

Supplemental Table 1: Sensitivity and specificity of RAD and automated antigen tests across different range of RT-PCR Ct values. Results in grey provide results of all RT-PCR values including those with a Ct value > 25 (min-max range: 12.6 – 38.2).

Sensitivity		No. of positive patients							
Ct range	n	Biotal (10 min)	Panbio (15 min)	Panbio (20 min)	Healgen (15 min)	Healgen (20 min)	Roche (15 min)	Roche (30 min)	Ortho
< 15	2	2 (100%)	1 (50.0%)	1 (50.0%)	2 (100%)	2 (100%)	2 (100%)	2 (100%)	2 (100%)
> 15-20	34	33 (97.1%)	32 (94.1%)	32 (94.1%)	33 (97.1%)	33 (97.1%)	33 (97.1%)	33 (97.1%)	34 (100%)
> 20-25	22	19 (86.4%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	22 (100%)
Total < 25†	58	54 (93.1%)	54 (93.1%)	54 (93.1%)	56 (96.6%)	56 (96.6%)	56 (96.6%)	56 (96.6%)	58 (100%)
[95%CI]		[83.3% to 98.1%]	[83.3% to 98.1%]	[83.3% to 98.1%]	[88.1% to 99.6%]	[88.1% to 99.6%]	[88.1% to 99.6%]	[88.1% to 99.6%]	[93.8% to 100%]
> 25	38	10 (26.3%)	11 (28.9%)	11 (28.9%)	14 (36.8%)	18 (47.4%)	11 (28.9%)	11 (28.9%)	22 (57.9%)
Total (n, %)	96	64 (66.7%)	65 (67.7%)	65 (67.7%)	70 (72.9%)	74 (77.1%)	67 (69.8%)	67 (69.8%)	80 (83.3%)
[95% CI]		[56.3% to 76.0%]	[57.4% to 76.9%]	[57.4% to 76.9%]	[62.9% to 81.5%]	[67.4% to 85.1%]	[59.6% to 78.8%]	[59.6% to 78.8%]	[74.4%- 90.2%]
Specificity		No. of negative patients							
Neg. RT-PCR†	130	119 (91.5%)	119 (91.5%)	119 (91.5%)	114 (87.7%)	109 (83.9%)	119 (91.5%)	119 (91.5%)	108 (83.1%)
[95%CI]		[85.4% to 95.7%]	[85.4% to 95.7%]	[85.4% to 95.7%]	[80.8% to 92.8%]	[76.4% to 89.7%]	[85.4% to 95.7%]	[85.4% to 95.7%]	[75.5% to 89.1%]
Neg. RT-PCR	92	91 (98.9%)	92 (100%)	92 (100%)	90 (97.8%)	89 (96.7%)	92 (100%)	92 (100%)	92 (100%)
[95%CI]		[94.1% to 99.9%]	[96.1%-100%]	[96.1%-100%]	[92.4%-99.7%]	[90.8%-99.3%]	[96.1%-100%]	[96.1%-100%]	[96.1%-100%]

Supplemental Table 2: Sensitivity and specificity of RAD and automated antigen tests across different range of RT-PCR Ct values. Results in grey provide results of all RT-PCR values including those with a Ct value > 35 (min-max range: 12.6 – 38.2).

Sensitivity		No. of positive patients							
Ct range	n	Biotal (10 min)	Panbio (15 min)	Panbio (20 min)	Healgen (15 min)	Healgen (20 min)	Roche (15 min)	Roche (30 min)	Ortho
< 15	2	2 (100%)	1 (50.0%)	1 (50.0%)	2 (100%)	2 (100%)	2 (100%)	2 (100%)	2 (100%)
> 15-20	34	33 (97.1%)	32 (94.1%)	32 (94.1%)	33 (97.1%)	33 (97.1%)	33 (97.1%)	33 (97.1%)	34 (100%)
> 20-25	22	19 (86.4%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	21 (95.5%)	22 (100%)
> 25-30	19	6 (31.6%)	10 (52.6%)	10 (52.6%)	11 (57.9%)	13 (68.4%)	10 (52.6%)	10 (52.6%)	19 (100%)
> 30-35	6	2 (33.3%)	0 (0.0%)	0 (0.0%)	2 (33.3%)	2 (33.3%)	0 (0.00%)	0 (0.0%)	3 (50.0%)
Total < 35† [95%CI]	83	62 (74.7%) [64.0% to 83.6%]	64 (77.1%) [66.6% to 85.6%]	64 (77.1%) [66.6% to 85.6%]	69 (83.1%) [73.3% to 90.5%]	71 (85.5%) [76.1% to 92.3%]	66 (79.5%) [69.2% to 87.6%]	66 (79.5%) [69.2% to 87.6%]	80 (96.4%) [89.8% to 99.3%]
> 35	13	2 (15.4%)	1 (7.7%)	1 (7.7%)	1 (7.7%)	3 (23.3%)	1 (7.7%)	1 (7.7%)	0 (0.0%)
Total (n, %) [95% CI]	96	64 (66.7%) [56.3% to 76.0%]	65 (67.7%) [57.4% to 76.9%]	65 (67.7%) [57.4% to 76.9%]	70 (72.9%) [62.9% to 81.5%]	74 (77.1%) [67.4% to 85.1%]	67 (69.8%) [59.6% to 78.8%]	67 (69.8%) [59.6% to 78.8%]	80 (83.3%) [74.4%- 90.2%]
Specificity		No. of negative patients							
Neg. RT-PCR†	105	102 (97.1%)	104 (99.1%)	104 (99.1%)	102 (97.1%)	99 (94.3%)	104 (99.1%)	104 (99.1%)	105 (100%)
[95%CI]		[91.9% to 99.4%]	[94.8% to 100%]	[94.8% to 100%]	[91.9% to 99.4%]	[88.0% to 97.9%]	[94.8% to 100%]	[94.8% to 100%]	[96.6% to 100%]
Neg. RT-PCR	92	91 (98.9%)	92 (100%)	92 (100%)	90 (97.8%)	89 (96.7%)	92 (100%)	92 (100%)	92 (100%)
[95%CI]		[94.1% to 99.9%]	[96.1%-100%]	[96.1%-100%]	[92.4%-99.7%]	[90.8%-99.3%]	[96.1%-100%]	[96.1%-100%]	[96.1%-100%]

Supplemental Table 3: Positive predictive values (PPV), negative predictive values (NPV) and accuracies were simulated at different disease prevalence to estimate the performance of the antigenic tests in « real-life » conditions. Ct value > 33 was not considered a true positive case. *As the sensitivity and the specificity were 100% both, no confidence intervals have been calculated for the PPV and the NPV.

		Disease prevalence					
		2%	5%	10%	15%	20%	25%
PPV	Biotical [95% CI]	29.6% [13.8% to 52.6%]	52.0% [29.1% to 74.1%]	69.6% [46.5% to 85.8%]	78.4% [58.0% to 90.6%]	83.7% [66.1% to 93.1%]	87.3% [72.2% to 94.8%]
	Panbio [95% CI]	63.8% [20.0% to 92.6%]	82.0% [39.2% to 97.0%]	90.6% [57.6% to 98.6%]	94.9% [68.4% to 99.1%]	95.6% [75.4% to 99.4%]	96.6% [80.3% to 99.5%]
	Healgen [95% CI]	24.6% [13.0% to 41.6%]	45.7% [27.8% to 64.8%]	64.0% [44.8% to 79.5%]	73.82% [56.3% to 86.0%]	80.0% [64.6% to 89.7%]	84.2% [70.9% to 92.1%]
	Roche [95% CI]	64.5% [20.5% to 92.8%]	82.4% [39.9% to 97.1%]	90.8% [58.4% to 98.6%]	94.02% [69.0% to 99.1%]	95.7% [76.0% to 99.4%]	96.7% [80.8% to 99.5%]
	Ortho [95% CI]	100% [N/A]*	100% [N/A]*	100% [N/A]*	100% [N/A]*	100% [N/A]*	100% [N/A]*
NPV	Biotical [95% CI]	99.5% [99.3% to 99.7%]	98.7% [98.1% to 99.1%]	97.3% [96.1% to 98.2%]	95.8% [93.9% to 97.2%]	94.2% [91.6% to 96.0%]	92.4% [89.1% to 94.8%]
	Panbio [95% CI]	99.6% [99.4% to 99.7%]	99.0% [98.4% to 99.3%]	97.8% [96.6% to 98.6%]	96.6% [94.8% to 97.8%]	95.2% [92.7% to 96.9%]	93.7% [90.6% to 95.8%]
	Healgen [95% CI]	99.8% [99.6% to 99.9%]	99.4% [98.9% to 99.7%]	98.7% [97.6% to 99.3%]	97.9% [96.3% to 98.9%]	97.1% [94.8% to 98.4%]	96.2% [93.1% to 97.9%]
	Roche [95% CI]	99.6% [99.4% to 99.8%]	99.1% [98.5% to 99.4%]	98.1% [96.9% to 98.8%]	97.0% [95.2% to 98.1%]	95.8% [93.4% to 97.3%]	94.4% [91.3% to 96.5%]
	Ortho [95% CI]	100% [N/A]*	100% [N/A]*	100% [N/A]*	100% [N/A]*	100% [N/A]*	100% [N/A]*
Accuracy	Biotical [95% CI]	95.9% [92.0% to 98.2%]	95.3% [91.2% to 97.8%]	94.2% [90.0% to 97.2%]	93.3% [88.7% to 96.4%]	92.2% [87.5% to 95.7%]	91.3% [86.3% to 94.9%]
	Panbio [95% CI]	98.7% [95.8% to 99.8%]	98.1% [95.0% to 99.5%]	97.2% [93.7% to 99.0%]	96.2% [92.4% to 98.5%]	95.3% [91.2% to 97.8%]	94.3% [90.0% to 97.2%]
	Healgen [95% CI]	94.3% [90.0% to 97.2%]	94.2% [89.8% to 97.1%]	93.9% [89.4% to 96.9%]	93.6% [89.1% to 96.6%]	93.3% [88.7% to 96.4%]	93.0% [88.4% to 96.2%]
	Roche [95% CI]	98.7% [95.9% to 99.8%]	98.3% [95.2% to 99.6%]	97.4% [94.0% to 99.2%]	96.6% [92.9% to 98.7%]	95.8% [91.8% to 98.2%]	94.9% [90.8% to 97.6%]
	Ortho [95% CI]	100% [98.1% to 100%]	100% [98.1% to 100%]	100% [98.1% to 100%]	100% [98.1% to 100%]	100% [98.1% to 100%]	100% [98.1% to 100%]