	0	0	1122	591	531	0	0	0	779	371	408	T/C	C	T
20140488MF_BR_AM_Manau	10156	ORFIAB	1772	0	0	0	1564	801	763	0	0	0	208	101	107	T/C	C	T
20140536FR_BR_AM_Manau	20296	ORFIAB	2921	2570	1126	1444	0	0	0	350	209	141	1	1	0	A/G	A	G
20140536FR_BR_AM_Manau	20297	ORFIAB	3011	2575	1131	1444	0	0	0	0	0	0	373	211	162	A/T	A	T
20140536FR_BR_AM_Manau	20300	ORFIAB	3026	417	225	192	1	1	0	1	0	1	2607	1168	1439	A/T	T	A
20141355VB_BR_AM_Manau	884	ORFIAB	3260	5	2	3	1425	684	741	0	0	0	1830	800	1030	T/C	T	C
20141355VB_BR_AM_Manau	26372	E	2902	2	2	0	0	0	0	2518	1134	1384	382	186	196	T/G	G	T
20141493LR_BR_AM_Labrea	2919	ORFIAB	3319	1	0	1	2924	1381	1543	0	0	0	394	182	212	T/C	C	T
20141493LR_BR_AM_Labrea	10030	ORFIAB	2372	0	0	0	2102	1119	983	0	0	0	270	144	126	T/C	C	T
20141493LR_BR_AM_Labrea	20262	ORFIAB	698	548	256	292	0	0	0	150	70	80	0	0	0	A/G	A	G
20141493LR_BR_AM_Labrea	28704	N	6078	5354	2669	2685	724	383	341	0	0	0	0	0	0	A/C	A	C
20141582LB_BR_AM_Manau	10728	ORFIAB	1301	0	0	0	732	354	378	0	0	0	569	270	299	T/C	C	T
20141582LB_BR_AM_Manau	11142	ORFIAB	1029	0	0	0	177	82	95	0	0	0	852	402	450	T/C	T	C
20141582LB_BR_AM_Manau	11143	ORFIAB	1029	186	89	97	1	0	1	842	396	446	0	0	0	A/G	G	A
20141582LB_BR_AM_Manau	12220	ORFIAB	910	0	0	0	103	52	51	0	0	0	807	417	390	T/C	T	C
20141582LB_BR_AM_Manau	15152	ORFIAB	926	106	79	27	2	1	1	0	0	0	818	498	320	A/T	T	A
20141582LB_BR_AM_Manau	19772	ORFIAB	1032	109	34	75	1	0	1	0	0	0	922	416	506	A/T	T	A
20141582LB_BR_AM_Manau	19777	ORFIAB	1097	0	0	0	149	50	99	948	432	516	0	0	0	C/G	G	C
20141582LB_BR_AM_Manau	20968	ORFIAB	1253	151	82	69	0	0	0	1102	547	555	0	0	0	A/G	G	A
20141582LB_BR_AM_Manau	20971	ORFIAB	1259	0	0	0	144	78	66	0	0	0	1115	560	555	T/C	T	C
20141582LB_BR_AM_Manau	22988	S	603	0	0	0	153	84	69	450	239	211	0	0	0	C/G	G	C
20141721RM_BR_AM_Manau	16646	ORFIAB	3176	0	0	0	2823	1413	1410	0	0	0	353	180	173	T/C	C	T

20141881JO_BR_AM_Manau	19751	1637	1423	624	799	3	1	2	2	1 1	209	98	111	A/T	A	T
20141881JO_BR_AM_Manau	19752	1674	1474	643	831	183	87	96	1	0 1	16	9	7	A/C	A	C
20141881JO_BR_AM_Manau	19753	1684	1463	646	817	218	95	123	3	0 3	0	0	0	A/C	A	C
20141881JO_BR_AM_Manau	19754	1686	1447	636	811	62	20	42	0	0 0	177	90	87	A/T	A	T
20141881JO_BR_AM_Manau	19758	1744	1460	638	822	7	0	7	23	12 11	254	118	136	A/T	A	T
20141881JO_BR_AM_Manau	19759	1749	1470	650	820	260	119	141	1	0 1	18	6	12	A/C	A	C
20141916KM_BR_AM_Manau	25702	1792	0	0	0	1140	529	611	0	0 0	652	297	355	T/C	C	T
20141937RS_BR_AM_Labrea	5380	925	1	0	1	307	166	141	0	0 0	617	322	295	T/C	T	C
20141937RS_BR_AM_Labrea	8668	2196	0	0	0	1781	975	806	0	0 0	415	225	190	T/C	C	T
20141937RS_BR_AM_Labrea	10076	3382	0	0	0	806	419	387	0	0 0	2576	1327	1249	T/C	T	C
20141937RS_BR_AM_Labrea	19102	3295	0	0	0	2922	1380	1542	0	0 0	373	165	208	T/C	C	T
20141937RS_BR_AM_Labrea	23774	2223	0	0	0	0	0	0	804	346 458	1419	657	762	T/G	T	G
20141937RS_BR_AM_Labrea	26458	410	0	0	0	0	0	0	228	101 127	182	90	92	T/G	G	T
20142019FJ_BR_AM_Manau	22879	338	0	0	0	143	69	74	0	0 0	195	97	98	T/C	T	C
20142116AS_BR_AM_Manau	3319	1121	592	248	344	0	0	0	526	216 310	3	2	1	A/G	A	G
20142153MO_BR_AM_Manau	1085	888	0	0	0	0	0	0	577	270 307	311	142	169	T/G	G	T
20142205NS_BR_AM_Manau	20117	1087	4	3	1	950	583	367	8	4 4	125	67	58	T/C	C	T
20142274FB_BR_AM_Manau	545	3330	0	0	0	0	0	0	2893	1424 1469	437	227	210	T/G	G	T
20142410MC_BR_AM_Manau	16795	6700	0	0	0	1	0	1	5320	2699 2621	1379	729	650	T/G	G	T
20142424SS_BR_AM_Manau	10725	1757	1	0	1	1531	736	795	0	0 0	225	110	115	T/C	C	T
20142424SS_BR_AM_Manau	18368	1591	0	0	0	0	0	0	1356	674 682	235	124	111	T/G	G	T
20142424SS_BR_AM_Manau	19155	929	824	408	416	105	54	51	0	0 0	0	0	0	A/C	A	C
20142424SS_BR_AM_Manau	19158	944	128	64	64	0	0	0	1	1 0	813	403	410	A/T	T	A
20142493RO_BR_AM_Manau	15822	1703	2	1	1	1	0	1	1522	656 866	178	16	162	T/G	G	T
20142973ES_BR_AM_Manau	5730	1787	0	0	0	1604	727	877	0	0 0	183	83	100	T/C	C	T
20143003CA_BR_AM_Manau	16245	7678	1250	701	549	0	0	0	6426	3452 2974	2	1	1	A/G	G	A
20143003CA_BR_AM_Manau	17289	5044	4117	2085	2032	1	1	0	926	464 462	0	0	0	A/G	A	G
20143003CA_BR_AM_Manau	18561	5992	0	0	0	1026	567	459	0	0 0	4966	2687	2279	T/C	T	C
20143003CA_BR_AM_Manau	19944	6501	2	1	1	5842	3391	2451	1	1 0	656	405	251	T/C	C	T
20143003CA_BR_AM_Manau	19950	7221	6223	3710	2513	964	574	390	32	21 11	2	1	1	A/C	A	C
20143003CA_BR_AM_Manau	19952	7315	1	1	0	6562	3890	2672	0	0 0	752	415	337	T/C	C	T
20143003CA_BR_AM_Manau	19953	7403	6572	3905	2667	0	0	0	0	0 0	831	452	379	A/T	A	T
20143003CA_BR_AM_Manau	20166	1315	148	72	76	0	0	0	0	0 0	1167	603	564	A/T	T	A
20143003CA_BR_AM_Manau	20167	1302	11	7	4	153	76	77	1132	579 553	6	4	2	C/G	G	C
20143003CA_BR_AM_Manau	20168	1287	1147	585	562	139	62	77	0	0 0	1	0	1	A/C	A	C
20143003CA_BR_AM_Manau	20169	1279	136	66	70	2	1	1	0	0 0	1141	587	554	A/T	T	A
20143003CA_BR_AM_Manau	20171	1267	3	2	1	0	0	0	1136	580 556	128	61	67	T/G	G	T
20143003CA_BR_AM_Manau	20173	1254	1	0	1	0	0	0	1126	578 548	127	61	66	T/G	G	T
20143003CA_BR_AM_Manau	20174	1246	0	0	0	129	61	68	0	0 0	1117	571	546	T/C	T	C
20143003CA_BR_AM_Manau	20611	861	0	0	0	614	318	296	0	0 0	247	125	122	T/C	C	T
20143088ER_BR_AM_Manau	8722	6486	0	0	0	5705	3119	2586	1	0 1	780	394	386	T/C	C	T
20143088ER_BR_AM_Manau	19400	1799	2	1	1	1602	795	807	195	61 134	0	0	0	C/G	C	G
20143088ER_BR_AM_Manau	23996	2062	0	0	0	1847	571	1276	0	0 0	215	66	149	T/C	C	T
20143145KL_BR_AM_Manau	6659	696	491	234	257	0	0	0	205	86 119	0	0	0	A/G	A	G

20143164MG_BR_AM_Manaus 2020-12-18	19263 ORFIAB	2824	2	2	0	2378	1311	1067	0	0	0	444	223	221	T/C	C	T
20143297CR_BR_AM_Manaus 2020-12-23	25350 S	1714	0	0	0	1534	863	671	0	0	0	180	99	81	T/C	C	T
20250295LD_BR_AM_Manaus 2020-04-11	3357 ORFIAB	965	815	395	420	138	73	65	0	0 0		12	7	5	A/C	A	C
20250295LD_BR_AM_Manaus 2020-04-11	4341 ORFIAB	1187	0	0	0	121	58	63	0	0 0		1066	546	520	T/C	T	C
20250295LD_BR_AM_Manaus 2020-04-11	4344 ORFIAB	1129	3	2	1	114	53	61	0	0 0		1012	527	485	T/C	T	C
20250295LD_BR_AM_Manaus 2020-04-11	7508 ORFIAB	1148	120	57	63	1001	509	492	5	3 2		22	11	11	A/C	C	A
20250295LD_BR_AM_Manaus 2020-04-11	7513 ORFIAB	1199	1	1	0	302	153	149	0	0 0		896	447	449	T/C	T	C
20250295LD_BR_AM_Manaus 2020-04-11	20064 ORFIAB	3397	11	5	6	948	586	362	0	0 0		2438	1428	1010	T/C	T	C
20250295LD_BR_AM_Manaus 2020-04-11	20745 ORFIAB	715	372	175	197	0	0	0	0	0 0		343	168	175	A/T	A	T
20250295LD_BR_AM_Manaus 2020-04-11	20757 ORFIAB	632	0	0	0	25	11	14	154	73 81		453	215	238	T/G	T	G
20250295LD_BR_AM_Manaus 2020-04-11	20759 ORFIAB	540	22	11	11	353	167	186	4	2 2		161	72	89	T/C	C	T
20250295LD_BR_AM_Manaus 2020-04-11	20760 ORFIAB	528	345	167	178	0	0	0	162	71 91		21	10	11	A/G	A	G
20250295LD_BR_AM_Manaus 2020-04-11	20762 ORFIAB	532	0	0	0	359	177	182	0	0 0		173	81	92	T/C	C	T
20250295LD_BR_AM_Manaus 2020-04-11	20766 ORFIAB	490	346	171	175	0	0	0	144	67 77		0	0	0	A/G	A	G
20250295LD_BR_AM_Manaus 2020-04-11	20771 ORFIAB	462	334	161	173	0	0	0	128	57 71		0	0	0	A/G	A	G
20250295LD_BR_AM_Manaus 2020-04-11	21796 S	397	0	0	0	0	0	0	249	130 119		148	73	75	T/G	G	T
20250329LS_BR_AM_Manaus 2020-04-09	3357 ORFIAB	808	678	305	373	118	72	46	0	0 0		12	9	3	A/C	A	C
20250329LS_BR_AM_Manaus 2020-04-09	3359 ORFIAB	818	21	12	9	134	76	58	14	10 4		649	292	357	T/C	T	C
20250329LS_BR_AM_Manaus 2020-04-09	3684 ORFIAB	2513	2246	1044	1202	0	0	0	0	0 0		267	146	121	A/T	A	T
20250329LS_BR_AM_Manaus 2020-04-09	3686 ORFIAB	2493	277	150	127	2216	1008	1208	0	0 0		0	0	0	A/C	C	A
20250329LS_BR_AM_Manaus 2020-04-09	10336 ORFIAB	2232	714	372	342	1514	776	738	0	0 0		4	2	2	A/C	C	A
20250329LS_BR_AM_Manaus 2020-04-09	10811 ORFIAB	2535	0	0	0	2056	1036	1020	0	0 0		478	235	243	T/C	C	T
20250329LS_BR_AM_Manaus 2020-04-09	23288 S	3605	487	282	205	0	0	0	3118	1676 1442		0	0	0	A/G	G	A
20841592RS_BR_AM_Manaus 2020-09-02	28310 N	3539	1193	573	620	2344	1354	990	0	0 0		2	1	1	A/C	C	A
20841592RS_BR_AM_Manaus 2020-09-02	28487 N	5619	3603	1834	1769	1	0	1	2015	982 1033		0	0	0	A/G	A	G
20841891TC_BR_AM_Manaus 2020-09-17	19109 ORFIAB	1995	0	0	0	0	0	0	904	385 519		1091	526	565	T/G	T	G
20842081KM_BR_AM_Manaus 2020-10-01	5406 ORFIAB	4151	0	0	0	1412	762	650	0	0 0		2739	1414	1325	T/C	T	C
20842081KM_BR_AM_Manaus 2020-10-01	11083 ORFIAB	1489	0	0	0	0	0	0	572	308 264		850	444	406	T/G	T	G
20842378LB_BR_AM_Manaus 2020-10-29	8229 ORFIAB	2285	245	168	77	1	0	1	134	28 106		1905	891	1014	A/T	T	A
20842378LB_BR_AM_Manaus 2020-10-29	8230 ORFIAB	2290	2	1	1	0	0	0	244	167 77		2044	917	1127	T/G	T	G
20842378LB_BR_AM_Manaus 2020-10-29	19812 ORFIAB	2581	2286	998	1288	289	95	194	0	0 0		6	1	5	A/C	A	C
20842378LB_BR_AM_Manaus 2020-10-29	19816 ORFIAB	2688	2	0	2	71	29	42	2263	982 1281		352	131	221	T/G	G	T
20842386CA_BR_AM_Manaus 2020-10-28	18647 ORFIAB	1758	1	1	0	1475	743	732	0	0 0		282	136	146	T/C	C	T
20842393GA_BR_AM_Manaus 2020-11-03	7081 ORFIAB	826	0	0	0	598	303	295	0	0 0		228	119	109	T/C	C	T
20842393GA_BR_AM_Manaus 2020-11-03	12439 ORFIAB	1852	0	0	0	547	271	276	0	0 0		1305	616	689	T/C	T	C
20842408LA_BR_AM_Manaus 2020-11-03	15843 ORFIAB	772	119	62	57	28	7	21	0	0 0		625	270	355	A/T	T	A
20842408LA_BR_AM_Manaus 2020-11-03	15844 ORFIAB	806	124	55	69	4	2	2	676	295 381		2	1	1	A/G	G	A
20842408LA_BR_AM_Manaus 2020-11-03	15845 ORFIAB	848	702	306	396	0	0	0	128	57 71		0	0	0	A/G	A	G
20842451CN_BR_AM_Manaus 2020-11-04	18395 ORFIAB	2148	0	0	0	887	455	432	1	1 0		1260	631	629	T/C	T	C
20842451CN_BR_AM_Manaus 2020-11-04	20025 ORFIAB	1588	1426	1367	59	162	79	83	0	0 0		0	0	0	A/C	A	C
20842455CA_BR_AM_Manaus 2020-11-05	16370 ORFIAB	5615	1	1	0	1234	839	395	0	0 0		4380	2320	2060	T/C	T	C
20842455CA_BR_AM_Manaus 2020-11-05	16375 ORFIAB	5149	641	334	307	4508	2344	2164	0	0 0		0	0	0	A/C	C	A
20842559AS_BR_AM_Manaus 2020-11-12	10340 ORFIAB	1044	1	0	1	820	421	399	0	0 0		223	108	115	T/C	C	T
20842559AS_BR_AM_Manaus 2020-11-12	15909 ORFIAB	1191	0	0	0	240	91	149	0	0 0		951	346	605	T/C	T	C

20842559AS_BR_AM_Manaus 2020-11-12	18318 ORFIAB	1340	0	0	0	0	0	0	1082	548 534	258	130	128	T/G	G	T
20842572LS_BR_AM_Manaus 2020-11-13	12363 ORFIAB	2329	0	0	0	235	113	122	0	0 0	2092	953	1139	T/C	T	C
20842695EA_BR_AM_Manaus 2020-11-19	3259 ORFIAB	3005	0	0	0	1	1	0	2549	1097 1452	455	231	224	T/G	G	T
20842695EA_BR_AM_Manaus 2020-11-19	23209 S	1561	1387	755	632	1	0	1	5	4 1	168	78	90	A/T	A	T
20842719LR_BR_AM_Manaus 2020-11-24	6046 ORFIAB	1478	0	0	0	1	0	1	298	198 100	1179	547	632	T/G	T	G
20842719LR_BR_AM_Manaus 2020-11-24	6049 ORFIAB	1486	1	1	0	1	0	1	305	196 109	1179	545	634	T/G	T	G
20842837AN_BR_AM_Manaus 2020-12-03	835 ORFIAB	6425	4	2	2	5283	2520	2763	2	1 1	1136	525	611	T/C	C	T
20842839FG_BR_AM_Manaus 2020-12-03	28253 ORF8	1110	0	0	0	822	403	419	0	0 0	288	184	104	T/C	C	T
20842839FG_BR_AM_Manaus 2020-12-03	28487 N	3092	1862	951	911	0	0	0	1229	649 580	1	0	1	A/G	A	G
20842839FG_BR_AM_Manaus 2020-12-03	28628 N	3579	0	0	0	3	1	2	2116	972 1144	1460	735	725	T/G	G	T
20842980AA_BR_AM_Manaus 2020-12-09	4548 ORFIAB	1895	1395	727	668	0	0	0	500	246 254	0	0	0	A/G	A	G
20842996RF_BR_AM_Manaus 2020-12-11	25864 ORF3A	1664	1490	640	850	0	0	0	174	52 122	0	0	0	A/G	A	G
20842996RF_BR_AM_Manaus 2020-12-11	28001 ORF8	876	0	0	0	0	0	0	769	383 386	107	58	49	T/G	G	T
20843023JA_BR_AM_Manaus 2020-12-11	16393 ORFIAB	3376	7	3	4	2931	1497	1434	0	0 0	438	211	227	T/C	C	T
20843023JA_BR_AM_Manaus 2020-12-11	17418 ORFIAB	2194	668	324	344	0	0	0	1526	765 761	0	0	0	A/G	G	A
20843044TM_BR_AM_Manaus 2020-12-14	12529 ORFIAB	5656	4665	2596	2069	964	617	347	2	1 1	25	19	6	A/C	A	C
20843049KC_BR_AM_Manaus 2020-12-16	3159 ORFIAB	6348	0	0	0	3663	1817	1846	0	0 0	2685	1252	1433	T/C	C	T
20843263MS_BR_AM_Manaus 2020-12-23	4167 ORFIAB	5530	0	0	0	606	322	284	0	0 0	4924	2579	2345	T/C	T	C
20843263MS_BR_AM_Manaus 2020-12-23	4505 ORFIAB	2843	311	159	152	0	0	0	2532	1265 1267	0	0	0	A/G	G	A
20843263MS_BR_AM_Manaus 2020-12-23	12106 ORFIAB	7618	0	0	0	2	1	1	5492	3365 2127	2124	1293	831	T/G	G	T
20843263MS_BR_AM_Manaus 2020-12-23	15514 ORFIAB	6506	5741	2502	3239	27	13	14	2	1 1	736	338	398	A/T	A	T
20843263MS_BR_AM_Manaus 2020-12-23	15665 ORFIAB	7656	2	1	1	1969	928	1041	0	0 0	5685	2641	3044	T/C	T	C
20843263MS_BR_AM_Manaus 2020-12-23	16864 ORFIAB	6485	715	385	330	0	0	0	5770	2908 2862	0	0	0	A/G	G	A
20843263MS_BR_AM_Manaus 2020-12-23	16865 ORFIAB	6453	711	381	330	0	0	0	0	0 0	5740	2885	2855	A/T	T	A
20843263MS_BR_AM_Manaus 2020-12-23	21855 S	3839	0	0	0	3366	1665	1701	0	0 0	473	225	248	T/C	C	T
20843312KD_BR_AM_Manaus 2020-12-29	21569 S	768	204	90	114	0	0	0	556	251 305	8	4	4	A/G	G	A
20843312KD_BR_AM_Manaus 2020-12-29	27625 ORF7A	3190	0	0	0	2497	1308	1189	0	0 0	693	338	355	T/C	C	T
20843351MC_BR_AM_Manaus 2020-12-28	27476 ORF7A	861	0	0	0	391	215	176	0	0 0	470	242	228	T/C	T	C
20843355YM_BR_AM_Manaus 2020-12-28	8597 ORFIAB	1935	1	0	1	1363	705	658	0	0 0	571	269	302	T/C	C	T
20843355YM_BR_AM_Manaus 2020-12-28	10027 ORFIAB	6717	5838	3084	2754	0	0	0	877	452 425	2	1	1	A/G	A	G
20843355YM_BR_AM_Manaus 2020-12-28	18796 ORFIAB	7039	1	0	1	6258	2994	3264	0	0 0	780	361	419	T/C	C	T
20890007MR_BR_AM_Manaus 2020-04-14	23971 S	286	141	45	96	0	0	0	145	51 94	0	0	0	A/G	G	A
20890012JJ_BR_AM_Caapiranga 2020-08-24	15830 ORFIAB	839	101	0	101	727	323	404	0	0 0	11	4	7	A/C	C	A
20890013MB_BR_AM_Caapiranga 2020-08-24	8130 ORFIAB	2274	1993	1038	955	0	0	0	0	0 0	281	138	143	A/T	A	T
20890014DO_BR_AM_Urucara 2020-10-11	2809 ORFIAB	3549	0	0	0	0	0	0	3161	1525 1636	388	189	199	T/G	G	T
20890014DO_BR_AM_Urucara 2020-10-11	8118 ORFIAB	2809	0	0	0	2100	1069	1031	0	0 0	709	363	346	T/C	C	T
20890014DO_BR_AM_Urucara 2020-10-11	8747 ORFIAB	4767	0	0	0	1	1	0	4189	2171 2018	577	306	271	T/G	G	T
20890014DO_BR_AM_Urucara 2020-10-11	11743 ORFIAB	2585	0	0	0	0	0	0	1881	921 960	704	355	349	T/G	G	T
20890014DO_BR_AM_Urucara 2020-10-11	13635 ORFIAB	1355	839	386	453	0	0	0	0	0 0	516	233	283	A/T	A	T
20890014DO_BR_AM_Urucara 2020-10-11	18597 ORFIAB	3212	529	279	250	0	0	0	2681	1362 1319	2	2	0	A/G	G	A
20890014DO_BR_AM_Urucara 2020-10-11	20859 ORFIAB	2500	0	0	0	286	150	136	0	0 0	2214	1159	1055	T/C	T	C
20890014DO_BR_AM_Urucara 2020-10-11	23335 S	7679	3	2	1	835	434	401	1	1 0	6840	3646	3194	T/C	T	C
20890022AB_BR_AM_Manaquiriri 2020-06-09	2655 ORFIAB	4235	3729	1846	1883	11	6	5	28	13 15	467	238	229	A/T	A	T
20890022AB_BR_AM_Manaquiriri 2020-06-09	2656 ORFIAB	4296	3781	1877	1904	20	9	11	0	0 0	495	256	239	A/T	A	T

20890022AB_BR_AM_Manauquiri 2020-06-09	2657 ORFIAB	4285	3741	1863	1878	525	266	259	1	10	18	10	8	A/C	A	C
20890022AB_BR_AM_Manauquiri 2020-06-09	12517 ORFIAB	1581	628	268	360	0	0	0	0	00	953	486	467	A/T	T	A
20890022AB_BR_AM_Manauquiri 2020-06-09	12527 ORFIAB	1649	1343	674	669	92	41	51	0	00	214	94	120	A/T	A	T
20890022AB_BR_AM_Manauquiri 2020-06-09	12528 ORFIAB	1594	0	0	0	1358	678	680	218	95 123	18	9	9	C/G	C	G
20890022AB_BR_AM_Manauquiri 2020-06-09	15740 ORFIAB	1169	991	441	550	47	27	20	131	69 62	0	0	0	A/G	A	G
20890022AB_BR_AM_Manauquiri 2020-06-09	15746 ORFIAB	1194	0	0	0	982	449	533	212	111 101	0	0	0	C/G	C	G
20890022AB_BR_AM_Manauquiri 2020-06-09	15749 ORFIAB	1185	975	446	529	0	0	0	0	00	210	111	99	A/T	A	T
20890022AB_BR_AM_Manauquiri 2020-06-09	15754 ORFIAB	1241	272	144	128	0	0	0	0	00	969	447	522	A/T	T	A
20890022AB_BR_AM_Manauquiri 2020-06-09	15773 ORFIAB	1214	410	222	188	0	0	0	802	366 436	2	0	2	A/G	G	A
20890022AB_BR_AM_Manauquiri 2020-06-09	15870 ORFIAB	5483	2627	1413	1214	0	0	0	0	00	2856	1545	1311	A/T	T	A
20890022AB_BR_AM_Manauquiri 2020-06-09	16931 ORFIAB	2443	553	247	306	0	0	0	0	00	1890	930	960	A/T	T	A
20890022AB_BR_AM_Manauquiri 2020-06-09	16932 ORFIAB	2372	1931	960	971	0	0	0	441	193 248	0	0	0	A/G	A	G
20890022AB_BR_AM_Manauquiri 2020-06-09	16939 ORFIAB	2235	0	0	0	7	4	3	265	105 160	1963	972	991	T/G	T	G
20890022AB_BR_AM_Manauquiri 2020-06-09	16940 ORFIAB	2252	37	17	20	266	106	160	0	00	1949	960	989	T/C	T	C
20890022AB_BR_AM_Manauquiri 2020-06-09	16942 ORFIAB	2221	1922	946	976	249	94	155	0	00	50	22	28	A/C	A	C
20890022AB_BR_AM_Manauquiri 2020-06-09	19881 ORFIAB	1006	110	58	52	894	196	698	0	00	2	1	1	A/C	C	A
20890022AB_BR_AM_Manauquiri 2020-06-09	27879 ORF7B	847	217	110	107	622	292	330	7	4 3	1	1	0	A/C	C	A
20890022AB_BR_AM_Manauquiri 2020-06-09	27880 ORF7B	860	602	285	317	0	0	0	236	119 117	18	9	9	A/G	A	G
20890022AB_BR_AM_Manauquiri 2020-06-09	27881 ORF7B	899	224	113	111	653	309	344	2	1 1	20	11	9	A/C	C	A
20890022AB_BR_AM_Manauquiri 2020-06-09	27882 ORF7B	920	0	0	0	30	14	16	657	310 347	233	119	114	T/G	G	T
20890022AB_BR_AM_Manauquiri 2020-06-09	28001 ORF8	1073	211	106	105	0	0	0	861	430 431	1	0	1	A/G	G	A
20890033RD_BR_AM_Maues 2020-04-10	10851 ORFIAB	702	0	0	0	303	171	132	0	00	399	217	182	T/C	T	C
20890033RD_BR_AM_Maues 2020-04-10	11667 ORFIAB	777	667	239	428	0	0	0	2	0 2	108	54	54	A/T	A	T
20890033RD_BR_AM_Maues 2020-04-10	11669 ORFIAB	795	1	0	1	683	233	450	3	0 3	108	54	54	T/C	C	T
20890033RD_BR_AM_Maues 2020-04-10	11671 ORFIAB	784	107	53	54	677	235	442	0	00	0	0	0	A/C	C	A
20890033RD_BR_AM_Maues 2020-04-10	11672 ORFIAB	802	0	0	0	106	54	52	0	00	696	241	455	T/C	T	C
20890033RD_BR_AM_Maues 2020-04-10	11674 ORFIAB	808	0	0	0	700	243	457	0	00	108	53	55	T/C	C	T
20890033RD_BR_AM_Maues 2020-04-10	19461 ORFIAB	994	799	358	441	0	0	0	193	73 120	2	1	1	A/G	A	G
20890035DS_BR_AM_RPE 2020-10-02	26013 ORF3A	1651	0	0	0	193	94	99	0	00	1458	1352	106	T/C	T	C
20890046AA_BR_AM_Manicore 2020-05-17	4534 ORFIAB	2146	0	0	0	1763	869	894	1	0 1	382	191	191	T/C	C	T
20890046AA_BR_AM_Manicore 2020-05-17	9478 ORFIAB	2054	0	0	0	251	122	129	0	00	1803	864	939	T/C	T	C
20890046AA_BR_AM_Manicore 2020-05-17	11972 ORFIAB	1799	0	0	0	188	123	65	1611	1340 271	0	0	0	C/G	G	C
20890046AA_BR_AM_Manicore 2020-05-17	12211 ORFIAB	2544	0	0	0	0	0	0	2144	1077 1067	400	206	194	T/G	G	T
20890046AA_BR_AM_Manicore 2020-05-17	17064 ORFIAB	2550	453	283	170	0	0	0	2097	1029 1068	0	0	0	A/G	G	A
20890046AA_BR_AM_Manicore 2020-05-17	17067 ORFIAB	2569	0	0	0	439	275	164	0	00	2130	1054	1076	T/C	T	C
20890046AA_BR_AM_Manicore 2020-05-17	17070 ORFIAB	2532	382	250	132	0	0	0	13	4 9	2137	1048	1089	A/T	T	A
20890046AA_BR_AM_Manicore 2020-05-17	17072 ORFIAB	2521	3	1	2	2139	1051	1088	0	00	379	250	129	T/C	C	T
20890046AA_BR_AM_Manicore 2020-05-17	17074 ORFIAB	2668	366	241	125	2289	1132	1157	1	10	12	3	9	A/C	C	A
20890046AA_BR_AM_Manicore 2020-05-17	17076 ORFIAB	2599	3	1	2	2223	1099	1124	16	8 8	357	236	121	T/C	C	T
20890046AA_BR_AM_Manicore 2020-05-17	17077 ORFIAB	2585	2	1	1	2227	1089	1138	2	2 0	354	232	122	T/C	C	T
20890046AA_BR_AM_Manicore 2020-05-17	17078 ORFIAB	2537	2197	1083	1114	0	0	0	336	225 111	4	2	2	A/G	A	G
20890046AA_BR_AM_Manicore 2020-05-17	19867 ORFIAB	1448	1162	123	1039	172	27	145	113	58 55	1	1	0	A/C	A	C
20890046AA_BR_AM_Manicore 2020-05-17	20032 ORFIAB	723	0	0	0	501	472	29	0	00	222	191	31	T/C	C	T
20890068AA_BR_AM_NON 2020-05-03	412 ORFIAB	7063	2981	1497	1484	4077	2120	1957	3	2 1	2	2	0	A/C	C	A

20890068AA_BR_AM_NON 2020-05-03	5810 ORFIAB	3602	0	0	0	0	0	0	3210	1624 1586	392	213	179	T/G	G	T
20890068AA_BR_AM_NON 2020-05-03	5950 ORFIAB	1679	0	0	0	0	0	0	1502	750 752	177	97	80	T/G	G	T
20890068AA_BR_AM_NON 2020-05-03	11900 ORFIAB	3904	0	0	0	2282	1123	1159	0	0 0	1622	792	830	T/C	C	T
20890068AA_BR_AM_NON 2020-05-03	14428 ORFIAB	5201	0	0	0	0	0	0	4594	2268 2326	607	321	286	T/G	G	T
20890068AA_BR_AM_NON 2020-05-03	17347 ORFIAB	5977	2	1	1	0	0	0	5263	2692 2571	712	387	325	T/G	G	T
20890068AA_BR_AM_NON 2020-05-03	18357 ORFIAB	5124	0	0	0	621	321	300	0	0 0	4503	2239	2264	T/C	T	C
20890068AA_BR_AM_NON 2020-05-03	20450 ORFIAB	1186	957	486	471	1	1	0	226	109 117	2	1	1	A/G	A	G
20890068AA_BR_AM_NON 2020-05-03	20495 ORFIAB	967	0	0	0	0	0	0	852	440 412	115	62	53	T/G	G	T
20890068AA_BR_AM_NON 2020-05-03	21741 S	4093	1	0	1	3541	1760	1781	1	0 1	550	270	280	T/C	C	T
20890068AA_BR_AM_NON 2020-05-03	22706 S	1835	0	0	0	343	171	172	1492	701 791	0	0	0	C/G	G	C
20890068AA_BR_AM_NON 2020-05-03	23220 S	4348	1	1	0	3583	1986	1597	764	395 369	0	0	0	C/G	C	G
20890068AA_BR_AM_NON 2020-05-03	23224 S	4732	0	0	0	0	0	0	4007	2226 1781	725	412	313	T/G	G	T
20890068AA_BR_AM_NON 2020-05-03	23226 S	4604	0	0	0	3884	2186	1698	0	0 0	720	411	309	T/C	C	T
20890068AA_BR_AM_NON 2020-05-03	23683 S	3698	0	0	0	3192	1400	1792	0	0 0	506	224	282	T/C	C	T
20890068AA_BR_AM_NON 2020-05-03	24027 S	1227	0	0	0	149	56	93	0	0 0	1078	530	548	T/C	T	C
20890084SS_BR_AM_Manicore 2020-06-08	7866 ORFIAB	1144	0	0	0	126	18	108	1017	343 674	1	0	1	C/G	G	C
20890084SS_BR_AM_Manicore 2020-06-08	23131 S	2153	26	14	12	343	175	168	43	16 27	1741	910	831	T/C	T	C
2089011IDM_BR_AM_PF 2020-04-14	10588 ORFIAB	3551	2814	1411	1403	0	0	0	0	0 0	737	371	366	A/T	A	T
20890117JP_BR_AM_Carauari 2020-09-15	4201 ORFIAB	3269	0	0	0	379	199	180	2890	1541 1349	0	0	0	C/G	G	C
20890117JP_BR_AM_Carauari 2020-09-15	4415 ORFIAB	2047	237	113	124	0	0	0	1810	880 930	0	0	0	A/G	G	A
20890117JP_BR_AM_Carauari 2020-09-15	5708 ORFIAB	6740	2	1	1	1	0	1	5758	2692 3066	979	464	515	T/G	G	T
20890117JP_BR_AM_Carauari 2020-09-15	6195 ORFIAB	1871	5	3	2	1576	827	749	0	0 0	290	139	151	T/C	C	T
20890117JP_BR_AM_Carauari 2020-09-15	8853 ORFIAB	4883	0	0	0	0	0	0	4331	2253 2078	552	284	268	T/G	G	T
20890117JP_BR_AM_Carauari 2020-09-15	10426 ORFIAB	5442	2	1	1	0	0	0	652	335 317	4785	2327	2458	T/G	T	G
20890117JP_BR_AM_Carauari 2020-09-15	10427 ORFIAB	5519	0	0	0	0	0	0	4894	2431 2463	625	307	318	T/G	G	T
20890117JP_BR_AM_Carauari 2020-09-15	12071 ORFIAB	5426	0	0	0	687	380	307	4736	2610 2126	3	3	0	C/G	G	C
20890117JP_BR_AM_Carauari 2020-09-15	12325 ORFIAB	6097	0	0	0	5448	2546	2902	1	1 0	648	290	358	T/C	C	T
20890117JP_BR_AM_Carauari 2020-09-15	16717 ORFIAB	4769	4276	2203	2073	1	0	1	0	0 0	492	249	243	A/T	A	T
20890117JP_BR_AM_Carauari 2020-09-15	18194 ORFIAB	6757	831	454	377	0	0	0	5926	3089 2837	0	0	0	A/G	G	A
20890117JP_BR_AM_Carauari 2020-09-15	22249 S	1141	120	56	64	0	0	0	1021	488 533	0	0	0	A/G	G	A
20890117JP_BR_AM_Carauari 2020-09-15	22277 S	1245	0	0	0	1104	541	563	0	0 0	141	70	71	T/C	C	T
20890117JP_BR_AM_Carauari 2020-09-15	22566 S	1465	0	0	0	210	110	100	0	0 0	1255	655	600	T/C	T	C
20890117JP_BR_AM_Carauari 2020-09-15	23611 S	6576	0	0	0	0	0	0	5838	2883 2955	738	374	364	T/G	G	T
20890125FV_BR_AM_Manaus 2020-05-18	1462 ORFIAB	1067	218	106	112	0	0	0	849	379 470	0	0	0	A/G	G	A
20890125FV_BR_AM_Manaus 2020-05-18	17105 ORFIAB	2933	2506	1271	1235	0	0	0	423	214 209	4	2	2	A/G	A	G
20890125FV_BR_AM_Manaus 2020-05-18	26221 E	1607	553	277	276	0	0	0	1054	496 558	0	0	0	A/G	G	A
20890125FV_BR_AM_Manaus 2020-05-18	27925 ORF8	1217	14	6	8	1074	483	591	0	0 0	129	57	72	T/C	C	T
20890140CD_BR_AM_SIRN 2020-06-10	24797 S	3390	11	6	5	2831	1465	1366	2	1 1	546	284	262	T/C	C	T
20890167ES_BR_AM_SAI 2020-04-15	7203 ORFIAB	2699	2	2	0	2396	1360	1036	282	163 119	19	10	9	C/G	C	G
20890167ES_BR_AM_SAI 2020-04-15	7211 ORFIAB	2750	5	2	3	0	0	0	345	191 154	2400	1362	1038	T/G	T	G
20890167ES_BR_AM_SAI 2020-04-15	20153 ORFIAB	1442	1209	650	559	216	137	79	17	10 7	0	0	0	A/C	A	C
20890167ES_BR_AM_SAI 2020-04-15	22946 S	1184	1047	580	467	0	0	0	137	66 71	0	0	0	A/G	A	G
20890167ES_BR_AM_SAI 2020-04-15	26022 ORF3A	896	0	0	0	156	90	66	0	0 0	740	410	330	T/C	T	C
20890206CF_BR_AM_Parintins 2020-04-28	5810 ORFIAB	2764	614	323	291	1	0	1	2144	1046 1098	5	3	2	A/G	G	A

20890206CF_BR_AM_Parintins 2020-04-28	7038 ORFIAB	2262	1	0	1	0	0	0	1998	957 1041	263	131	132	T/G	G	T
20890206CF_BR_AM_Parintins 2020-04-28	7641 ORFIAB	4212	0	0	0	0	0	0	3606	1763 1843	606	291	315	T/G	G	T
20890206CF_BR_AM_Parintins 2020-04-28	22624 S	1937	0	0	0	1632	820	812	0	0 0	305	149	156	T/C	C	T
20890206CF_BR_AM_Parintins 2020-04-28	24933 S	4791	2	1	1	4	2	2	4079	1891 2188	703	366	337	T/G	G	T
20890206CF_BR_AM_Parintins 2020-04-28	25183 S	4386	0	0	0	0	0	0	3773	1849 1924	611	320	291	T/G	G	T
20890223JC_BR_AM_PFI 2020-04-30	3357 ORFIAB	630	496	215	281	134	75	59	0	0 0	0	0	0	A/C	A	C
20890223JC_BR_AM_PFI 2020-04-30	3359 ORFIAB	673	5	1	4	167	94	73	0	0 0	501	221	280	T/C	T	C
20890223JC_BR_AM_PFI 2020-04-30	20857 ORFIAB	907	0	0	0	109	59	50	798	428 370	0	0	0	C/G	G	C
20890223JC_BR_AM_PFI 2020-04-30	20859 ORFIAB	907	105	56	49	0	0	0	0	0 0	802	434	368	A/T	T	A
20890244FP_BR_AM_Parintins 2020-05-03	12160 ORFIAB	2038	1	0	1	0	0	0	1777	907 870	260	140	120	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	558 ORFIAB	3425	0	0	0	0	0	0	3045	1526 1519	380	192	188	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	1186 ORFIAB	1026	0	0	0	0	0	0	907	489 418	119	59	60	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	1196 ORFIAB	1056	143	77	66	0	0	0	913	472 441	0	0	0	A/G	G	A
20890352JA_BR_AM_Jutai 2020-04-29	1601 ORFIAB	1179	2	1	1	1053	561	492	0	0 0	124	59	65	T/C	C	T
20890352JA_BR_AM_Jutai 2020-04-29	4148 ORFIAB	1028	0	0	0	0	0	0	877	466 411	151	80	71	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	4682 ORFIAB	1508	0	0	0	0	0	0	1267	647 620	241	119	122	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	5339 ORFIAB	1740	0	0	0	1512	788	724	0	0 0	228	122	106	T/C	C	T
20890352JA_BR_AM_Jutai 2020-04-29	7017 ORFIAB	755	0	0	0	0	0	0	647	312 335	108	55	53	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	7038 ORFIAB	820	0	0	0	0	0	0	633	298 335	187	92	95	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	12062 ORFIAB	1796	247	137	110	0	0	0	1549	859 690	0	0	0	A/G	G	A
20890352JA_BR_AM_Jutai 2020-04-29	12164 ORFIAB	1869	0	0	0	0	0	0	1618	832 786	251	127	124	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	13202 ORFIAB	3401	417	230	187	0	0	0	2984	1593 1391	0	0	0	A/G	G	A
20890352JA_BR_AM_Jutai 2020-04-29	13358 ORFIAB	3473	0	0	0	3110	1544	1566	0	0 0	363	179	184	T/C	C	T
20890352JA_BR_AM_Jutai 2020-04-29	13571 ORFIAB	1224	0	0	0	2	2	0	939	442 497	256	125	131	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	14464 ORFIAB	1441	0	0	0	0	0	0	1215	596 619	226	113	113	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	14537 ORFIAB	1476	0	0	0	168	88	80	0	0 0	1308	687	621	T/C	T	C
20890352JA_BR_AM_Jutai 2020-04-29	15024 ORFIAB	1128	0	0	0	974	495	479	154	84 70	0	0	0	C/G	C	G
20890352JA_BR_AM_Jutai 2020-04-29	15113 ORFIAB	1427	0	0	0	1202	670	532	0	0 0	225	119	106	T/C	C	T
20890352JA_BR_AM_Jutai 2020-04-29	15866 ORFIAB	1203	0	0	0	1068	504	564	0	0 0	135	65	70	T/C	C	T
20890352JA_BR_AM_Jutai 2020-04-29	15900 ORFIAB	1369	174	53	121	0	0	0	0	0 0	1195	458	737	A/T	T	A
20890352JA_BR_AM_Jutai 2020-04-29	18987 ORFIAB	1906	0	0	0	592	287	305	0	0 0	1314	614	700	T/C	T	C
20890352JA_BR_AM_Jutai 2020-04-29	22471 S	768	123	64	59	0	0	0	645	337 308	0	0	0	A/G	G	A
20890352JA_BR_AM_Jutai 2020-04-29	22710 S	611	0	0	0	455	215	240	0	0 0	156	69	87	T/C	C	T
20890352JA_BR_AM_Jutai 2020-04-29	22984 S	666	0	0	0	0	0	0	560	298 262	106	60	46	T/G	G	T
20890352JA_BR_AM_Jutai 2020-04-29	28292 N	3180	318	157	161	2862	1501	1361	0	0 0	0	0	0	A/C	C	A
20890352JA_BR_AM_Jutai 2020-04-29	28857 N	4166	50	27	23	956	583	373	3147	1786 1361	8	3	5	C/G	G	C
20890511ME_BR_AM_SGC 2020-10-19	5822 ORFIAB	1658	0	0	0	960	492	468	1	0 1	697	329	368	T/C	C	T
20890511ME_BR_AM_SGC 2020-10-19	6195 ORFIAB	1283	0	0	0	1043	546	497	0	0 0	240	124	116	T/C	C	T
20890511ME_BR_AM_SGC 2020-10-19	19070 ORFIAB	2546	1	0	1	261	116	145	0	0 0	2284	1034	1250	T/C	T	C
20890511ME_BR_AM_SGC 2020-10-19	23986 S	778	0	0	0	198	65	133	0	0 0	580	200	380	T/C	T	C
20890511ME_BR_AM_SGC 2020-10-19	27237 ORF6	1730	1340	629	711	0	0	0	390	157 233	0	0	0	A/G	A	G
20890610SL_BR_AM_Tabatinga 2020-04-08	14018 ORFIAB	2894	0	0	0	357	193	164	2537	1265 1272	0	0	0	C/G	G	C
20890610SL_BR_AM_Tabatinga 2020-04-08	18977 ORFIAB	1873	1604	730	874	0	0	0	0	0 0	269	47	222	A/T	A	T
20890610SL_BR_AM_Tabatinga 2020-04-08	18981 ORFIAB	1926	0	0	0	1602	730	872	324	73 251	0	0	0	C/G	C	G

20890610SL_BR_AM_Tabatinga 2020-04-08	18983 ORFIAB	1924	346	83	263	0	0	0	0	0 0	1578	721	857	A/T	T	A	
20890610SL_BR_AM_Tabatinga 2020-04-08	22532 S	1449	7	4	3	8	5	3	1278	666 612	156	80	76	T/G	G	T	
20890610SL_BR_AM_Tabatinga 2020-04-08	25540 ORF3A	4785	756	368	388	0	0	0	4029	1876 2153	0	0	0	A/G	G	A	
20890610SL_BR_AM_Tabatinga 2020-04-08	28077 ORF8	1862	0	0	0	0	0	0	950	504 446	912	494	418	T/G	G	T	
20890661CB_BR_AM_Tabatinga 2020-04-16	6781 ORFIAB	503	0	0	0	226	124	102	0	0 0	277	143	134	T/C	T	C	
20890675MV_BR_AM_Manauas 2020-12-22	10252 ORFIAB	950	0	0	0	846	441	405	0	0	103	52	51	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	4449 ORFIAB	1293	0	0	0	1071	509	562	0	0 0	222	102	120	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	5683 ORFIAB	3409	0	0	0	657	313	344	2752	1262 1490	0	0	0	C/G	G	C	
20890702BS_BR_AM_Iranduba 2020-05-24	7851 ORFIAB	2379	0	0	0	247	190	57	1	1 0	2131	981	1150	T/C	T	C	
20890702BS_BR_AM_Iranduba 2020-05-24	8095 ORFIAB	3695	3258	1681	1577	0	0	0	431	259 172	6	4	2	A/G	A	G	
20890702BS_BR_AM_Iranduba 2020-05-24	8096 ORFIAB	3701	3262	1692	1570	439	265	174	0	0 0	0	0	0	A/C	A	C	
20890702BS_BR_AM_Iranduba 2020-05-24	8216 ORFIAB	1979	0	0	0	0	0	0	1112	522 590	867	429	438	T/G	G	T	
20890702BS_BR_AM_Iranduba 2020-05-24	8219 ORFIAB	1930	301	142	159	0	0	0	1629	765 864	0	0	0	A/G	G	A	
20890702BS_BR_AM_Iranduba 2020-05-24	8259 ORFIAB	1362	142	54	88	17	9	8	0	0 0	1203	560	643	A/T	T	A	
20890702BS_BR_AM_Iranduba 2020-05-24	8633 ORFIAB	901	772	365	407	0	0	0	0	0 0	129	71	58	A/T	A	T	
20890702BS_BR_AM_Iranduba 2020-05-24	11231 ORFIAB	2336	0	0	0	1986	928	1058	0	0 0	350	154	196	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	11235 ORFIAB	2388	343	146	197	2010	934	1076	34	19 15	1	1	0	A/C	C	A	
20890702BS_BR_AM_Iranduba 2020-05-24	13040 ORFIAB	1363	177	90	87	0	0	0	1186	630 556	0	0	0	A/G	G	A	
20890702BS_BR_AM_Iranduba 2020-05-24	14080 ORFIAB	760	0	0	0	0	0	0	644	320 324	116	61	55	T/G	G	T	
20890702BS_BR_AM_Iranduba 2020-05-24	14567 ORFIAB	1009	0	0	0	906	455	451	0	0 0	103	57	46	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	14568 ORFIAB	1001	101	56	45	0	0	0	0	0 0	900	452	448	A/T	T	A	
20890702BS_BR_AM_Iranduba 2020-05-24	16393 ORFIAB	2990	0	0	0	2648	1334	1314	22	13 9	320	154	166	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	16394 ORFIAB	3003	0	0	0	2674	1326	1348	3	0 3	326	156	170	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	16399 ORFIAB	2807	0	0	0	1	0	1	291	137 154	2515	1243	1272	T/G	T	G	
20890702BS_BR_AM_Iranduba 2020-05-24	16403 ORFIAB	2767	2483	1212	1271	283	126	157	1	0 1	0	0	0	A/C	A	C	
20890702BS_BR_AM_Iranduba 2020-05-24	16792 ORFIAB	2132	0	0	0	1905	967	938	0	0 0	227	112	115	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	16877 ORFIAB	2648	1	0	1	2324	1207	1117	0	0 0	323	156	167	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	18348 ORFIAB	2912	411	212	199	2501	1252	1249	0	0 0	0	0	0	A/C	C	A	
20890702BS_BR_AM_Iranduba 2020-05-24	20918 ORFIAB	921	757	384	373	0	0	0	164	87 77	0	0	0	A/G	A	G	
20890702BS_BR_AM_Iranduba 2020-05-24	23335 S	1877	0	0	0	327	166	161	0	0 0	1550	796	754	T/C	T	C	
20890702BS_BR_AM_Iranduba 2020-05-24	23393 S	1911	0	0	0	1587	786	801	0	0 0	324	163	161	T/C	C	T	
20890702BS_BR_AM_Iranduba 2020-05-24	27266 ORF6	700	0	0	0	0	0	0	118	52 66	582	275	307	T/G	T	G	
20890793EA_BR_AM_PF 2020-12-22	23393 S	2585	0	0	0	2277	1139	1138	0	0	0	308	153	155	T/C	C	T
20891068DS_BR_AM_Manauas 2020-12-24	3176 ORFIAB	4036	0	0	0	2229	1043	1186	0	0	0	1807	865	942	T/C	C	T
20891068DS_BR_AM_Manauas 2020-12-24	19084 ORFIAB	1779	1262	549	713	517	240	277	0	0	0	0	0	A/C	A	C	
20891120MA_BR_AM_Careiro 2020-05-26	4206 ORFIAB	2822	2	1	1	2176	1107	1069	0	0 0	644	309	335	T/C	C	T	
20891128MC_BR_AM_Tabatinga 2020-05-15	5054 ORFIAB	2402	1961	998	963	0	0	0	0	0 0	441	239	202	A/T	A	T	
20891128MC_BR_AM_Tabatinga 2020-05-15	5059 ORFIAB	2436	2	1	1	415	224	191	0	0 0	2019	1031	988	T/C	T	C	
20891128MC_BR_AM_Tabatinga 2020-05-15	5062 ORFIAB	2310	0	0	0	2	2	0	2011	1023 988	297	165	132	T/G	G	T	
20891128MC_BR_AM_Tabatinga 2020-05-15	5066 ORFIAB	2206	299	166	133	1	1	0	1905	956 949	1	0	1	A/G	G	A	
20891128MC_BR_AM_Tabatinga 2020-05-15	5067 ORFIAB	2373	292	163	129	0	0	0	2075	1048 1027	6	3	3	A/G	G	A	
20891128MC_BR_AM_Tabatinga 2020-05-15	6762 ORFIAB	1126	0	0	0	846	421	425	0	0 0	280	144	136	T/C	C	T	
20891128MC_BR_AM_Tabatinga 2020-05-15	7754 ORFIAB	2094	1871	902	969	0	0	0	222	92 130	1	1	0	A/G	A	G	
20891128MC_BR_AM_Tabatinga 2020-05-15	7756 ORFIAB	2124	3	2	1	243	102	141	1877	912 965	1	1	0	C/G	G	C	



20891128MC_BR_AM_Tabatinga 2020-05-15	7759 ORFIAB	2165	1	1	0	275	116	159	0	0 0	1889	919	970	T/C	T	C
20891128MC_BR_AM_Tabatinga 2020-05-15	7760 ORFIAB	2080	273	117	156	1	1	0	1803	881 922	3	2	1	A/G	G	A
20891128MC_BR_AM_Tabatinga 2020-05-15	7764 ORFIAB	2103	1	0	1	1774	886	888	0	0 0	328	137	191	T/C	C	T
20891128MC_BR_AM_Tabatinga 2020-05-15	7765 ORFIAB	2081	0	0	0	1755	869	886	326	133 193	0	0	0	C/G	C	G
20891128MC_BR_AM_Tabatinga 2020-05-15	7766 ORFIAB	2099	1766	864	902	0	0	0	333	134 199	0	0	0	A/G	A	G
20891128MC_BR_AM_Tabatinga 2020-05-15	12053 ORFIAB	5800	0	0	0	4280	2357	1923	0	0 0	1520	838	682	T/C	C	T
20891128MC_BR_AM_Tabatinga 2020-05-15	13577 ORFIAB	1921	0	0	0	1663	822	841	0	0 0	258	132	126	T/C	C	T
20891128MC_BR_AM_Tabatinga 2020-05-15	13946 ORFIAB	2008	0	0	0	1717	873	844	0	0 0	291	149	142	T/C	C	T
20891128MC_BR_AM_Tabatinga 2020-05-15	14465 ORFIAB	2863	0	0	0	434	209	225	0	0 0	2429	1167	1262	T/C	T	C
20891128MC_BR_AM_Tabatinga 2020-05-15	14768 ORFIAB	2923	0	0	0	2535	1221	1314	1	0 1	387	184	203	T/C	C	T
20891128MC_BR_AM_Tabatinga 2020-05-15	23208 S	2301	425	103	322	1875	933	942	0	0 0	1	1	0	A/C	C	A
20891128MC_BR_AM_Tabatinga 2020-05-15	23209 S	2272	1820	910	910	1	1	0	0	0 0	451	116	335	A/T	A	T
20891128MC_BR_AM_Tabatinga 2020-05-15	23600 S	4007	443	239	204	1	1	0	1	0 1	3561	1852	1709	A/T	T	A
20891184SB_BR_AM_Tabatinga 2020-05-18	2570 ORFIAB	3874	0	0	0	2333	1161	1172	1	1 0	1540	743	797	T/C	C	T
20891184SB_BR_AM_Tabatinga 2020-05-18	8109 ORFIAB	3360	478	238	240	2882	1447	1435	0	0 0	0	0	0	A/C	C	A
20891184SB_BR_AM_Tabatinga 2020-05-18	16308 ORFIAB	6400	11	5	6	5734	2884	2850	2	1 1	653	325	328	T/C	C	T
20891505PT_BR_AM_Manaus 2020-07-23	17007 ORFIAB	5716	27	13	14	1058	549	509	0	0 0	4631	2381	2250	T/C	T	C
20891680JR_BR_AM_Manaquiri 2020-06-10	1899 ORFIAB	4007	2214	1059	1155	0	0	0	1791	832 959	2	1	1	A/G	A	G
20891688MN_BR_AM_Manaquiri 2020-06-0	2509 ORFIAB	2882	0	0	0	2430	1178	1252	1	0 1	451	214	237	T/C	C	T
20891688MN_BR_AM_Manaquiri 2020-06-0	10641 ORFIAB	2555	12	7	5	2148	1056	1092	0	0 0	395	190	205	T/C	C	T
20891688MN_BR_AM_Manaquiri 2020-06-0	19762 ORFIAB	1834	1588	788	800	0	0	0	227	83 144	19	10	9	A/G	A	G
20891688MN_BR_AM_Manaquiri 2020-06-0	22677 S	1641	0	0	0	1429	695	734	211	114 97	1	1	0	C/G	C	G
20891688MN_BR_AM_Manaquiri 2020-06-0	27526 ORF7A	2965	0	0	0	1201	653	548	1	0 1	1763	939	824	T/C	T	C
20891898RL_BR_AM_Manaus 2020-05-19	11083 ORFIAB	3662	0	0	0	0	0	0	2761	1354 1407	863	437	426	T/G	G	T
20891898RL_BR_AM_Manaus 2020-05-19	18322 ORFIAB	2533	2	0	2	2149	1059	1090	0	0 0	382	178	204	T/C	C	T
20892136AL_BR_AM_Manacapuru 2020-04-	4812 ORFIAB	2551	1397	680	717	0	0	0	1154	547 607	0	0	0	A/G	A	G
20892136AL_BR_AM_Manacapuru 2020-04-	7086 ORFIAB	1984	0	0	0	1125	575	550	0	0 0	859	447	412	T/C	C	T
20892136AL_BR_AM_Manacapuru 2020-04-	16726 ORFIAB	2595	0	0	0	2196	1093	1103	0	0 0	399	200	199	T/C	C	T
20892136AL_BR_AM_Manacapuru 2020-04-	25855 ORF3A	1863	0	0	0	1103	341	762	760	176 584	0	0	0	C/G	C	G
20892136AL_BR_AM_Manacapuru 2020-04-	28134 ORF8	2554	0	0	0	0	0	0	1465	702 763	1089	473	616	T/G	G	T
20892199FT_BR_AM_Manaus 2020-12-21	10323 ORFIAB	7899	6840	3845	2995	0	0	0	1059	562 497	0	0	0	A/G	A	G
20892224RM_BR_AM_Manaus 2020-12-21	17544 ORFIAB	1986	419	222	197	0	0	0	1567	796 771	0	0	0	A/G	G	A
20892241JS_BR_AM_Manaus 2020-06-23	6084 ORFIAB	873	770	375	395	0	0	0	1	1 0	102	60	42	A/T	A	T
20892241JS_BR_AM_Manaus 2020-06-23	6088 ORFIAB	898	769	371	398	112	65	47	7	4 3	10	7	3	A/C	A	C
20892241JS_BR_AM_Manaus 2020-06-23	6091 ORFIAB	914	11	6	5	785	381	404	118	66 52	0	0	0	C/G	C	G
20892241JS_BR_AM_Manaus 2020-06-23	6092 ORFIAB	941	118	67	51	786	379	407	37	22 15	0	0	0	A/C	C	A
20892241JS_BR_AM_Manaus 2020-06-23	6093 ORFIAB	950	807	395	412	1	1	0	116	66 50	26	14	12	A/G	A	G
20892241JS_BR_AM_Manaus 2020-06-23	7391 ORFIAB	1642	2	1	1	1475	702	773	165	88 77	0	0	0	C/G	C	G
20892241JS_BR_AM_Manaus 2020-06-23	20150 ORFIAB	1468	1205	635	570	100	58	42	162	98 64	1	1	0	A/G	A	G
20892241JS_BR_AM_Manaus 2020-06-23	20151 ORFIAB	1458	0	0	0	253	147	106	0	0 0	1205	643	562	T/C	T	C
20892241JS_BR_AM_Manaus 2020-06-23	20306 ORFIAB	773	110	58	52	0	0	0	663	321 342	0	0	0	A/G	G	A
20892241JS_BR_AM_Manaus 2020-06-23	23710 S	4773	4033	1947	2086	0	0	0	738	364 374	2	2	0	A/G	A	G
20892300TV_BR_AM_Barreirinha 2020-06-2	1401 ORFIAB	1286	203	102	101	0	0	0	1082	485 597	1	1	0	A/G	G	A
20892300TV_BR_AM_Barreirinha 2020-06-2	8600 ORFIAB	756	273	139	134	0	0	0	483	235 248	0	0	0	A/G	G	A

20892477WL_BR_AM_Manau	2020-07-27	28674 N	7322	0	0	0	6285	3403	2882	1	1 0	1036	532	504	T/C	C	T
20892484AS_BR_AM_Manau	2020-07-20	8841 ORFIAB	7672	3	2	1	5638	2955	2683	1	0 1	2030	1009	1021	T/C	C	T
20892494MS_BR_AM_Manau	2020-07-20	12071 ORFIAB	6041	34	23	11	7	5	2	5347	3309 2038	653	520	133	T/G	G	T
20892494MS_BR_AM_Manau	2020-07-20	12072 ORFIAB	6082	5375	3336	2039	12	5	7	10	6 4	685	545	140	A/T	A	T
20892494MS_BR_AM_Manau	2020-07-20	12073 ORFIAB	6185	670	538	132	5464	3396	2068	1	1 0	50	29	21	A/C	C	A
20892494MS_BR_AM_Manau	2020-07-20	12082 ORFIAB	5710	5055	3078	1977	49	32	17	574	507 67	31	21	10	A/G	A	G
20892521AG_BR_AM_Manau	2020-07-24	7420 ORFIAB	1061	0	0	0	179	88	91	0	0 0	882	423	459	T/C	T	C
20892521AG_BR_AM_Manau	2020-07-24	18583 ORFIAB	2341	0	0	0	0	0	0	1769	901 868	572	304	268	T/G	G	T
20892521AG_BR_AM_Manau	2020-07-24	21781 S	2475	0	0	0	248	120	128	0	0 0	2227	1115	1112	T/C	T	C
20892521AG_BR_AM_Manau	2020-07-24	27567 ORF7A	2979	756	360	396	2005	1058	947	169	83 86	49	28	21	A/C	C	A
20892521AG_BR_AM_Manau	2020-07-24	27569 ORF7A	2971	1	1	0	759	365	394	0	0 0	2211	1161	1050	T/C	T	C
20892521AG_BR_AM_Manau	2020-07-24	27627 ORF7A	2030	310	172	138	0	0	0	0	0 0	1720	875	845	A/T	T	A
20892521AG_BR_AM_Manau	2020-07-24	27628 ORF7A	2014	0	0	0	322	183	139	1692	853 839	0	0	0	C/G	G	C
20892521AG_BR_AM_Manau	2020-07-24	27629 ORF7A	2037	13	6	7	1696	858	838	0	0 0	328	188	140	T/C	C	T
20892521AG_BR_AM_Manau	2020-07-24	27630 ORF7A	2027	1	0	1	1679	847	832	0	0 0	347	192	155	T/C	C	T
20892521AG_BR_AM_Manau	2020-07-24	28881 N	6403	651	462	189	0	0	0	5751	3946 1805	1	1	0	A/G	G	A
20892521AG_BR_AM_Manau	2020-07-24	28882 N	6237	636	453	183	1	1	0	5600	3840 1760	0	0	0	A/G	G	A
20892521AG_BR_AM_Manau	2020-07-24	28883 N	6260	2	1	1	660	464	196	5597	3838 1759	1	1	0	C/G	G	C
20892523EN_BR_AM_Manau	2020-07-26	1457 ORFIAB	5105	0	0	0	3426	1662	1764	1	0 1	1678	783	895	T/C	C	T
20892533JB_BR_AM_Manau	2020-07-28	18445 ORFIAB	2551	0	0	0	0	0	0	953	490 463	1598	840	758	T/G	T	G
20892533JB_BR_AM_Manau	2020-07-28	25573 ORF3A	6963	6253	2966	3287	0	0	0	710	325 385	0	0	0	A/G	A	G
20892944LC_BR_AM_Manau	2020-09-14	15917 ORFIAB	2780	2417	213	2204	356	51	305	0	0 0	7	4	3	A/C	A	C
20892944LC_BR_AM_Manau	2020-09-14	15925 ORFIAB	3406	35	35	0	2980	394	2586	0	0 0	390	176	214	T/C	C	T
20892944LC_BR_AM_Manau	2020-09-14	26013 ORF3A	2954	2	1	1	555	256	299	0	0 0	2393	2233	160	T/C	T	C
20892962AF_BR_AM_Manau	2020-09-15	23126 S	1295	0	0	0	0	0	0	1049	596 453	246	143	103	T/G	G	T
20892974ES_BR_AM_Manau	2020-09-15	8730 ORFIAB	1833	0	0	0	1642	899	743	191	92 99	0	0	0	C/G	C	G
20893356IS_BR_AM_Manau	2020-05-11	28292 N	1907	940	448	492	965	584	381	2	1 1	0	0	0	A/C	C	A
20893858ML_BR_AM_Manacapuru	2020-05-05	12511 ORFIAB	1930	0	0	0	199	69	130	0	0 0	1731	946	785	T/C	T	C
20893866MN_BR_AM_Manau	2020-12-23	3815 ORFIAB	968	128	0	128	0	0	0	839	362 477	1	0	1	A/G	G	A
20894176SC_BR_AM_Manacapuru	2020-05-05	14097 ORFIAB	2899	1	0	1	560	290	270	0	0 0	2336	1159	1177	T/C	T	C
20894648MM_BR_AM_Manacapuru	2020-06-06	2003 ORFIAB	1382	0	0	0	1214	596	618	0	0 0	168	83	85	T/C	C	T
20894648MM_BR_AM_Manacapuru	2020-06-06	28369 N	2777	1	0	1	842	438	404	0	0 0	1934	977	957	T/C	T	C
20894654WF_BR_AM_Manacapuru	2020-06-06	10702 ORFIAB	1769	1	1	0	1521	766	755	2	1 1	245	119	126	T/C	C	T
20894927MS_BR_AM_Careiro	2020-12-28	26885 M	3827	1	0	1	2223	1144	1079	0	0 0	1603	827	776	T/C	C	T
20895217CM_BR_AM_Manau	2020-12-22	14925 ORFIAB	1850	0	0	0	1374	684	690	1	1 0	475	215	260	T/C	C	T
20895258MP_BR_AM_Manau	2020-06-22	8193 ORFIAB	2063	1799	929	870	30	12	18	219	128 91	15	12	3	A/G	A	G
20895258MP_BR_AM_Manau	2020-06-22	12565 ORFIAB	1234	157	87	70	0	0	0	1077	586 491	0	0	0	A/G	G	A
20895548CN_BR_AM_Manau	2020-07-06	4372 ORFIAB	714	601	300	301	0	0	0	0	0 0	113	56	57	A/T	A	T
20895548CN_BR_AM_Manau	2020-07-06	6326 ORFIAB	1053	927	481	446	4	2	2	122	58 64	0	0	0	A/G	A	G
20895548CN_BR_AM_Manau	2020-07-06	6329 ORFIAB	1079	134	61	73	0	0	0	0	0 0	945	486	459	A/T	T	A
20895548CN_BR_AM_Manau	2020-07-06	6330 ORFIAB	1073	0	0	0	939	479	460	134	62 72	0	0	0	C/G	C	G
20895548CN_BR_AM_Manau	2020-07-06	8569 ORFIAB	1540	0	0	0	177	90	87	0	0 0	1363	668	695	T/C	T	C
20895548CN_BR_AM_Manau	2020-07-06	9416 ORFIAB	2216	0	0	0	368	177	191	1846	892 954	2	1	1	C/G	G	C
20895548CN_BR_AM_Manau	2020-07-06	11502 ORFIAB	2691	336	165	171	0	0	0	2355	1166 1189	0	0	0	A/G	G	A

20895554JT_BR_AM_Manaus 2020-09-16	20309 ORFIAB	1105	896	430	466	0	0	0	207	95 112	2	1	1	A/G	A	G
20895570KS_BR_AM_Manaus 2020-09-16	8977 ORFIAB	4338	1	1	0	3	1	2	3715	1803 1912	619	320	299	T/G	G	T
20895570KS_BR_AM_Manaus 2020-09-16	11750 ORFIAB	3682	24	10	14	2468	1174	1294	0	0 0	1190	544	646	T/C	C	T
20895654ID_BR_AM_Manaus 2020-07-21	5491 ORFIAB	2103	0	0	0	566	286	280	0	0 0	1537	797	740	T/C	T	C
20895654ID_BR_AM_Manaus 2020-07-21	8498 ORFIAB	728	0	0	0	1	0	1	608	302 306	119	60	59	T/G	G	T
20895654ID_BR_AM_Manaus 2020-07-21	11455 ORFIAB	1158	0	0	0	804	401	403	0	0 0	354	181	173	T/C	C	T
20895654ID_BR_AM_Manaus 2020-07-21	15703 ORFIAB	1163	954	431	523	0	0	0	208	105 103	1	1	0	A/G	A	G
20895654ID_BR_AM_Manaus 2020-07-21	15705 ORFIAB	1191	220	110	110	0	0	0	971	440 531	0	0	0	A/G	G	A
20895654ID_BR_AM_Manaus 2020-07-21	15706 ORFIAB	1335	999	449	550	0	0	0	336	174 162	0	0	0	A/G	A	G
20895654ID_BR_AM_Manaus 2020-07-21	15708 ORFIAB	1328	0	0	0	345	175	170	983	443 540	0	0	0	C/G	G	C
20895654ID_BR_AM_Manaus 2020-07-21	15709 ORFIAB	1325	983	439	544	0	0	0	0	0 0	342	174	168	A/T	A	T
20895654ID_BR_AM_Manaus 2020-07-21	16322 ORFIAB	1930	0	0	0	264	131	133	1666	831 835	0	0	0	C/G	G	C
20895654ID_BR_AM_Manaus 2020-07-21	16620 ORFIAB	1216	1091	546	545	0	0	0	125	66 59	0	0	0	A/G	A	G
20895654ID_BR_AM_Manaus 2020-07-21	18664 ORFIAB	773	0	0	0	666	328	338	107	59 48	0	0	0	C/G	C	G
20895654ID_BR_AM_Manaus 2020-07-21	18666 ORFIAB	776	666	331	335	0	0	0	0	0 0	108	62	46	A/T	A	T
20898137RM_BR_AM_RPE 2020-12-19	25440 ORF3A	2059	0	0	0	1	0	1	1714	839 875	344	168	176	T/G	G	T
20898137RM_BR_AM_RPE 2020-12-19	25494 ORF3A	2985	0	0	0	0	0	0	2551	1236 1315	434	225	209	T/G	G	T
21142481RG_BR_AM_Manaus 2021-01-13	733 ORFIAB	2678	0	0	0	1815	813	1002	0	0 0	863	399	464	T/C	C	T
21142481RG_BR_AM_Manaus 2021-01-13	1190 ORFIAB	926	0	0	0	622	332	290	0	0 0	304	159	145	T/C	C	T
21142481RG_BR_AM_Manaus 2021-01-13	2306 ORFIAB	642	0	0	0	504	267	237	0	0 0	138	86	52	T/C	C	T
21142481RG_BR_AM_Manaus 2021-01-13	2544 ORFIAB	1592	1	1	0	1126	562	564	0	0 0	465	230	235	T/C	C	T
21142481RG_BR_AM_Manaus 2021-01-13	2749 ORFIAB	2691	0	0	0	894	447	447	0	0 0	1797	859	938	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	3828 ORFIAB	406	0	0	0	144	57	87	0	0 0	262	106	156	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	5648 ORFIAB	2727	887	411	476	1840	847	993	0	0 0	0	0	0	A/C	C	A
21142481RG_BR_AM_Manaus 2021-01-13	5849 ORFIAB	551	0	0	0	199	100	99	0	0 0	352	180	172	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	12778 ORFIAB	1767	0	0	0	702	338	364	0	0 0	1065	511	554	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	13860 ORFIAB	343	0	0	0	106	55	51	0	0 0	237	121	116	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	17259 ORFIAB	675	0	0	0	1	0	1	229	123 106	445	228	217	T/G	T	G
21142481RG_BR_AM_Manaus 2021-01-13	21614 S	532	0	0	0	167	90	77	0	0 0	365	181	184	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	21621 S	789	365	182	183	424	230	194	0	0 0	0	0	0	A/C	C	A
21142481RG_BR_AM_Manaus 2021-01-13	21622 S	790	0	0	0	364	182	182	0	0 0	426	232	194	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	21638 S	1015	0	0	0	466	252	214	0	0 0	549	290	259	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	22812 S	342	124	63	61	218	116	102	0	0 0	0	0	0	A/C	C	A
21142481RG_BR_AM_Manaus 2021-01-13	23012 S	629	391	220	171	0	0	0	236	125 111	0	0	0	A/G	A	G
21142481RG_BR_AM_Manaus 2021-01-13	23063 S	803	278	154	124	0	0	0	0	0 0	525	301	224	A/T	T	A
21142481RG_BR_AM_Manaus 2021-01-13	23335 S	1687	0	0	0	200	105	95	0	0 0	1485	747	738	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	23525 S	2261	0	0	0	728	341	387	0	0 0	1533	718	815	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	23638 S	1697	2	1	1	1428	577	851	0	0 0	267	126	141	T/C	C	T
21142481RG_BR_AM_Manaus 2021-01-13	24642 S	3459	3	0	3	1303	677	626	0	0 0	2146	1014	1132	T/C	T	C
21142481RG_BR_AM_Manaus 2021-01-13	25912 ORF3A	3113	0	0	0	0	0	0	1943	1110 833	1170	718	452	T/G	G	T
21142481RG_BR_AM_Manaus 2021-01-13	28079 ORF8	1365	0	0	0	0	0	0	1135	621 514	230	131	99	T/G	G	T
21142481RG_BR_AM_Manaus 2021-01-13	28167 ORF8	1018	788	464	324	0	0	0	230	28 202	0	0	0	A/G	A	G
21142481RG_BR_AM_Manaus 2021-01-13	28290 N	3792	2	1	1	2454	1385	1069	0	0 0	1336	724	612	T/C	C	T
21142481RG_BR_AM_Manaus 2021-01-13	28512 N	7864	3	1	2	2836	1616	1220	5023	2592 2431	2	1	1	C/G	G	C

21142481RG_BR_AM_Manaus 2021-01-13	28877 N	6904	3538	1857	1681	0	0	0	0	0	0	3366	2242	1124	A/T	A	T
21142481RG_BR_AM_Manaus 2021-01-13	28878 N	6920	6	1	5	3411	2255	1156	3500	1852	1648	3	2	1	C/G	G	C
21143316HC_BR_AM_Manaus 2021-01-04	15797 ORF1AB	3402	0	0	0	366	163	203	0	0	0	3036	1328	1708	T/C	T	C
21143339MM_BR_AM_Manaus 2021-01-05	8164 ORF1AB	3368	387	251	136	7	0	7	6	5	1	2968	1595	1373	A/T	T	A
21143339MM_BR_AM_Manaus 2021-01-05	8167 ORF1AB	3351	21	7	14	17	11	6	362	237	125	2951	1589	1362	T/G	T	G
21143339MM_BR_AM_Manaus 2021-01-05	17397 ORF1AB	836	0	0	0	722	361	361	0	0	0	114	55	59	T/C	C	T
21143339MM_BR_AM_Manaus 2021-01-05	23244 S	1829	0	0	0	1641	908	733	0	0	0	188	109	79	T/C	C	T
21143408DG_BR_AM_Manaus 2021-01-06	19655 ORF1AB	2209	1368	670	698	0	0	0	841	398	443	0	0	0	A/G	A	G
21143408DG_BR_AM_Manaus 2021-01-06	22329 S	1189	0	0	0	751	386	365	0	0	0	438	208	230	T/C	C	T
21143420WC_BR_AM_Manaus 2021-01-07	6959 ORF1AB	619	258	127	131	0	0	0	0	0	0	361	173	188	A/T	T	A
21143459HF_BR_AM_Manaus 2021-01-08	20738 ORF1AB	766	108	50	58	0	0	0	0	0	0	658	315	343	A/T	T	A
21143496CM_BR_AM_Manaus 2021-01-11	27870 ORF7B	1045	0	0	0	108	54	54	936	445	491	1	1	0	C/G	G	C
21143537SL_BR_AM_Manaus 2021-01-12	10323 ORF1AB	944	809	409	400	0	0	0	135	68	67	0	0	0	A/G	A	G
21143537SL_BR_AM_Manaus 2021-01-12	12534 ORF1AB	564	0	0	0	438	237	201	0	0	0	126	65	61	T/C	C	T
21143603CF_BR_AM_Manaus 2021-01-13	13220 ORF1AB	3882	1056	615	441	0	0	0	2826	1632	1194	0	0	0	A/G	G	A
21143603CF_BR_AM_Manaus 2021-01-13	25672 ORF3A	1926	580	259	321	1346	615	731	0	0	0	0	0	0	A/C	C	A
21843439LC_BR_AM_Manaus 2021-01-07	8140 ORF1AB	4250	2	1	1	2695	1416	1279	1	1	0	1552	798	754	T/C	C	T
21843518RA_BR_AM_Manaus 2021-01-06	8722 ORF1AB	2487	0	0	0	2219	1222	997	0	0	0	268	138	130	T/C	C	T
21890002SP_BR_AM_Anorij 2021-01-04	411 ORF1AB	1999	294	156	138	0	0	0	1704	916	788	1	0	1	A/G	G	A
21890002SP_BR_AM_Anorij 2021-01-04	1348 ORF1AB	1074	0	0	0	900	408	492	0	0	0	174	87	87	T/C	C	T
21890002SP_BR_AM_Anorij 2021-01-04	1481 ORF1AB	1465	0	0	0	235	111	124	0	0	0	1230	577	653	T/C	T	C
21890002SP_BR_AM_Anorij 2021-01-04	3525 ORF1AB	1194	0	0	0	1056	499	557	0	0	0	138	63	75	T/C	C	T
21890002SP_BR_AM_Anorij 2021-01-04	5392 ORF1AB	1425	0	0	0	992	520	472	1	0	1	432	237	195	T/C	C	T
21890002SP_BR_AM_Anorij 2021-01-04	9574 ORF1AB	782	0	0	0	0	0	0	109	52	57	673	342	331	T/G	T	G
21890002SP_BR_AM_Anorij 2021-01-04	9575 ORF1AB	787	0	0	0	0	0	0	681	355	326	106	50	56	T/G	G	T
21890002SP_BR_AM_Anorij 2021-01-04	14189 ORF1AB	1171	0	0	0	983	524	459	0	0	0	188	97	91	T/C	C	T
21890002SP_BR_AM_Anorij 2021-01-04	14371 ORF1AB	1341	0	0	0	0	0	0	1122	587	535	219	112	107	T/G	G	T
21890002SP_BR_AM_Anorij 2021-01-04	14453 ORF1AB	1551	0	0	0	237	119	118	0	0	0	1314	643	671	T/C	T	C
21890002SP_BR_AM_Anorij 2021-01-04	17478 ORF1AB	2461	301	156	145	0	0	0	2160	1126	1034	0	0	0	A/G	G	A
21890002SP_BR_AM_Anorij 2021-01-04	18683 ORF1AB	2529	1	0	1	2180	1094	1086	0	0	0	348	168	180	T/C	C	T
21890006JG_BR_AM_SGC 2021-01-04	19548 ORF1AB	1050	909	471	438	0	0	0	0	0	0	141	68	73	A/T	A	T

**Table 2 – Minor variants found and corresponding nucleotide and/or amino acid change in respect to the major variant of each sample.**

sample	refpos	refvar	qvar	qpos	qlength	protein	variant	varclass	annotation
20140055FN_BR_AM_Manau\$ 2020-03-24	2130	A	G	2075		29589 NSP2	E442G	SNP	Non-Structural protein 2
20140055FN_BR_AM_Manau\$ 2020-03-24	2252	C	A	2197		29589 NSP2	Q483K	SNP	Non-Structural protein 2
20140055FN_BR_AM_Manau\$ 2020-03-24	9661	T	C	9606		29589 NSP4	F369F	SNP_silent	Transmembrane protein
20140055FN_BR_AM_Manau\$ 2020-03-24	14322	C	T	14267		29589 NSP12b	Y285Y	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140055FN_BR_AM_Manau\$ 2020-03-24	20859	T	G	20804		29589 NSP16	V67V	SNP_silent	2'-O-ribose methyltransferase
20140055FN_BR_AM_Manau\$ 2020-03-24	21810	T	C	21755		29589 S	V83A	SNP	Spike
20140055FN_BR_AM_Manau\$ 2020-03-24	23285	G	T	23230		29589 S	A575S	SNP	Spike
20140055FN_BR_AM_Manau\$ 2020-03-24	24933	G	T	24878		29589 S	G1124V	SNP	Spike
20140055FN_BR_AM_Manau\$ 2020-03-24	25797	C	A	25742		29589 ORF3a	S135S	SNP_silent	ORF3a protein
20140055FN_BR_AM_Manau\$ 2020-03-24	26846	C	T	26791		29589 M	S108S	SNP_silent	Membrane
20140055FN_BR_AM_Manau\$ 2020-03-24	27179	G	T	27124		29589 M	L219F	SNP	Membrane
20140283VA_BR_AM_Manau\$ 2020-04-09	12331	G	A	12331		29903 NSP8	R80R	SNP_silent	Non-Structural protein 8
20140451EL_BR_AM_Manau\$ 2020-04-22	8841	C	T	8841		29903 NSP4	T96I	SNP	Transmembrane protein
20140451EL_BR_AM_Manau\$ 2020-04-22	16915	C	T	16915		29903 NSP13	V226V	SNP_silent	Helicase
20140481LB_BR_AM_Manau\$ 2020-04-20	14402	TCC	CAG	14402		29903 NSP12b	FP312SA	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140481LB_BR_AM_Manau\$ 2020-04-20	14403	TCC	CAG	14402		29903 NSP12b	FP312SA	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140481LB_BR_AM_Manau\$ 2020-04-20	14404	TCC	CAG	14402		29903 NSP12b	FP312SA	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140481LB_BR_AM_Manau\$ 2020-04-20	14740	T	G	14740		29903 NSP12b	S425A	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140481LB_BR_AM_Manau\$ 2020-04-20	14750	T	C	14750		29903 NSP12b	L428S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140481LB_BR_AM_Manau\$ 2020-04-20	14745	T	A	14745		29903 NSP12b	V426V	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
20140488MF_BR_AM_Manau\$ 2020-04-23	10156	C	T	10156		29903 NSP5	D34D	SNP_silent	3C-like proteinase
20140488MF_BR_AM_Manau\$ 2020-04-23	8290	C	T	8290		29903 NSP3	L1857L	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20140536FR_BR_AM_Manau\$ 2020-04-28	20296	AA	GT	20241		29780 NSP15	K226V	SNP	endoRNase
20140536FR_BR_AM_Manau\$ 2020-04-28	20297	AA	GT	20241		29780 NSP15	K226V	SNP	endoRNase
20140536FR_BR_AM_Manau\$ 2020-04-28	20300	T	A	20245		29780 NSP15	L227*	SNP_stop	endoRNase
20141355VB_BR_AM_Manau\$ 2020-08-18	26372	G	T	26372		29903 E	C43F	SNP	Envelope
20141355VB_BR_AM_Manau\$ 2020-08-18	884	T	C	884		29903 NSP2	C27R	SNP	Non-Structural protein 2
20141493LR_BR_AM_Labrea 2020-08-05	28704	A	C	28704		29903 N	D144A	SNP	Nucleocapsid protein
20141493LR_BR_AM_Labrea 2020-08-05	2919	C	T	2919		29903 NSP3	P67L	SNP	Predicted phosphoesterase, papain-like proteinase
20141493LR_BR_AM_Labrea 2020-08-05	20262	A	G	20262		29903 NSP15	L214L	SNP_silent	endoRNase
20141493LR_BR_AM_Labrea 2020-08-05	10030	C	T	10030		29903 NSP4	T492T	SNP_silent	Transmembrane protein
20141582LB_BR_AM_Manau\$ 2020-09-04	20968	G	A	20968		29903 NSP16	V104I	SNP	2'-O-ribose methyltransferase
20141582LB_BR_AM_Manau\$ 2020-09-04	20971	T	C	20971		29903 NSP16	S105P	SNP	2'-O-ribose methyltransferase
20141582LB_BR_AM_Manau\$ 2020-09-04	10728	C	T	10728		29903 NSP5	T225I	SNP	3C-like proteinase
20141582LB_BR_AM_Manau\$ 2020-09-04	19772	T	A	19772		29903 NSP15	V51D	SNP	endoRNase
20141582LB_BR_AM_Manau\$ 2020-09-04	19777	G	C	19777		29903 NSP15	V53L	SNP	endoRNase
20141582LB_BR_AM_Manau\$ 2020-09-04	15152	T	A	15152		29903 NSP12b	F562Y	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift

20141582LB_BR_AM_Manaus 2020-09-04	22988 G	C	22988	29903 S	G476R	SNP	Spike
20141582LB_BR_AM_Manaus 2020-09-04	11142 TG	CA	11142	29903 NSP6	M57T	SNP	Transmembrane protein
20141582LB_BR_AM_Manaus 2020-09-04	11143 TG	CA	11142	29903 NSP6	M57T	SNP	Transmembrane protein
20141582LB_BR_AM_Manaus 2020-09-04	12220 T	C	12220	29903 NSP8	N43N	SNP_silent	Non-Structural protein 8
20141721RM_BR_AM_Manaus 2020-09-17	16646 C	T	16646	29903 NSP13	T137M	SNP	Helicase
20141881JO_BR_AM_Manaus 2020-09-24	19751 AAAA	TCCT	19751	29903 NSP15	EN44VL	SNP	endoRNase
20141881JO_BR_AM_Manaus 2020-09-24	19751 AAAA	TCCT	19752	29903 NSP15	EN44VL	SNP	endoRNase
20141881JO_BR_AM_Manaus 2020-09-24	19751 AAAA	TCCT	19753	29903 NSP15	EN44VL	SNP	endoRNase
20141881JO_BR_AM_Manaus 2020-09-24	19751 AAAA	TCCT	19754	29903 NSP15	EN44VL	SNP	endoRNase
20141881JO_BR_AM_Manaus 2020-09-24	19758 AA	TC	19758	29903 NSP15	KT46NP	SNP	endoRNase
20141881JO_BR_AM_Manaus 2020-09-24	19759 AA	TC	19758	29903 NSP15	KT46NP	SNP	endoRNase
20141916KM_BR_AM_Manaus 2020-09-28	25702 C	T	25702	29903 ORF3a	P104S	SNP	ORF3a protein
20141937RS_BR_AM_Labrea 2020-09-12	19102 C	T	19102	29903 NSP14	P355S	SNP	3'-to-5' exonuclease
20141937RS_BR_AM_Labrea 2020-09-12	10076 T	C	10076	29903 NSP5	F8L	SNP	3C-like proteinase
20141937RS_BR_AM_Labrea 2020-09-12	26458 G	T	26458	29903 E	D72Y	SNP	Envelope
20141937RS_BR_AM_Labrea 2020-09-12	23774 T	G	23774	29903 S	C738G	SNP	Spike
20141937RS_BR_AM_Labrea 2020-09-12	5380 T	C	5380	29903 NSP3	G887G	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20141937RS_BR_AM_Labrea 2020-09-12	8668 C	T	8668	29903 NSP4	D38D	SNP_silent	Transmembrane protein
20142019FJ_BR_AM_Manaus 2020-09-24	22879 T	C	22879	29903 S	N439N	SNP_silent	Spike
20142116AS_BR_AM_Manaus 2020-10-05	3319 A	G	3319	29903 NSP3	P200P	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20142153MO_BR_AM_Manaus 2020-10-08	1085 G	T	1085	29903 NSP2	V94L	SNP	Non-Structural protein 2
20142205NS_BR_AM_Manaus 2020-10-15	20117 C	T	20117	29903 NSP15	T166I	SNP	endoRNase
20142274FB_BR_AM_Manaus 2020-10-22	545 G	T	545	29903 NSP1	G94C	SNP	Leader protein
20142410MC_BR_AM_Manaus 2020-11-06	16795 G	T	16795	29903 NSP13	V187L	SNP	Helicase
20142424SS_BR_AM_Manaus 2020-10-28	18368 G	T	18368	29903 NSP14	G110V	SNP	3'-to-5' exonuclease
20142424SS_BR_AM_Manaus 2020-10-28	19158 T	A	19158	29903 NSP14	H373Q	SNP	3'-to-5' exonuclease
20142424SS_BR_AM_Manaus 2020-10-28	10725 C	T	10725	29903 NSP5	T224I	SNP	3C-like proteinase
20142424SS_BR_AM_Manaus 2020-10-28	19155 A	C	19155	29903 NSP14	T372T	SNP_silent	3'-to-5' exonuclease
20142493RO_BR_AM_Manaus 2020-11-12	15822 G	T	15822	29903 NSP12b	M785I	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20142973ES_BR_AM_Manaus 2020-12-10	5730 C	T	5684	29789 NSP3	T1004I	SNP	Predicted phosphoesterase, papain-like proteinase
20143003CA_BR_AM_Manaus 2020-12-22	16245 G	A	16199	29750 NSP13	G3G	SNP_silent	Helicase
20143003CA_BR_AM_Manaus 2020-12-22	17289 A	G	17243	29750 NSP13	T351T	SNP_silent	Helicase
20143003CA_BR_AM_Manaus 2020-12-22	18561 T	C	18515	29750 NSP14	L174L	SNP_silent	3'-to-5' exonuclease
20143003CA_BR_AM_Manaus 2020-12-22	19944 C	T	19898	29750 NSP15	A108A	SNP_silent	endoRNase
20143003CA_BR_AM_Manaus 2020-12-22	19950 A	C	19904	29750 NSP15	K110N	SNP	endoRNase
20143003CA_BR_AM_Manaus 2020-12-22	19952 CA	TT	19906	29750 NSP15	P111L	SNP	endoRNase
20143003CA_BR_AM_Manaus 2020-12-22	19953 CA	TT	19906	29750 NSP15	P111L	SNP	endoRNase
20143003CA_BR_AM_Manaus 2020-12-22	20166 TGAT	ACCA	20120	29750 NSP15	D183P	SNP	endoRNase
20143003CA_BR_AM_Manaus 2020-12-22	20167 TGAT	ACCA	20120	29750 NSP15	D183P	SNP	endoRNase

20143003CA_BR_AM_Manau	2020-12-22	20168	TGAT	ACCA	20120	29750	NSP15	D183P	SNP	endoRNase
20143003CA_BR_AM_Manau	2020-12-22	20169	TGAT	ACCA	20120	29750	NSP15	D183P	SNP	endoRNase
20143003CA_BR_AM_Manau	2020-12-22	20171	G	T	20125	29750	NSP15	G184V	SNP	endoRNase
20143003CA_BR_AM_Manau	2020-12-22	20173	GT	TC	20127	29750	NSP15	V185S	SNP	endoRNase
20143003CA_BR_AM_Manau	2020-12-22	20174	GT	TC	20127	29750	NSP15	V185S	SNP	endoRNase
20143003CA_BR_AM_Manau	2020-12-22	20611	C	T	20565	29750	NSP15	L331F	SNP	endoRNase
20143088ER_BR_AM_Manau	2020-12-28	8722	C	T	8676	29589	NSP4	D56D	SNP_silent	Transmembrane protein
20143088ER_BR_AM_Manau	2020-12-28	19400	C	G	19345	29589	NSP14	S454C	SNP	3'-to-5' exonuclease
20143088ER_BR_AM_Manau	2020-12-28	23996	C	T	23941	29589	S	P812S	SNP	Spike
20143145KL_BR_AM_Manau	2020-12-30	6659	A	G	6613	29706	NSP3	S1314G	SNP	Predicted phosphoesterase, papain-like proteinase
20143164MG_BR_AM_Manau	2020-12-18	19263	C	T	19217	29598	NSP14	N408N	SNP_silent	3'-to-5' exonuclease
20143297CR_BR_AM_Manau	2020-12-23	25350	C	T	25295	29780	S	P1263L	SNP	Spike
20250295LD_BR_AM_Manau	2020-04-11	20757	T	G	20757	29903	NSP16	S33R	SNP	2'-O-ribose methyltransferase
20250295LD_BR_AM_Manau	2020-04-11	20759	CA	TG	20759	29903	NSP16	A34V	SNP	2'-O-ribose methyltransferase
20250295LD_BR_AM_Manau	2020-04-11	20760	CA	TG	20759	29903	NSP16	A34V	SNP	2'-O-ribose methyltransferase
20250295LD_BR_AM_Manau	2020-04-11	20762	C	T	20762	29903	NSP16	T35I	SNP	2'-O-ribose methyltransferase
20250295LD_BR_AM_Manau	2020-04-11	20771	A	G	20771	29903	NSP16	K38R	SNP	2'-O-ribose methyltransferase
20250295LD_BR_AM_Manau	2020-04-11	3357	A	C	3357	29903	NSP3	Y213S	SNP	Predicted phosphoesterase, papain-like proteinase
20250295LD_BR_AM_Manau	2020-04-11	4341	T	C	4341	29903	NSP3	I541T	SNP	Predicted phosphoesterase, papain-like proteinase
20250295LD_BR_AM_Manau	2020-04-11	4344	T	C	4344	29903	NSP3	I542T	SNP	Predicted phosphoesterase, papain-like proteinase
20250295LD_BR_AM_Manau	2020-04-11	7508	C	A	7508	29903	NSP3	R1597S	SNP	Predicted phosphoesterase, papain-like proteinase
20250295LD_BR_AM_Manau	2020-04-11	21796	G	T	21796	29903	S	R78S	SNP	Spike
20250295LD_BR_AM_Manau	2020-04-11	20766	A	G	20766	29903	NSP16	L36L	SNP_silent	2'-O-ribose methyltransferase
20250295LD_BR_AM_Manau	2020-04-11	20064	T	C	20064	29903	NSP15	V148V	SNP_silent	endoRNase
20250295LD_BR_AM_Manau	2020-04-11	3359	T	C	3359	29903	NSP3	Y213Y	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20250295LD_BR_AM_Manau	2020-04-11	7513	T	C	7513	29903	NSP3	N1598N	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20250329LS_BR_AM_Manau	2020-04-09	10811	C	T	10811	29903	NSP5	L253F	SNP	3C-like proteinase
20250329LS_BR_AM_Manau	2020-04-09	3357	A	C	3357	29903	NSP3	Y213S	SNP	Predicted phosphoesterase, papain-like proteinase
20250329LS_BR_AM_Manau	2020-04-09	3684	A	T	3684	29903	NSP3	Q322L	SNP	Predicted phosphoesterase, papain-like proteinase
20250329LS_BR_AM_Manau	2020-04-09	3686	C	A	3686	29903	NSP3	H323N	SNP	Predicted phosphoesterase, papain-like proteinase
20250329LS_BR_AM_Manau	2020-04-09	23288	G	A	23288	29903	S	V576I	SNP	Spike
20250329LS_BR_AM_Manau	2020-04-09	10336	C	A	10336	29903	NSP5	A94A	SNP_silent	3C-like proteinase
20250329LS_BR_AM_Manau	2020-04-09	3359	T	C	3359	29903	NSP3	Y213Y	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20841592RS_BR_AM_Manau	2020-09-02	28310	C	A	28310	29903	N	P13T	SNP	Nucleocapsid protein
20841592RS_BR_AM_Manau	2020-09-02	28487	A	G	28487	29903	N	I72V	SNP	Nucleocapsid protein
20841891TC_BR_AM_Manau	2020-09-17	19109	T	G	19109	29903	NSP14	I357S	SNP	3'-to-5' exonuclease
20842081KM_BR_AM_Manau	2020-10-01	5406	T	C	5406	29903	NSP3	I896T	SNP	Predicted phosphoesterase, papain-like proteinase
20842081KM_BR_AM_Manau	2020-10-01	11083	T	G	11083	29903	NSP6	F37L	SNP	Transmembrane protein
20842378LB_BR_AM_Manau	2020-10-29	19812	A	C	19812	29903	NSP15	K64N	SNP	endoRNase

20842378LB_BR_AM_Manaus 2020-10-29	19816 G	T	19816	29903 NSP15	V66L	SNP	endoRNase
20842378LB_BR_AM_Manaus 2020-10-29	8229 TT	AG	8229	29903 NSP3	L1837Q	SNP	Predicted phosphoesterase, papain-like proteinase
20842378LB_BR_AM_Manaus 2020-10-29	8230 TT	AG	8229	29903 NSP3	L1837Q	SNP	Predicted phosphoesterase, papain-like proteinase
20842386CA_BR_AM_Manaus 2020-10-28	18647 C	T	18647	29903 NSP14	P203L	SNP	3'-to-5' exonuclease
20842393GA_BR_AM_Manaus 2020-11-03	12439 T	C	12439	29903 NSP8	P116P	SNP_silent	Non-Structural protein 8
20842393GA_BR_AM_Manaus 2020-11-03	7081 C	T	7081	29903 NSP3	N1454N	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20842408LA_BR_AM_Manaus 2020-11-03	15843 TGA	AAG	15843	29903 NSP12b	E793R	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20842408LA_BR_AM_Manaus 2020-11-03	15844 TGA	AAG	15843	29903 NSP12b	E793R	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20842408LA_BR_AM_Manaus 2020-11-03	15845 TGA	AAG	15843	29903 NSP12b	E793R	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20842451CN_BR_AM_Manaus 2020-11-04	18395 T	C	18395	29903 NSP14	V119A	SNP	3'-to-5' exonuclease
20842451CN_BR_AM_Manaus 2020-11-04	20025 A	C	20025	29903 NSP15	R135S	SNP	endoRNase
20842455CA_BR_AM_Manaus 2020-11-05	16370 T	C	16370	29903 NSP13	V45A	SNP	Helicase
20842455CA_BR_AM_Manaus 2020-11-05	16375 C	A	16375	29903 NSP13	P47T	SNP	Helicase
20842559AS_BR_AM_Manaus 2020-11-12	10340 C	T	10340	29903 NSP5	P96S	SNP	3C-like proteinase
20842559AS_BR_AM_Manaus 2020-11-12	18318 G	T	18318	29903 NSP14	G93G	SNP_silent	3'-to-5' exonuclease
20842559AS_BR_AM_Manaus 2020-11-12	15909 T	C	15909	29903 NSP12b	G814G	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
20842572LS_BR_AM_Manaus 2020-11-13	12363 T	C	12363	29903 NSP8	L91P	SNP	Non-Structural protein 8
20842695EA_BR_AM_Manaus 2020-11-19	3259 G	T	3213	29598 NSP3	Q180H	SNP	Predicted phosphoesterase, papain-like proteinase
20842695EA_BR_AM_Manaus 2020-11-19	23209 A	T	23163	29598 S	T549T	SNP_silent	Spike
20842719LR_BR_AM_Manaus 2020-11-24	6046 T	G	6000	29635 NSP3	N1109K	SNP	Predicted phosphoesterase, papain-like proteinase
20842719LR_BR_AM_Manaus 2020-11-24	6049 T	G	6003	29635 NSP3	F1110L	SNP	Predicted phosphoesterase, papain-like proteinase
20842837AN_BR_AM_Manaus 2020-12-03	835 C	T	789	29789 NSP2	F10F	SNP_silent	Non-Structural protein 2
20842839FG_BR_AM_Manaus 2020-12-03	28253 C	T	28207	29735 ORF8	F120F	SNP_silent	ORF8 protein
20842839FG_BR_AM_Manaus 2020-12-03	28487 A	G	28441	29735 N	I72V	SNP	Nucleocapsid protein
20842839FG_BR_AM_Manaus 2020-12-03	28628 G	T	28582	29735 N	A119S	SNP	Nucleocapsid protein
20842980AA_BR_AM_Manaus 2020-12-09	4548 A	G	4502	29628 NSP3	K610R	SNP	Predicted phosphoesterase, papain-like proteinase
20842996RF_BR_AM_Manaus 2020-12-11	25864 A	G	25818	29707 ORF3a	I158V	SNP	ORF3a protein
20842996RF_BR_AM_Manaus 2020-12-11	28001 G	T	27955	29707 ORF8	P36P	SNP_silent	ORF8 protein
20843023JA_BR_AM_Manaus 2020-12-11	16393 C	T	16347	29595 NSP13	P53S	SNP	Helicase
20843023JA_BR_AM_Manaus 2020-12-11	17418 G	A	17372	29595 NSP13	K394K	SNP_silent	Helicase
20843044TM_BR_AM_Manaus 2020-12-14	12529 A	C	12483	29789 NSP8	T146T	SNP_silent	Non-Structural protein 8
20843049KC_BR_AM_Manaus 2020-12-16	3159 C	T	3113	29635 NSP3	T147I	SNP	Predicted phosphoesterase, papain-like proteinase
20843263MS_BR_AM_Manaus 2020-12-23	4167 T	C	4121	29598 NSP3	I483T	SNP	Predicted phosphoesterase, papain-like proteinase
20843263MS_BR_AM_Manaus 2020-12-23	4505 G	A	4459	29598 NSP3	G596S	SNP	Predicted phosphoesterase, papain-like proteinase
20843263MS_BR_AM_Manaus 2020-12-23	12106 G	T	12060	29598 NSP8	E5D	SNP	Non-Structural protein 8
20843263MS_BR_AM_Manaus 2020-12-23	15514 A	T	15468	29598 NSP12b	S683C	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20843263MS_BR_AM_Manaus 2020-12-23	15665 T	C	15619	29598 NSP12b	V733A	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20843263MS_BR_AM_Manaus 2020-12-23	16864 GT	AA	16818	29598 NSP13	V210N	SNP	Helicase
20843263MS_BR_AM_Manaus 2020-12-23	16865 GT	AA	16818	29598 NSP13	V210N	SNP	Helicase



20843263MS_BR_AM_Manau 2020-12-23	21855 C	T	21809	29598 S	S98F	SNP	Spike
20843312KD_BR_AM_Manau 2020-12-29	21569 G	A	21514	29780 S	V3I	SNP	Spike
20843312KD_BR_AM_Manau 2020-12-29	27625 C	T	27570	29780 ORF7a	R78C	SNP	ORF7a protein
20843351MC_BR_AM_Manau 2020-12-28	27476 T	C	27421	29593 ORF7a	I28T	SNP	ORF7a protein
20843355YM_BR_AM_Manau 2020-12-28	8597 C	T	8551	29589 NSP4	L15F	SNP	Transmembrane protein
20843355YM_BR_AM_Manau 2020-12-28	10027 A	G	9981	29589 NSP4	Q491Q	SNP_silent	Transmembrane protein
20843355YM_BR_AM_Manau 2020-12-28	18796 C	T	18741	29589 NSP14	N252N	SNP_silent	3'-to-5' exonuclease
20890007MR_BR_AM_Manau 2020-04-14	23971 G	A	23971	29903 S	S803S	SNP_silent	Spike
20890012JJ_BR_AM_Caapiranga 2020-08-24	15830 C	A	15830	29903 NSP12b	A788E	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890013MB_BR_AM_Caapiranga 2020-08-24	8130 A	T	8130	29903 NSP3	K1804M	SNP	Predicted phosphoesterase, papain-like proteinase
20890014DO_BR_AM_Urucara 2020-10-11	18597 G	A	18597	29903 NSP14	W186*	SNP_stop	3'-to-5' exonuclease
20890014DO_BR_AM_Urucara 2020-10-11	2809 G	T	2809	29903 NSP3	R30S	SNP	Predicted phosphoesterase, papain-like proteinase
20890014DO_BR_AM_Urucara 2020-10-11	8118 C	T	8118	29903 NSP3	A1800V	SNP	Predicted phosphoesterase, papain-like proteinase
20890014DO_BR_AM_Urucara 2020-10-11	13635 A	T	13635	29903 NSP12b	L56F	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890014DO_BR_AM_Urucara 2020-10-11	8747 G	T	8747	29903 NSP4	A65S	SNP	Transmembrane protein
20890014DO_BR_AM_Urucara 2020-10-11	11743 G	T	11743	29903 NSP6	Q257H	SNP	Transmembrane protein
20890014DO_BR_AM_Urucara 2020-10-11	20859 T	C	20859	29903 NSP16	V67V	SNP_silent	2'-O-ribose methyltransferase
20890014DO_BR_AM_Urucara 2020-10-11	23335 T	C	23335	29903 S	S591S	SNP_silent	Spike
20890022AB_BR_AM_Manauquiri 2020-06-09	12517 T	A	12517	29903 NSP8	C142*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manauquiri 2020-06-09	12527 AC	TG	12527	29903 NSP8	T146*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manauquiri 2020-06-09	12528 AC	TG	12527	29903 NSP8	T146*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manauquiri 2020-06-09	19881 C	A	19881	29903 NSP15	D87E	SNP	endoRNase
20890022AB_BR_AM_Manauquiri 2020-06-09	16931 TA	AG	16931	29903 NSP13	V232E	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16932 TA	AG	16931	29903 NSP13	V232E	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16939 TT	GC	16939	29903 NSP13	L235A	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16940 TT	GC	16939	29903 NSP13	L235A	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16942 A	C	16942	29903 NSP13	S236R	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	2655 AAA	TTC	2655	29903 NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manauquiri 2020-06-09	2656 AAA	TTC	2655	29903 NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manauquiri 2020-06-09	2657 AAA	TTC	2655	29903 NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manauquiri 2020-06-09	27879 CACG	AGAT	27879	29903 ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	27880 CACG	AGAT	27879	29903 ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	27881 CACG	AGAT	27879	29903 ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	27882 CACG	AGAT	27879	29903 ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	15740 A	G	15740	29903 NSP12b	N758S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15746 C	G	15746	29903 NSP12b	T760S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15749 A	T	15749	29903 NSP12b	Y761F	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15754 T	A	15754	29903 NSP12b	S763T	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15773 G	A	15773	29903 NSP12b	S769N	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift

20890022AB_BR_AM_Manquiri 2020-06-09	15870 T	A	15870	29903 NSP12b	H801Q	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manquiri 2020-06-09	28001 G	A	28001	29903 ORF8	P36P	SNP_silent	ORF8 protein
20890033RD_BR_AM_Maues 2020-04-10	19461 A	G	19461	29903 NSP14	I474M	SNP	3'-to-5' exonuclease
20890033RD_BR_AM_Maues 2020-04-10	10851 T	C	10851	29903 NSP5	V266A	SNP	3C-like proteinase
20890033RD_BR_AM_Maues 2020-04-10	11667 A	T	11667	29903 NSP6	N232I	SNP	Transmembrane protein
20890033RD_BR_AM_Maues 2020-04-10	11669 C	T	11669	29903 NSP6	R233C	SNP	Transmembrane protein
20890033RD_BR_AM_Maues 2020-04-10	11671 CT	AC	11671	29903 NSP6	Y234H	SNP	Transmembrane protein
20890033RD_BR_AM_Maues 2020-04-10	11672 CT	AC	11671	29903 NSP6	Y234H	SNP	Transmembrane protein
20890033RD_BR_AM_Maues 2020-04-10	11674 C	T	11674	29903 NSP6	Y234Y	SNP_silent	Transmembrane protein
20890035DS_BR_AM_RPE 2020-10-02	26013 T	C	26013	29903 ORF3a	F207F	SNP_silent	ORF3a protein
20890046AA_BR_AM_Manicore 2020-05-17	19867 A	C	19867	29903 NSP15	T83P	SNP	endoRNase
20890046AA_BR_AM_Manicore 2020-05-17	20032 C	T	20032	29903 NSP15	R138C	SNP	endoRNase
20890046AA_BR_AM_Manicore 2020-05-17	17072 C	T	17072	29903 NSP13	T279I	SNP	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	17074 C	A	17074	29903 NSP13	L280I	SNP	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	17076 CCA	TTG	17076	29903 NSP13	Q281W	SNP	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	17077 CCA	TTG	17076	29903 NSP13	Q281W	SNP	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	17078 CCA	TTG	17076	29903 NSP13	Q281W	SNP	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	11972 G	C	11972	29903 NSP7	D44H	SNP	Non-Structural protein 7
20890046AA_BR_AM_Manicore 2020-05-17	12211 G	T	12211	29903 NSP8	K40N	SNP	Non-Structural protein 8
20890046AA_BR_AM_Manicore 2020-05-17	17064 G	A	17064	29903 NSP13	K276K	SNP_silent	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	17067 T	C	17067	29903 NSP13	Y277Y	SNP_silent	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	17070 T	A	17070	29903 NSP13	S278S	SNP_silent	Helicase
20890046AA_BR_AM_Manicore 2020-05-17	4534 C	T	4534	29903 NSP3	Y605Y	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20890046AA_BR_AM_Manicore 2020-05-17	9478 T	C	9478	29903 NSP4	F308F	SNP_silent	Transmembrane protein
20890068AA_BR_AM_NON 2020-05-03	20450 A	G	20450	29903 NSP15	N277S	SNP	endoRNase
20890068AA_BR_AM_NON 2020-05-03	20495 G	T	20495	29903 NSP15	C292F	SNP	endoRNase
20890068AA_BR_AM_NON 2020-05-03	17347 G	T	17347	29903 NSP13	V371F	SNP	Helicase
20890068AA_BR_AM_NON 2020-05-03	11900 C	T	11900	29903 NSP7	L20F	SNP	Non-Structural protein 7
20890068AA_BR_AM_NON 2020-05-03	5810 G	T	5810	29903 NSP3	D1031Y	SNP	Predicted phosphoesterase, papain-like proteinase
20890068AA_BR_AM_NON 2020-05-03	5950 G	T	5950	29903 NSP3	K1077N	SNP	Predicted phosphoesterase, papain-like proteinase
20890068AA_BR_AM_NON 2020-05-03	14428 G	T	14428	29903 NSP12b	V321L	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890068AA_BR_AM_NON 2020-05-03	21741 C	T	21741	29903 S	S60F	SNP	Spike
20890068AA_BR_AM_NON 2020-05-03	22706 G	C	22706	29903 S	V382L	SNP	Spike
20890068AA_BR_AM_NON 2020-05-03	23220 C	G	23220	29903 S	T553S	SNP	Spike
20890068AA_BR_AM_NON 2020-05-03	23224 G	T	23224	29903 S	E554D	SNP	Spike
20890068AA_BR_AM_NON 2020-05-03	23226 C	T	23226	29903 S	S555F	SNP	Spike
20890068AA_BR_AM_NON 2020-05-03	24027 T	C	24027	29903 S	L822P	SNP	Spike
20890068AA_BR_AM_NON 2020-05-03	18357 T	C	18357	29903 NSP14	P106P	SNP_silent	3'-to-5' exonuclease
20890068AA_BR_AM_NON 2020-05-03	412 C	A	412	29903 NSP1	G49G	SNP_silent	Leader protein

20890068AA_BR_AM_NON 2020-05-03	23683	C	23683	29903	S	Y707Y	SNP_silent	Spike
20890084SS_BR_AM_Manicore 2020-06-08	7866	G	7866	29903	NSP3	G1716A	SNP	Predicted phosphoesterase, papain-like proteinase
20890084SS_BR_AM_Manicore 2020-06-08	23131	T	23131	29903	S	T523T	SNP_silent	Spike
20890111DM_BR_AM_PF 2020-04-14	10588	A	10588	29903	NSP5	E178D	SNP	3C-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	16717	A	16717	29903	NSP13	R161*	SNP_stop	Helicase
20890117JP_BR_AM_Carauari 2020-09-15	5708	G	5708	29903	NSP3	E997*	SNP_stop	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	22277	C	22277	29903	S	Q239*	SNP_stop	Spike
20890117JP_BR_AM_Carauari 2020-09-15	18194	G	18194	29903	NSP14	R52K	SNP	3'-to-5' exonuclease
20890117JP_BR_AM_Carauari 2020-09-15	10426	TG	10426	29903	NSP5	V125F	SNP	3C-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	10427	TG	10426	29903	NSP5	V125F	SNP	3C-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	12071	G	12071	29903	NSP7	D77H	SNP	Non-Structural protein 7
20890117JP_BR_AM_Carauari 2020-09-15	4201	G	4201	29903	NSP3	M494I	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	4415	G	4415	29903	NSP3	E566K	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	6195	C	6195	29903	NSP3	P1159L	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	22566	T	22566	29903	S	L335S	SNP	Spike
20890117JP_BR_AM_Carauari 2020-09-15	8853	G	8853	29903	NSP4	G100V	SNP	Transmembrane protein
20890117JP_BR_AM_Carauari 2020-09-15	12325	C	12325	29903	NSP8	D78D	SNP_silent	Non-Structural protein 8
20890117JP_BR_AM_Carauari 2020-09-15	22249	G	22249	29903	S	L229L	SNP_silent	Spike
20890117JP_BR_AM_Carauari 2020-09-15	23611	G	23611	29903	S	R683R	SNP_silent	Spike
20890125FV_BR_AM_Manus 2020-05-18	26221	G	26221	29903	3'UTR		26221 extragenic	NA
20890125FV_BR_AM_Manus 2020-05-18	17105	A	17105	29903	NSP13	H290R	SNP	Helicase
20890125FV_BR_AM_Manus 2020-05-18	27925	C	27925	29903	ORF8	T11I	SNP	ORF8 protein
20890125FV_BR_AM_Manus 2020-05-18	1462	G	1462	29903	NSP2	K219K	SNP_silent	Non-Structural protein 2
20890140CD_BR_AM_SIRN 2020-06-10	24797	C	24797	29903	S	P1079S	SNP	Spike
20890167ES_BR_AM_SAI 2020-04-15	20153	A	20153	29903	NSP15	Y178S	SNP	endoRNase
20890167ES_BR_AM_SAI 2020-04-15	7203	C	7203	29903	NSP3	S1495C	SNP	Predicted phosphoesterase, papain-like proteinase
20890167ES_BR_AM_SAI 2020-04-15	7211	T	7211	29903	NSP3	W1498G	SNP	Predicted phosphoesterase, papain-like proteinase
20890167ES_BR_AM_SAI 2020-04-15	22946	A	22946	29903	S	K462E	SNP	Spike
20890167ES_BR_AM_SAI 2020-04-15	26022	T	26022	29903	ORF3a	D210D	SNP_silent	ORF3a protein
20890206CF_BR_AM_Parintins 2020-04-28	5810	G	5810	29903	NSP3	D1031N	SNP	Predicted phosphoesterase, papain-like proteinase
20890206CF_BR_AM_Parintins 2020-04-28	7038	G	7038	29903	NSP3	G1440V	SNP	Predicted phosphoesterase, papain-like proteinase
20890206CF_BR_AM_Parintins 2020-04-28	7641	G	7641	29903	NSP3	C1641F	SNP	Predicted phosphoesterase, papain-like proteinase
20890206CF_BR_AM_Parintins 2020-04-28	24933	G	24933	29903	S	G1124V	SNP	Spike
20890206CF_BR_AM_Parintins 2020-04-28	25183	G	25183	29903	S	E1207D	SNP	Spike
20890206CF_BR_AM_Parintins 2020-04-28	22624	C	22624	29903	S	N354N	SNP_silent	Spike
20890223JC_BR_AM_PF 2020-04-30	20857	G	20857	29903	NSP16	V67L	SNP	2'-O-ribose methyltransferase
20890223JC_BR_AM_PF 2020-04-30	3357	A	3357	29903	NSP3	Y213S	SNP	Predicted phosphoesterase, papain-like proteinase
20890223JC_BR_AM_PF 2020-04-30	20859	T	20859	29903	NSP16	V67V	SNP_silent	2'-O-ribose methyltransferase
20890223JC_BR_AM_PF 2020-04-30	3359	T	3359	29903	NSP3	Y213Y	SNP_silent	Predicted phosphoesterase, papain-like proteinase

20890244FP_BR_AM_Parintins 2020-05-03	12160 G	T	12160	29903 NSP8	E23D	SNP	Non-Structural protein 8
20890352JA_BR_AM_Jutai 2020-04-29	13202 G	A	13202	29903 NSP10	E60K	SNP	Growth-factor-like protein
20890352JA_BR_AM_Jutai 2020-04-29	13358 C	T	13358	29903 NSP10	L112F	SNP	Growth-factor-like protein
20890352JA_BR_AM_Jutai 2020-04-29	558 G	T	558	29903 NSP1	G98V	SNP	Leader protein
20890352JA_BR_AM_Jutai 2020-04-29	1196 G	A	1196	29903 NSP2	E131K	SNP	Non-Structural protein 2
20890352JA_BR_AM_Jutai 2020-04-29	1601 C	T	1601	29903 NSP2	L266F	SNP	Non-Structural protein 2
20890352JA_BR_AM_Jutai 2020-04-29	12062 G	A	12062	29903 NSP7	E74K	SNP	Non-Structural protein 7
20890352JA_BR_AM_Jutai 2020-04-29	12164 G	T	12164	29903 NSP8	A25S	SNP	Non-Structural protein 8
20890352JA_BR_AM_Jutai 2020-04-29	28292 C	A	28292	29903 N	Q7K	SNP	Nucleocapsid protein
20890352JA_BR_AM_Jutai 2020-04-29	28857 G	C	28857	29903 N	R195T	SNP	Nucleocapsid protein
20890352JA_BR_AM_Jutai 2020-04-29	4148 G	T	4148	29903 NSP3	V477F	SNP	Predicted phosphoesterase, papain-like proteinase
20890352JA_BR_AM_Jutai 2020-04-29	4682 G	T	4682	29903 NSP3	A655S	SNP	Predicted phosphoesterase, papain-like proteinase
20890352JA_BR_AM_Jutai 2020-04-29	5339 C	T	5339	29903 NSP3	P874S	SNP	Predicted phosphoesterase, papain-like proteinase
20890352JA_BR_AM_Jutai 2020-04-29	7017 G	T	7017	29903 NSP3	G1433V	SNP	Predicted phosphoesterase, papain-like proteinase
20890352JA_BR_AM_Jutai 2020-04-29	7038 G	T	7038	29903 NSP3	G1440V	SNP	Predicted phosphoesterase, papain-like proteinase
20890352JA_BR_AM_Jutai 2020-04-29	13571 G	T	13571	29903 NSP12b	G35V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	14464 G	T	14464	29903 NSP12b	V333F	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	14537 T	C	14537	29903 NSP12b	L357P	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	15024 C	G	15024	29903 NSP12b	F519L	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	15113 C	T	15113	29903 NSP12b	A549V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	15866 C	T	15866	29903 NSP12b	P800L	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	22710 C	T	22710	29903 S	S383F	SNP	Spike
20890352JA_BR_AM_Jutai 2020-04-29	22984 G	T	22984	29903 S	Q474H	SNP	Spike
20890352JA_BR_AM_Jutai 2020-04-29	18987 T	C	18987	29903 NSP14	V316V	SNP_silent	3'-to-5' exonuclease
20890352JA_BR_AM_Jutai 2020-04-29	1186 G	T	1186	29903 NSP2	A127A	SNP_silent	Non-Structural protein 2
20890352JA_BR_AM_Jutai 2020-04-29	15900 T	A	15900	29903 NSP12b	V811V	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890352JA_BR_AM_Jutai 2020-04-29	22471 G	A	22471	29903 S	L303L	SNP_silent	Spike
20890511ME_BR_AM_SGC 2020-10-19	19070 T	C	19070	29903 NSP14	V344A	SNP	3'-to-5' exonuclease
20890511ME_BR_AM_SGC 2020-10-19	5822 C	T	5822	29903 NSP3	L1035F	SNP	Predicted phosphoesterase, papain-like proteinase
20890511ME_BR_AM_SGC 2020-10-19	6195 C	T	6195	29903 NSP3	P1159L	SNP	Predicted phosphoesterase, papain-like proteinase
20890511ME_BR_AM_SGC 2020-10-19	27237 A	G	27237	29903 ORF6	A12A	SNP_silent	ORF6 protein
20890511ME_BR_AM_SGC 2020-10-19	23986 T	C	23986	29903 S	D808D	SNP_silent	Spike
20890610SL_BR_AM_Tabatinga 2020-04-08	22532 G	T	22532	29903 S	E324*	SNP_stop	Spike
20890610SL_BR_AM_Tabatinga 2020-04-08	18977 A	T	18977	29903 NSP14	Q313L	SNP	3'-to-5' exonuclease
20890610SL_BR_AM_Tabatinga 2020-04-08	18981 C	G	18981	29903 NSP14	H314Q	SNP	3'-to-5' exonuclease
20890610SL_BR_AM_Tabatinga 2020-04-08	18983 T	A	18983	29903 NSP14	M315K	SNP	3'-to-5' exonuclease
20890610SL_BR_AM_Tabatinga 2020-04-08	25540 G	A	25540	29903 ORF3a	V50I	SNP	ORF3a protein
20890610SL_BR_AM_Tabatinga 2020-04-08	28077 G	T	28077	29903 ORF8	V62L	SNP	ORF8 protein
20890610SL_BR_AM_Tabatinga 2020-04-08	14018 G	C	14018	29903 NSP12b	C184S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift

20890661CB_BR_AM_Tabatinga 2020-04-16	6781 T	C	6781	29903 NSP3	F1354F	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20890675MV_BR_AM_Manaus 2020-12-22	10252 C	T	10206	29789 NSP5	F66F	SNP_silent	3C-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	20918 A	G	20918	29903 NSP16	Q87R	SNP	2'-O-ribose methyltransferase
20890702BS_BR_AM_Iranduba 2020-05-24	13040 G	A	13040	29903 NSP10	E6K	SNP	Growth-factor-like protein
20890702BS_BR_AM_Iranduba 2020-05-24	16393 CC	TT	16393	29903 NSP13	P53L	SNP	Helicase
20890702BS_BR_AM_Iranduba 2020-05-24	16394 CC	TT	16393	29903 NSP13	P53L	SNP	Helicase
20890702BS_BR_AM_Iranduba 2020-05-24	16399 T	G	16399	29903 NSP13	C55G	SNP	Helicase
20890702BS_BR_AM_Iranduba 2020-05-24	16403 A	C	16403	29903 NSP13	D56A	SNP	Helicase
20890702BS_BR_AM_Iranduba 2020-05-24	16792 C	T	16792	29903 NSP13	R186C	SNP	Helicase
20890702BS_BR_AM_Iranduba 2020-05-24	16877 C	T	16877	29903 NSP13	T214I	SNP	Helicase
20890702BS_BR_AM_Iranduba 2020-05-24	27266 T	G	27266	29903 ORF6	F22C	SNP	ORF6 protein
20890702BS_BR_AM_Iranduba 2020-05-24	4449 C	T	4449	29903 NSP3	T577I	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	5683 G	C	5683	29903 NSP3	M988I	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	7851 T	C	7851	29903 NSP3	V1711A	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	8095 AA	GC	8095	29903 NSP3	T1793P	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	8096 AA	GC	8095	29903 NSP3	T1793P	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	8216 G	T	8216	29903 NSP3	V1833F	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	8219 G	A	8219	29903 NSP3	V1834I	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	8259 T	A	8259	29903 NSP3	V1847D	SNP	Predicted phosphoesterase, papain-like proteinase
20890702BS_BR_AM_Iranduba 2020-05-24	14080 G	T	14080	29903 NSP12b	G205C	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890702BS_BR_AM_Iranduba 2020-05-24	14567 CT	TA	14567	29903 NSP12b	A367V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890702BS_BR_AM_Iranduba 2020-05-24	14568 CT	TA	14567	29903 NSP12b	A367V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890702BS_BR_AM_Iranduba 2020-05-24	23393 C	T	23393	29903 S	L611F	SNP	Spike
20890702BS_BR_AM_Iranduba 2020-05-24	8633 A	T	8633	29903 NSP4	I27L	SNP	Transmembrane protein
20890702BS_BR_AM_Iranduba 2020-05-24	11231 C	T	11231	29903 NSP6	P87S	SNP	Transmembrane protein
20890702BS_BR_AM_Iranduba 2020-05-24	11235 C	A	11235	29903 NSP6	A88D	SNP	Transmembrane protein
20890702BS_BR_AM_Iranduba 2020-05-24	18348 C	A	18348	29903 NSP14	T103T	SNP_silent	3'-to-5' exonuclease
20890702BS_BR_AM_Iranduba 2020-05-24	23335 T	C	23335	29903 S	S591S	SNP_silent	Spike
20890793EA_BR_AM_PF 2020-12-22	23393 C	T	23347	29778 S	L611F	SNP	Spike
20891068DS_BR_AM_Manaus 2020-12-24	3176 C	T	3130	29780 NSP3	P153S	SNP	Predicted phosphoesterase, papain-like proteinase
20891068DS_BR_AM_Manaus 2020-12-24	19084 A	C	19029	29780 NSP14	K349Q	SNP	3'-to-5' exonuclease
20891120MA_BR_AM_Careiro 2020-05-26	4206 C	T	4206	29903 NSP3	A496V	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	12053 C	T	12053	29903 NSP7	L71F	SNP	Non-Structural protein 7
20891128MC_BR_AM_Tabatinga 2020-05-15	5054 A	T	5054	29903 NSP3	T779S	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	5062 G	T	5062	29903 NSP3	L781F	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	5066 GG	AA	5066	29903 NSP3	G783K	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	5067 GG	AA	5066	29903 NSP3	G783K	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	6762 C	T	6762	29903 NSP3	T1348I	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	7754 A	G	7754	29903 NSP3	K1679E	SNP	Predicted phosphoesterase, papain-like proteinase

20891128MC_BR_AM_Tabatinga 2020-05-15	7756 G	C	7756	29903 NSP3	K1679N	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	7759 TG	CA	7759	29903 NSP3	G1681S	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	7760 TG	CA	7759	29903 NSP3	G1681S	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	7764 CCA	TGG	7764	29903 NSP3	SI1682LV	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	7765 CCA	TGG	7764	29903 NSP3	SI1682LV	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	7766 CCA	TGG	7764	29903 NSP3	SI1682LV	SNP	Predicted phosphoesterase, papain-like proteinase
20891128MC_BR_AM_Tabatinga 2020-05-15	13577 C	T	13577	29903 NSP12b	A37V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20891128MC_BR_AM_Tabatinga 2020-05-15	13946 C	T	13946	29903 NSP12b	P160L	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20891128MC_BR_AM_Tabatinga 2020-05-15	14465 T	C	14465	29903 NSP12b	V333A	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20891128MC_BR_AM_Tabatinga 2020-05-15	14768 C	T	14768	29903 NSP12b	A434V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20891128MC_BR_AM_Tabatinga 2020-05-15	23208 CA	AT	23208	29903 S	T549N	SNP	Spike
20891128MC_BR_AM_Tabatinga 2020-05-15	23209 CA	AT	23208	29903 S	T549N	SNP	Spike
20891128MC_BR_AM_Tabatinga 2020-05-15	23600 T	A	23600	29903 S	S680T	SNP	Spike
20891128MC_BR_AM_Tabatinga 2020-05-15	5059 T	C	5059	29903 NSP3	Y780Y	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20891184SB_BR_AM_Tabatinga 2020-05-18	2570 C	T	2570	29903 NSP2	P589S	SNP	Non-Structural protein 2
20891184SB_BR_AM_Tabatinga 2020-05-18	8109 C	A	8109	29903 NSP3	T1797N	SNP	Predicted phosphoesterase, papain-like proteinase
20891184SB_BR_AM_Tabatinga 2020-05-18	16308 C	T	16308	29903 NSP13	F24F	SNP_silent	Helicase
20891505PT_BR_AM_Manauas 2020-07-23	17007 T	C	17007	29903 NSP13	N257N	SNP_silent	Helicase
20891680JR_BR_AM_Manauquiri 2020-06-10	1899 A	G	1899	29903 NSP2	Q365R	SNP	Non-Structural protein 2
20891688MN_BR_AM_Manauquiri 2020-06-09	10641 C	T	10641	29903 NSP5	T196M	SNP	3C-like proteinase
20891688MN_BR_AM_Manauquiri 2020-06-09	19762 A	G	19762	29903 NSP15	T48A	SNP	endoRNase
20891688MN_BR_AM_Manauquiri 2020-06-09	27526 T	C	27526	29903 ORF7a	S45P	SNP	ORF7a protein
20891688MN_BR_AM_Manauquiri 2020-06-09	22677 C	G	22677	29903 S	A372G	SNP	Spike
20891688MN_BR_AM_Manauquiri 2020-06-09	2509 C	T	2509	29903 NSP2	P568P	SNP_silent	Non-Structural protein 2
20891898RL_BR_AM_Manauas 2020-05-19	18322 C	T	18322	29903 NSP14	H95Y	SNP	3'-to-5' exonuclease
20891898RL_BR_AM_Manauas 2020-05-19	11083 G	T	11083	29903 NSP6	L37F	SNP	Transmembrane protein
20892136AL_BR_AM_Manacapuru 2020-04-30	16726 C	T	16726	29903 NSP13	H164Y	SNP	Helicase
20892136AL_BR_AM_Manacapuru 2020-04-30	25855 C	G	25855	29903 ORF3a	H155D	SNP	ORF3a protein
20892136AL_BR_AM_Manacapuru 2020-04-30	28134 G	T	28134	29903 ORF8	V81F	SNP	ORF8 protein
20892136AL_BR_AM_Manacapuru 2020-04-30	4812 A	G	4812	29903 NSP3	Y698C	SNP	Predicted phosphoesterase, papain-like proteinase
20892136AL_BR_AM_Manacapuru 2020-04-30	7086 C	T	7086	29903 NSP3	T1456I	SNP	Predicted phosphoesterase, papain-like proteinase
20892199FT_BR_AM_Manauas 2020-12-21	10323 A	G	10277	29780 NSP5	K90R	SNP	3C-like proteinase
20892224RM_BR_AM_Manauas 2020-12-21	17544 G	A	17498	29657 NSP13	M436I	SNP	Helicase
20892241JS_BR_AM_Manauas 2020-06-23	20150 AT	GC	20150	29903 NSP15	N177S	SNP	endoRNase
20892241JS_BR_AM_Manauas 2020-06-23	20151 AT	GC	20150	29903 NSP15	N177S	SNP	endoRNase
20892241JS_BR_AM_Manauas 2020-06-23	20306 G	A	20306	29903 NSP15	G229D	SNP	endoRNase
20892241JS_BR_AM_Manauas 2020-06-23	6084 A	T	6084	29903 NSP3	D1122V	SNP	Predicted phosphoesterase, papain-like proteinase
20892241JS_BR_AM_Manauas 2020-06-23	6088 A	C	6088	29903 NSP3	L1123F	SNP	Predicted phosphoesterase, papain-like proteinase
20892241JS_BR_AM_Manauas 2020-06-23	6091 CCA	GAG	6091	29903 NSP3	NQ1124KR	SNP	Predicted phosphoesterase, papain-like proteinase

20892241JS_BR_AM_Manaus 2020-06-23	6092 CCA	GAG	6091	29903 NSP3	NQ1124KR	SNP	Predicted phosphoesterase, papain-like proteinase
20892241JS_BR_AM_Manaus 2020-06-23	6093 CCA	GAG	6091	29903 NSP3	NQ1124KR	SNP	Predicted phosphoesterase, papain-like proteinase
20892241JS_BR_AM_Manaus 2020-06-23	7391 C	G	7391	29903 NSP3	P1558A	SNP	Predicted phosphoesterase, papain-like proteinase
20892241JS_BR_AM_Manaus 2020-06-23	23710 A	G	23710	29903 S	T716T	SNP_silent	Spike
20892300TV_BR_AM_Barreirinha 2020-06-29	1401 G	A	1401	29903 NSP2	G199E	SNP	Non-Structural protein 2
20892300TV_BR_AM_Barreirinha 2020-06-29	8600 G	A	8600	29903 NSP4	V16M	SNP	Transmembrane protein
20892477WL_BR_AM_Manaus 2020-07-27	28674 C	T	28674	29903 N	A134V	SNP	Nucleocapsid protein
20892484AS_BR_AM_Manaus 2020-07-20	8841 C	T	8841	29903 NSP4	T96I	SNP	Transmembrane protein
20892494MS_BR_AM_Manaus 2020-07-20	12071 GAC	TTA	12071	29903 NSP7	D77L	SNP	Non-Structural protein 7
20892494MS_BR_AM_Manaus 2020-07-20	12072 GAC	TTA	12071	29903 NSP7	D77L	SNP	Non-Structural protein 7
20892494MS_BR_AM_Manaus 2020-07-20	12073 GAC	TTA	12071	29903 NSP7	D77L	SNP	Non-Structural protein 7
20892494MS_BR_AM_Manaus 2020-07-20	12082 A	G	12082	29903 NSP7	A80A	SNP_silent	Non-Structural protein 7
20892521AG_BR_AM_Manaus 2020-07-24	27567 C	A	27567	29903 ORF7a	C58*	SNP_stop	ORF7a protein
20892521AG_BR_AM_Manaus 2020-07-24	18583 G	T	18583	29903 NSP14	V182L	SNP	3'-to-5' exonuclease
20892521AG_BR_AM_Manaus 2020-07-24	28881 GGG	AAC	28881	29903 N	RG203KR	SNP	Nucleocapsid protein
20892521AG_BR_AM_Manaus 2020-07-24	28882 GGG	AAC	28881	29903 N	RG203KR	SNP	Nucleocapsid protein
20892521AG_BR_AM_Manaus 2020-07-24	28883 GGG	AAC	28881	29903 N	RG203KR	SNP	Nucleocapsid protein
20892521AG_BR_AM_Manaus 2020-07-24	27569 T	C	27569	29903 ORF7a	F59S	SNP	ORF7a protein
20892521AG_BR_AM_Manaus 2020-07-24	27627 TGCC	ACTT	27627	29903 ORF7a	A79L	SNP	ORF7a protein
20892521AG_BR_AM_Manaus 2020-07-24	27628 TGCC	ACTT	27627	29903 ORF7a	A79L	SNP	ORF7a protein
20892521AG_BR_AM_Manaus 2020-07-24	27629 TGCC	ACTT	27627	29903 ORF7a	A79L	SNP	ORF7a protein
20892521AG_BR_AM_Manaus 2020-07-24	27630 TGCC	ACTT	27627	29903 ORF7a	A79L	SNP	ORF7a protein
20892521AG_BR_AM_Manaus 2020-07-24	7420 T	C	7420	29903 NSP3	I1567I	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20892521AG_BR_AM_Manaus 2020-07-24	21781 T	C	21781	29903 S	T73T	SNP_silent	Spike
20892523EN_BR_AM_Manaus 2020-07-26	1457 C	T	1457	29903 NSP2	R218C	SNP	Non-Structural protein 2
20892533JB_BR_AM_Manaus 2020-07-28	18445 T	G	18445	29903 NSP14	F136V	SNP	3'-to-5' exonuclease
20892533JB_BR_AM_Manaus 2020-07-28	25573 A	G	25573	29903 ORF3a	K61E	SNP	ORF3a protein
20892944LC_BR_AM_Manaus 2020-09-14	15917 A	C	15917	29903 NSP12b	Y817S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20892944LC_BR_AM_Manaus 2020-09-14	15925 C	T	15925	29903 NSP12b	L820F	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20892944LC_BR_AM_Manaus 2020-09-14	26013 T	C	26013	29903 ORF3a	F207F	SNP_silent	ORF3a protein
20892962AF_BR_AM_Manaus 2020-09-15	23126 G	T	23126	29903 S	A522S	SNP	Spike
20892974ES_BR_AM_Manaus 2020-09-15	8730 C	G	8730	29903 NSP4	S59C	SNP	Transmembrane protein
20893356IS_BR_AM_Manaus 2020-05-11	28292 A	C	28237	29589 N	K7Q	SNP	Nucleocapsid protein
20893858ML_BR_AM_Manacapuru 2020-05-21	12511 T	C	12511	29903 NSP8	N140N	SNP_silent	Non-Structural protein 8
20893866MN_BR_AM_Manaus 2020-12-23	3815 G	A	3769	29780 NSP3	D366N	SNP	Predicted phosphoesterase, papain-like proteinase
20894176SC_BR_AM_Manacapuru 2020-05-26	14097 T	C	14097	29903 NSP12b	F210F	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
20894648MM_BR_AM_Manacapuru 2020-06-10	2003 C	T	2003	29903 NSP2	L400F	SNP	Non-Structural protein 2
20894648MM_BR_AM_Manacapuru 2020-06-10	28369 T	C	28369	29903 N	R32R	SNP_silent	Nucleocapsid protein
20894654WF_BR_AM_Manacapuru 2020-06-11	10702 C	T	10702	29903 NSP5	D216D	SNP_silent	3C-like proteinase

20894927MS_BR_AM_Careiro 2020-12-28	26885 C	T	26830	29779 M	N121N	SNP_silent	Membrane
20895217CM_BR_AM_Manauas 2020-12-22	14925 C	T	14870	29780 NSP12b	V486V	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
20895258MP_BR_AM_Manauas 2020-06-22	8193 A	G	8193	29903 NSP3	D1825G	SNP	Predicted phosphoesterase, papain-like proteinase
20895258MP_BR_AM_Manauas 2020-06-22	12565 G	A	12565	29903 NSP8	Q158Q	SNP_silent	Non-Structural protein 8
20895548CN_BR_AM_Manauas 2020-07-06	6326 A	G	6326	29903 NSP3	T1203A	SNP	Predicted phosphoesterase, papain-like proteinase
20895548CN_BR_AM_Manauas 2020-07-06	6329 TC	AG	6329	29903 NSP3	S1204R	SNP	Predicted phosphoesterase, papain-like proteinase
20895548CN_BR_AM_Manauas 2020-07-06	6330 TC	AG	6329	29903 NSP3	S1204R	SNP	Predicted phosphoesterase, papain-like proteinase
20895548CN_BR_AM_Manauas 2020-07-06	9416 G	C	9416	29903 NSP4	G288R	SNP	Transmembrane protein
20895548CN_BR_AM_Manauas 2020-07-06	11502 G	A	11502	29903 NSP6	G177D	SNP	Transmembrane protein
20895548CN_BR_AM_Manauas 2020-07-06	4372 A	T	4372	29903 NSP3	G551G	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20895548CN_BR_AM_Manauas 2020-07-06	8569 T	C	8569	29903 NSP4	N5N	SNP_silent	Transmembrane protein
20895554JT_BR_AM_Manauas 2020-09-16	20309 A	G	20309	29903 NSP15	Y230C	SNP	endoRNase
20895570KS_BR_AM_Manauas 2020-09-16	11750 C	T	11750	29903 NSP6	L260F	SNP	Transmembrane protein
20895570KS_BR_AM_Manauas 2020-09-16	8977 G	T	8977	29903 NSP4	E141D	SNP	Transmembrane protein
20895654ID_BR_AM_Manauas 2020-07-21	18664 C	G	18664	29903 NSP14	L209V	SNP	3'-to-5' exonuclease
20895654ID_BR_AM_Manauas 2020-07-21	16322 G	C	16322	29903 NSP13	C29S	SNP	Helicase
20895654ID_BR_AM_Manauas 2020-07-21	8498 G	T	8498	29903 NSP3	A1927S	SNP	Predicted phosphoesterase, papain-like proteinase
20895654ID_BR_AM_Manauas 2020-07-21	15703 A	G	15703	29903 NSP12b	M746V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20895654ID_BR_AM_Manauas 2020-07-21	15705 GA	AG	15705	29903 NSP12b	MM746IV	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20895654ID_BR_AM_Manauas 2020-07-21	15706 GA	AG	15705	29903 NSP12b	MM746IV	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20895654ID_BR_AM_Manauas 2020-07-21	15708 GA	CT	15708	29903 NSP12b	MI747IL	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20895654ID_BR_AM_Manauas 2020-07-21	15709 GA	CT	15708	29903 NSP12b	MI747IL	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20895654ID_BR_AM_Manauas 2020-07-21	18666 A	T	18666	29903 NSP14	L209L	SNP_silent	3'-to-5' exonuclease
20895654ID_BR_AM_Manauas 2020-07-21	16620 A	G	16620	29903 NSP13	E128E	SNP_silent	Helicase
20895654ID_BR_AM_Manauas 2020-07-21	5491 T	C	5491	29903 NSP3	D924D	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20895654ID_BR_AM_Manauas 2020-07-21	11455 C	T	11455	29903 NSP6	A161A	SNP_silent	Transmembrane protein
20898137RM_BR_AM_RPE 2020-12-19	25440 G	T	25394	29748 ORF3a	K16N	SNP	ORF3a protein
20898137RM_BR_AM_RPE 2020-12-19	25494 G	T	25448	29748 ORF3a	T34T	SNP_silent	ORF3a protein
21142481RG_BR_AM_Manauas 2021-01-13	733 C	T	687	29593 NSP1	D156D	SNP_silent	Leader protein
21142481RG_BR_AM_Manauas 2021-01-13	1190 C	T	1144	29589 NSP2	P129S	SNP	Non-Structural protein 2
21142481RG_BR_AM_Manauas 2021-01-13	2306 C	T	2260	29589 NSP2	L501F	SNP	Non-Structural protein 2
21142481RG_BR_AM_Manauas 2021-01-13	2544 C	T	2498	29589 NSP2	T580I	SNP	Non-Structural protein 2
21142481RG_BR_AM_Manauas 2021-01-13	2749 T	C	2703	29593 NSP3	D10D	SNP_silent	Predicted phosphoesterase, papain-like proteinase
21142481RG_BR_AM_Manauas 2021-01-13	3828 T	C	3782	29593 NSP3	L370S	SNP	Predicted phosphoesterase, papain-like proteinase
21142481RG_BR_AM_Manauas 2021-01-13	5648 C	A	5602	29593 NSP3	Q977K	SNP	Predicted phosphoesterase, papain-like proteinase
21142481RG_BR_AM_Manauas 2021-01-13	5849 T	C	5803	29593 NSP3	S1044P	SNP	Predicted phosphoesterase, papain-like proteinase
21142481RG_BR_AM_Manauas 2021-01-13	12778 T	C	12723	29593 NSP9	Y31Y	SNP_silent	ssRNA-binding protein
21142481RG_BR_AM_Manauas 2021-01-13	13860 T	C	13805	29593 NSP12b	D131D	SNP_silent	RNA-dependent RNA polymerase, post-ribosomal frameshift
21142481RG_BR_AM_Manauas 2021-01-13	17259 T	G	17204	29593 NSP13	D341E	SNP	Helicase



21142481RG_BR_AM_Manau	2021-01-13	21614	T	C	21559	29593	S	F18L	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	21621	A	C	21566	29593	S	N20T	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	21622	T	C	21567	29593	S	N21N	SNP_silent	Spike
21142481RG_BR_AM_Manau	2021-01-13	21638	T	C	21583	29593	S	S26P	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	22812	C	A	22757	29593	S	T417K	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	23012	A	G	22957	29593	S	K484E	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	23063	T	A	23008	29593	S	Y501N	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	23525	T	C	23470	29593	S	Y655H	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	24642	T	C	24587	29593	S	I1027T	SNP	Spike
21142481RG_BR_AM_Manau	2021-01-13	28167	A	G	28112	29593	ORF8	K92E	SNP	ORF8 protein
21142481RG_BR_AM_Manau	2021-01-13	28512	G	C	28461	29593	N	R80P	SNP	Nucleocapsid protein
21142481RG_BR_AM_Manau	2021-01-13	23335	T	C	23280	29589	S	S591S	SNP_silent	Spike
21142481RG_BR_AM_Manau	2021-01-13	23638	C	T	23583	29589	S	I692I	SNP_silent	Spike
21142481RG_BR_AM_Manau	2021-01-13	25912	G	T	25857	29589	ORF3a	G174C	SNP	ORF3a protein
21142481RG_BR_AM_Manau	2021-01-13	28079	G	T	28024	29589	ORF8	V62V	SNP_silent	ORF8 protein
21142481RG_BR_AM_Manau	2021-01-13	28290	C	T	28235	29589	N	P6L	SNP	Nucleocapsid protein
21142481RG_BR_AM_Manau	2021-01-13	28877	AG	TC	28822	29589	N	S201S	SNP_silent	Nucleocapsid protein
21142481RG_BR_AM_Manau	2021-01-13	28878	AG	TC	28822	29589	N	S201S	SNP_silent	Nucleocapsid protein
21143316HC_BR_AM_Manau	2021-01-04	15797	T	C	15751	29741	NSP12b	L777P	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
21143339MM_BR_AM_Manau	2021-01-05	8164	T	A	8118	29780	NSP3	F1815L	SNP	Predicted phosphoesterase, papain-like proteinase
21143339MM_BR_AM_Manau	2021-01-05	8167	T	G	8121	29780	NSP3	I1816M	SNP	Predicted phosphoesterase, papain-like proteinase
21143339MM_BR_AM_Manau	2021-01-05	17397	C	T	17342	29780	NSP13	V387V	SNP_silent	Helicase
21143339MM_BR_AM_Manau	2021-01-05	23244	C	T	23189	29780	S	P561L	SNP	Spike
21143408DG_BR_AM_Manau	2021-01-06	19655	A	G	19609	29707	NSP15	K12R	SNP	endoRNase
21143408DG_BR_AM_Manau	2021-01-06	22329	C	T	22283	29707	S	S256L	SNP	Spike
21143420WC_BR_AM_Manau	2021-01-07	6959	T	A	6913	29780	NSP3	W1414R	SNP	Predicted phosphoesterase, papain-like proteinase
21143459HF_BR_AM_Manau	2021-01-08	20738	T	A	20683	29766	NSP16	L27H	SNP	2'-O-ribose methyltransferase
21143496CM_BR_AM_Manau	2021-01-11	27870	G	C	27815	29711	ORF7b	E39Q	SNP	ORF7b protein
21143537SL_BR_AM_Manau	2021-01-12	10323	A	G	10277	29780	NSP5	K90R	SNP	3C-like proteinase
21143537SL_BR_AM_Manau	2021-01-12	12534	C	T	12479	29780	NSP8	T148I	SNP	Non-Structural protein 8
21143603CF_BR_AM_Manau	2021-01-13	13220	G	A	13165	29734	NSP10	E66K	SNP	Growth-factor-like protein
21143603CF_BR_AM_Manau	2021-01-13	25672	C	A	25617	29734	ORF3a	L94I	SNP	ORF3a protein
21843439LC_BR_AM_Manau	2021-01-07	8140	C	T	8094	29589	NSP3	S1807S	SNP_silent	Predicted phosphoesterase, papain-like proteinase
21843518RA_BR_AM_Manau	2021-01-06	8722	C	T	8676	29589	NSP4	D56D	SNP_silent	Transmembrane protein
21890002SP_BR_AM_Anori	2021-01-04	411	G	A	365	29589	NSP1	G49D	SNP	Leader protein
21890002SP_BR_AM_Anori	2021-01-04	1348	C	T	1302	29589	NSP2	P181P	SNP_silent	Non-Structural protein 2
21890002SP_BR_AM_Anori	2021-01-04	1481	T	C	1435	29589	NSP2	F226L	SNP	Non-Structural protein 2
21890002SP_BR_AM_Anori	2021-01-04	3525	C	T	3479	29589	NSP3	S269F	SNP	Predicted phosphoesterase, papain-like proteinase
21890002SP_BR_AM_Anori	2021-01-04	5392	C	T	5346	29589	NSP3	N891N	SNP_silent	Predicted phosphoesterase, papain-like proteinase

21890002SP_BR_AM_Anorj 2021-01-04	9574 TG	GT	9528	29589 NSP4	V341F	SNP	Transmembrane protein
21890002SP_BR_AM_Anorj 2021-01-04	9575 TG	GT	9528	29589 NSP4	V341F	SNP	Transmembrane protein
21890002SP_BR_AM_Anorj 2021-01-04	14189 C	T	14134	29589 NSP12b	A241V	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
21890002SP_BR_AM_Anorj 2021-01-04	14371 G	T	14316	29589 NSP12b	A302S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
21890002SP_BR_AM_Anorj 2021-01-04	14453 T	C	14398	29589 NSP12b	V329A	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
21890002SP_BR_AM_Anorj 2021-01-04	17478 G	A	17423	29589 NSP13	K414K	SNP_silent	Helicase
21890002SP_BR_AM_Anorj 2021-01-04	18683 C	T	18628	29589 NSP14	T215I	SNP	3'-to-5' exonuclease
21890006JG_BR_AM_SGC 2021-01-04	19548 A	T	19493	29589 NSP14	S503S	SNP_silent	3'-to-5' exonuclease

**Table 3 – Total count of Mvs per sample and the associated statistics.**

<b>Genomes</b>	<b>Date</b>	<b>MVs</b>	<b>Period</b>	<b>Genomes with MV</b>	<b>Mean MV</b>	<b>Mean STDEV</b>
20140055FN_BR_AM_Manaus 2020-03-24	2020-03-24	11	Mar-Sep	67/121	2	6,229298597
20890610SL_BR_AM_Tabatinga 2020-04-08	2020-04-08	7	Oct-Jan	60/129	1	4,309495494
20250329LS_BR_AM_Manaus 2020-04-09	2020-04-09	7	Total	126/250	2	5,077657253
20140283VA_BR_AM_Manaus 2020-04-09	2020-04-09	1				
20890033RD_BR_AM_Maues 2020-04-10	2020-04-10	7				
20250295LD_BR_AM_Manaus 2020-04-11	2020-04-11	14				
20890007MR_BR_AM_Manaus 2020-04-14	2020-04-14	1				
20890111DM_BR_AM_PF 2020-04-14	2020-04-14	1				
20890167ES_BR_AM_SAI 2020-04-15	2020-04-15	5				
20890661CB_BR_AM_Tabatinga 2020-04-16	2020-04-16	1				
20140481LB_BR_AM_Manaus 2020-04-20	2020-04-20	6				
20140451EL_BR_AM_Manaus 2020-04-22	2020-04-22	2				
20140488MF_BR_AM_Manaus 2020-04-23	2020-04-23	2				
20890206CF_BR_AM_Parintins 2020-04-28	2020-04-28	6				
20140536FR_BR_AM_Manaus 2020-04-28	2020-04-28	3				
20890352JA_BR_AM_Jutai 2020-04-29	2020-04-29	26				
20892136AL_BR_AM_Manacapuru 2020-04-30	2020-04-30	5				
20890223JC_BR_AM_PF 2020-04-30	2020-04-30	4				
20890068AA_BR_AM_NON 2020-05-03	2020-05-03	16				
20890244FP_BR_AM_Parintins 2020-05-03	2020-05-03	1				
20893356IS_BR_AM_Manaus 2020-05-11	2020-05-11	1				
20891128MC_BR_AM_Tabatinga 2020-05-15	2020-05-15	21				
20890046AA_BR_AM_Manicore 2020-05-17	2020-05-17	14				
20890125FV_BR_AM_Manaus 2020-05-18	2020-05-18	4				
20891184SB_BR_AM_Tabatinga 2020-05-18	2020-05-18	3				
20891898RL_BR_AM_Manaus 2020-05-19	2020-05-19	2				

20893858ML_BR_AM_Manacapuru 2020-05-21	2020-05-21	1
20890702BS_BR_AM_Iranduba 2020-05-24	2020-05-24	26
20891120MA_BR_AM_Careiro 2020-05-26	2020-05-26	1
20894176SC_BR_AM_Manacapuru 2020-05-26	2020-05-26	1
20890084SS_BR_AM_Manicore 2020-06-08	2020-06-08	2
20890022AB_BR_AM_Manauquiri 2020-06-09	2020-06-09	23
20891688MN_BR_AM_Manauquiri 2020-06-09	2020-06-09	5
20894648MM_BR_AM_Manacapuru 2020-06-10	2020-06-10	2
20890140CD_BR_AM_SIRN 2020-06-10	2020-06-10	1
20891680JR_BR_AM_Manauquiri 2020-06-10	2020-06-10	1
20894654WF_BR_AM_Manacapuru 2020-06-11	2020-06-11	1
20895258MP_BR_AM_Manauquiri 2020-06-22	2020-06-22	2
20892241JS_BR_AM_Manauquiri 2020-06-23	2020-06-23	10
20892300TV_BR_AM_Barreirinha 2020-06-29	2020-06-29	2
20895548CN_BR_AM_Manauquiri 2020-07-06	2020-07-06	7
20892494MS_BR_AM_Manauquiri 2020-07-20	2020-07-20	4
20892484AS_BR_AM_Manauquiri 2020-07-20	2020-07-20	1
20895654ID_BR_AM_Manauquiri 2020-07-21	2020-07-21	12
20891505PT_BR_AM_Manauquiri 2020-07-23	2020-07-23	1
20892521AG_BR_AM_Manauquiri 2020-07-24	2020-07-24	12
20892523EN_BR_AM_Manauquiri 2020-07-26	2020-07-26	1
20892477WL_BR_AM_Manauquiri 2020-07-27	2020-07-27	1
20892533JB_BR_AM_Manauquiri 2020-07-28	2020-07-28	2
20141493LR_BR_AM_Labrea 2020-08-05	2020-08-05	4
20141355VB_BR_AM_Manauquiri 2020-08-18	2020-08-18	2
20890012JJ_BR_AM_Caapiranga 2020-08-24	2020-08-24	1
20890013MB_BR_AM_Caapiranga 2020-08-24	2020-08-24	1
20841592RS_BR_AM_Manauquiri 2020-09-02	2020-09-02	2

20141582LB_BR_AM_Manaus 2020-09-04	2020-09-04	10
20141937RS_BR_AM_Labrea 2020-09-12	2020-09-12	6
20892944LC_BR_AM_Manaus 2020-09-14	2020-09-14	3
20890117JP_BR_AM_Carauari 2020-09-15	2020-09-15	15
20892962AF_BR_AM_Manaus 2020-09-15	2020-09-15	1
20892974ES_BR_AM_Manaus 2020-09-15	2020-09-15	1
20895570KS_BR_AM_Manaus 2020-09-16	2020-09-16	2
20895554JT_BR_AM_Manaus 2020-09-16	2020-09-16	1
20141721RM_BR_AM_Manaus 2020-09-17	2020-09-17	1
20841891TC_BR_AM_Manaus 2020-09-17	2020-09-17	1
20141881JO_BR_AM_Manaus 2020-09-24	2020-09-24	6
20142019FJ_BR_AM_Manaus 2020-09-24	2020-09-24	1
20141916KM_BR_AM_Manaus 2020-09-28	2020-09-28	1
20842081KM_BR_AM_Manaus 2020-10-01	2020-10-01	2
20890035DS_BR_AM_RPE 2020-10-02	2020-10-02	1
20142116AS_BR_AM_Manaus 2020-10-05	2020-10-05	1
20142153MO_BR_AM_Manaus 2020-10-08	2020-10-08	1
20890014DO_BR_AM_Urucara 2020-10-11	2020-10-11	8
20142205NS_BR_AM_Manaus 2020-10-15	2020-10-15	1
20890511ME_BR_AM_SGC 2020-10-19	2020-10-19	5
20142274FB_BR_AM_Manaus 2020-10-22	2020-10-22	1
20142424SS_BR_AM_Manaus 2020-10-28	2020-10-28	4
20842386CA_BR_AM_Manaus 2020-10-28	2020-10-28	1
20842378LB_BR_AM_Manaus 2020-10-29	2020-10-29	4
20842408LA_BR_AM_Manaus 2020-11-03	2020-11-03	3
20842393GA_BR_AM_Manaus 2020-11-03	2020-11-03	2
20842451CN_BR_AM_Manaus 2020-11-04	2020-11-04	2
20842455CA_BR_AM_Manaus 2020-11-05	2020-11-05	2

20142410MC_BR_AM_Manaus 2020-11-06	2020-11-06	1
20842559AS_BR_AM_Manaus 2020-11-12	2020-11-12	3
20142493RO_BR_AM_Manaus 2020-11-12	2020-11-12	1
20842572LS_BR_AM_Manaus 2020-11-13	2020-11-13	1
20842695EA_BR_AM_Manaus 2020-11-19	2020-11-19	2
20842719LR_BR_AM_Manaus 2020-11-24	2020-11-24	2
20842839FG_BR_AM_Manaus 2020-12-03	2020-12-03	3
20842837AN_BR_AM_Manaus 2020-12-03	2020-12-03	1
20842980AA_BR_AM_Manaus 2020-12-09	2020-12-09	1
20142973ES_BR_AM_Manaus 2020-12-10	2020-12-10	1
20842996RF_BR_AM_Manaus 2020-12-11	2020-12-11	2
20843023JA_BR_AM_Manaus 2020-12-11	2020-12-11	2
20843044TM_BR_AM_Manaus 2020-12-14	2020-12-14	1
20843049KC_BR_AM_Manaus 2020-12-16	2020-12-16	1
20143164MG_BR_AM_Manaus 2020-12-18	2020-12-18	1
20898137RM_BR_AM_RPE 2020-12-19	2020-12-19	2
20892199FT_BR_AM_Manaus 2020-12-21	2020-12-21	1
20892224RM_BR_AM_Manaus 2020-12-21	2020-12-21	1
20143003CA_BR_AM_Manaus 2020-12-22	2020-12-22	15
20890675MV_BR_AM_Manaus 2020-12-22	2020-12-22	1
20890793EA_BR_AM_PF 2020-12-22	2020-12-22	1
20895217CM_BR_AM_Manaus 2020-12-22	2020-12-22	1
20843263MS_BR_AM_Manaus 2020-12-23	2020-12-23	8
20143297CR_BR_AM_Manaus 2020-12-23	2020-12-23	1
20893866MN_BR_AM_Manaus 2020-12-23	2020-12-23	1
20891068DS_BR_AM_Manaus 2020-12-24	2020-12-24	2
20143088ER_BR_AM_Manaus 2020-12-28	2020-12-28	3
20843355YM_BR_AM_Manaus 2020-12-28	2020-12-28	3

20843351MC_BR_AM_Manau	2020-12-28	1
20894927MS_BR_AM_Careiro	2020-12-28	1
20843312KD_BR_AM_Manau	2020-12-29	2
20143145KL_BR_AM_Manau	2020-12-30	1
21890002SP_BR_AM_Anori	2021-01-04	12
21143316HC_BR_AM_Manau	2021-01-04	1
21890006JG_BR_AM_SGC	2021-01-04	1
21143339MM_BR_AM_Manau	2021-01-05	4
21143408DG_BR_AM_Manau	2021-01-06	2
21843518RA_BR_AM_Manau	2021-01-06	1
21143420WC_BR_AM_Manau	2021-01-07	1
21843439LC_BR_AM_Manau	2021-01-07	1
21143459HF_BR_AM_Manau	2021-01-08	1
21143496CM_BR_AM_Manau	2021-01-11	1
21143537SL_BR_AM_Manau	2021-01-12	2
21143603CF_BR_AM_Manau	2021-01-13	2
21142481RG_BR_AM_Manau	2021-01-13	29

**Table 4 – Minor variants associated with the SARS-CoV-2 genomic region and type of nucleotide and amino acid substitution found in the B.1.1.28 lineages forming a basal clade from where the P.1 lineage emerged.**

sample	refpos	refvar	qvar	qpos	qlength	protein	variant	varclass	annotation
20141937RS_BR_AM_Labrea 2020-09-12_minor	19102	C	T	19102	29903	NSP14	P355S	SNP	3'-to-5' exonuclease
20141937RS_BR_AM_Labrea 2020-09-12_minor	10076	T	C	10076	29903	NSP5	F8L	SNP	3C-like proteinase
20141937RS_BR_AM_Labrea 2020-09-12_minor	26458	G	T	26458	29903	E	D72Y	SNP	Envelope
20141937RS_BR_AM_Labrea 2020-09-12_minor	23774	T	G	23774	29903	S	C738G	SNP	Spike
20141937RS_BR_AM_Labrea 2020-09-12_minor	5380	T	C	5380	29903	NSP3	G887G	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20141937RS_BR_AM_Labrea 2020-09-12_minor	8668	C	T	8668	29903	NSP4	D38D	SNP_silent	Transmembrane protein
20142116AS_BR_AM_Manaus 2020-10-05_minor	3319	A	G	3319	29903	NSP3	P200P	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20142493RO_BR_AM_Manaus 2020-11-12_minor	15822	G	T	15822	29903	NSP12b	M785I	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20842378LB_BR_AM_Manaus 2020-10-29_minor	19812	A	C	19812	29903	NSP15	K64N	SNP	endoRNase
20842378LB_BR_AM_Manaus 2020-10-29_minor	19816	G	T	19816	29903	NSP15	V66L	SNP	endoRNase
20842378LB_BR_AM_Manaus 2020-10-29_minor	8229	TT	AG	8229	29903	NSP3	L1837Q	SNP	Predicted phosphoesterase, papain-like proteinase
20842393GA_BR_AM_Manaus 2020-11-03_minor	12439	T	C	12439	29903	NSP8	P116P	SNP_silent	Non-Structural protein 8
20842393GA_BR_AM_Manaus 2020-11-03_minor	7081	C	T	7081	29903	NSP3	N1454N	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20890012JJ_BR_AM_Caapiranga 2020-08-24_minor	15830	C	A	15830	29903	NSP12b	A788E	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890013MB_BR_AM_Caapiranga 2020-08-24_minor	8130	A	T	8130	29903	NSP3	K1804M	SNP	Predicted phosphoesterase, papain-like proteinase
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	12517	T	A	12517	29903	NSP8	C142*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	12527	AC	TG	12527	29903	NSP8	T146*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	19881	C	A	19881	29903	NSP15	D87E	SNP	endoRNase
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	16931	TA	AG	16931	29903	NSP13	V232E	SNP	Helicase
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	16939	TT	GC	16939	29903	NSP13	L235A	SNP	Helicase
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	16942	A	C	16942	29903	NSP13	S236R	SNP	Helicase
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	2655	AAA	TTC	2655	29903	NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	27879	CACG	AGAT	27879	29903	ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	15740	A	G	15740	29903	NSP12b	N758S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	15746	C	G	15746	29903	NSP12b	T760S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	15749	A	T	15749	29903	NSP12b	Y761F	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	15754	T	A	15754	29903	NSP12b	S763T	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	15773	G	A	15773	29903	NSP12b	S769N	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	15870	T	A	15870	29903	NSP12b	H801Q	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manaquiri 2020-06-09_minor	28001	G	A	28001	29903	ORF8	P36P	SNP_silent	ORF8 protein
20890117JP_BR_AM_Carauari 2020-09-15_minor	16717	A	T	16717	29903	NSP13	R161*	SNP_stop	Helicase
20890117JP_BR_AM_Carauari 2020-09-15_minor	5708	G	T	5708	29903	NSP3	E997*	SNP_stop	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15_minor	22277	C	T	22277	29903	S	Q239*	SNP_stop	Spike
20890117JP_BR_AM_Carauari 2020-09-15_minor	18194	G	A	18194	29903	NSP14	R52K	SNP	3'-to-5' exonuclease
20890117JP_BR_AM_Carauari 2020-09-15_minor	10426	TG	GT	10426	29903	NSP5	V125F	SNP	3C-like proteinase



20890117JP_BR_AM_Carauari 2020-09-15_minor	12071 G	C	12071	29903	NSP7	D77H	SNP	Non-Structural protein 7
20890117JP_BR_AM_Carauari 2020-09-15_minor	4201 G	C	4201	29903	NSP3	M494I	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15_minor	4415 G	A	4415	29903	NSP3	E566K	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15_minor	6195 C	T	6195	29903	NSP3	P1159L	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15_minor	22566 T	C	22566	29903	S	L335S	SNP	Spike
20890117JP_BR_AM_Carauari 2020-09-15_minor	8853 G	T	8853	29903	NSP4	G100V	SNP	Transmembrane protein
20890117JP_BR_AM_Carauari 2020-09-15_minor	12325 C	T	12325	29903	NSP8	D78D	SNP_silent	Non-Structural protein 8
20890117JP_BR_AM_Carauari 2020-09-15_minor	22249 G	A	22249	29903	S	L229L	SNP_silent	Spike
20890117JP_BR_AM_Carauari 2020-09-15_minor	23611 G	T	23611	29903	S	R683R	SNP_silent	Spike

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20890117JP_BR_AM_Carauari 2020-09-15	16717 A	T	16717	29903	NSP13	R161*	SNP_stop	Helicase
20890117JP_BR_AM_Carauari 2020-09-15	5708 G	T	5708	29903	NSP3	E997*	SNP_stop	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	22277 C	T	22277	29903	S	Q239*	SNP_stop	Spike
20890117JP_BR_AM_Carauari 2020-09-15	18194 G	A	18194	29903	NSP14	R52K	SNP	3'-to-5' exonuclease
20890117JP_BR_AM_Carauari 2020-09-15	10426 TG	GT	10426	29903	NSP5	V125F	SNP	3C-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	10427 TG	GT	10426	29903	NSP5	V125F	SNP	3C-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	12071 G	C	12071	29903	NSP7	D77H	SNP	Non-Structural protein 7
20890117JP_BR_AM_Carauari 2020-09-15	4201 G	C	4201	29903	NSP3	M494I	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	4415 G	A	4415	29903	NSP3	E566K	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	6195 C	T	6195	29903	NSP3	P1159L	SNP	Predicted phosphoesterase, papain-like proteinase
20890117JP_BR_AM_Carauari 2020-09-15	22566 T	C	22566	29903	S	L335S	SNP	Spike
20890117JP_BR_AM_Carauari 2020-09-15	8853 G	T	8853	29903	NSP4	G100V	SNP	Transmembrane protein
20890117JP_BR_AM_Carauari 2020-09-15	12325 C	T	12325	29903	NSP8	D78D	SNP_silent	Non-Structural protein 8
20890117JP_BR_AM_Carauari 2020-09-15	22249 G	A	22249	29903	S	L229L	SNP_silent	Spike
20890117JP_BR_AM_Carauari 2020-09-15	23611 G	T	23611	29903	S	R683R	SNP_silent	Spike
20142493RO_BR_AM_Manus 2020-11-12	15822 G	T	15822	29903	NSP12b	M785I	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20842378LB_BR_AM_Manus 2020-10-29	19812 A	C	19812	29903	NSP15	K64N	SNP	endoRNase
20842378LB_BR_AM_Manus 2020-10-29	19816 G	T	19816	29903	NSP15	V66L	SNP	endoRNase
20842378LB_BR_AM_Manus 2020-10-29	8229 TT	AG	8229	29903	NSP3	L1837Q	SNP	Predicted phosphoesterase, papain-like proteinase
20842378LB_BR_AM_Manus 2020-10-29	8230 TT	AG	8229	29903	NSP3	L1837Q	SNP	Predicted phosphoesterase, papain-like proteinase
20842393GA_BR_AM_Manus 2020-11-03	12439 T	C	12439	29903	NSP8	P116P	SNP_silent	Non-Structural protein 8
20842393GA_BR_AM_Manus 2020-11-03	7081 C	T	7081	29903	NSP3	N1454N	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20842695EA_BR_AM_Manus 2020-11-19	3259 G	T	3213	29598	NSP3	Q180H	SNP	Predicted phosphoesterase, papain-like proteinase
20842695EA_BR_AM_Manus 2020-11-19	23209 A	T	23163	29598	S	T549T	SNP_silent	Spike

20890012JJ_BR_AM_Caapiranga 2020-08-24	15830	C	A	15830	29903	NSP12b	A788E	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890013MB_BR_AM_Caapiranga 2020-08-24	8130	A	T	8130	29903	NSP3	K1804M	SNP	Predicted phosphoesterase, papain-like proteinase
20890022AB_BR_AM_Manauquiri 2020-06-09	12517	T	A	12517	29903	NSP8	C142*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manauquiri 2020-06-09	12527	AC	TG	12527	29903	NSP8	T146*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manauquiri 2020-06-09	12528	AC	TG	12527	29903	NSP8	T146*	SNP_stop	Non-Structural protein 8
20890022AB_BR_AM_Manauquiri 2020-06-09	19881	C	A	19881	29903	NSP15	D87E	SNP	endoRNase
20890022AB_BR_AM_Manauquiri 2020-06-09	16931	TA	AG	16931	29903	NSP13	V232E	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16932	TA	AG	16931	29903	NSP13	V232E	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16939	TT	GC	16939	29903	NSP13	L235A	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16940	TT	GC	16939	29903	NSP13	L235A	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	16942	A	C	16942	29903	NSP13	S236R	SNP	Helicase
20890022AB_BR_AM_Manauquiri 2020-06-09	2655	AAA	TTC	2655	29903	NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manauquiri 2020-06-09	2656	AAA	TTC	2655	29903	NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manauquiri 2020-06-09	2657	AAA	TTC	2655	29903	NSP2	EK617VQ	SNP	Non-Structural protein 2
20890022AB_BR_AM_Manauquiri 2020-06-09	27879	CACG	AGAT	27879	29903	ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	27880	CACG	AGAT	27879	29903	ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	27881	CACG	AGAT	27879	29903	ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	27882	CACG	AGAT	27879	29903	ORF7b	HA42RS	SNP	ORF7b protein
20890022AB_BR_AM_Manauquiri 2020-06-09	15740	A	G	15740	29903	NSP12b	N758S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15746	C	G	15746	29903	NSP12b	T760S	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15749	A	T	15749	29903	NSP12b	Y761F	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15754	T	A	15754	29903	NSP12b	S763T	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15773	G	A	15773	29903	NSP12b	S769N	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	15870	T	A	15870	29903	NSP12b	H801Q	SNP	RNA-dependent RNA polymerase, post-ribosomal frameshift
20890022AB_BR_AM_Manauquiri 2020-06-09	28001	G	A	28001	29903	ORF8	P36P	SNP_silent	ORF8 protein
20141937RS_BR_AM_Labrea 2020-09-12	19102	C	T	19102	29903	NSP14	P355S	SNP	3'-to-5' exonuclease
20141937RS_BR_AM_Labrea 2020-09-12	10076	T	C	10076	29903	NSP5	F8L	SNP	3C-like proteinase
20141937RS_BR_AM_Labrea 2020-09-12	26458	G	T	26458	29903	E	D72Y	SNP	Envelope
20141937RS_BR_AM_Labrea 2020-09-12	23774	T	G	23774	29903	S	C738G	SNP	Spike
20141937RS_BR_AM_Labrea 2020-09-12	5380	T	C	5380	29903	NSP3	G887G	SNP_silent	Predicted phosphoesterase, papain-like proteinase
20141937RS_BR_AM_Labrea 2020-09-12	8668	C	T	8668	29903	NSP4	D38D	SNP_silent	Transmembrane protein