

**Subject:** OFFICIAL: RE: Data request

**From:** WNCov.virology <WNCov.virology@phe.gov.uk>

**Date:** 28-Apr-20, 17:45

**CC:** Maria Zambon <Maria.Zambon@phe.gov.uk>, WNCov.virology <WNCov.virology@phe.gov.uk>

**OFFICIAL**

Professor Zambon asked that we respond to your request for data, as below.

i) RT-PCR tests –

- the gold standard for PCR tests is not virus isolation
- PCR tests are developed using synthetic transcripts; field use data are not widely available yet
- Typically specificity exceeds 95%

ii) antibody tests –

- There is a pre-publication manuscript available at <https://www.medrxiv.org/content/10.1101/2020.04.15.20066407v1.full.pdf> in which the authors describe testing plasma for SARS-Cov-2 IgM and IgG antibodies by ELISA and using nine different commercially available lateral flow immunoassay (LFIA) devices. Their findings were that “Point estimates for the sensitivity of LFIA devices ranged from 55-70% versus RT-PCR and 65-85% versus ELISA, with specificity 95-100% and 93-100% respectively. Within the limits of the study size, the performance of most LFIA devices was similar.”
- No commercial kits have yet been validated for use in the UK – work is ongoing.

Virology Cell,  
PHE Incident Response

**From:** Kevin Corbett

**Sent:** 25 April 2020 19:32

**To:** Maria Zambon <[Maria.Zambon@phe.gov.uk](mailto:Maria.Zambon@phe.gov.uk)>

**Subject:** Data request

Dear Professor Maria Zambon

I wonder if you could help me?

I am writing to you in your role as director of the Reference Microbiology Service at Public Health England (and SAGE member).

I am preparing an educational presentation on COVID-19 and need some data to illustrate the PPVs for teaching purposes.

In relation to the SARS-CoV-2, I need data for:

i) RT-PCR test(s); and

ii) antibody test(s)

used in England and Wales, or in all of the UK countries, if available.

I've included the respective matrices below for each test methodology.

Would you be able to provide me with some actual numbers or signpost me to as source, as I have not been able to find any.

Perhaps they are in the manufacturers' test kit packet inserts, which I also cannot find.

I'd be most grateful for any assistance you can give in this difficult time.

Kind regards

Kevin Corbett

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Kevin P.Corbett MSc PGCE PhD

Test Result	Virus isolated	Virus not isolated	Totals
RT-PCR <b>POSITIVE</b>	A	B	A+B
RT-PCR <b>NEGATIVE</b>	C	D	C+D

Test Result	Virus isolated	Virus not isolated	Totals
Anitbody <b>POSITIVE</b>	A	B	A+B
Antibody <b>NEGATIVE</b>	C	D	C+D

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