



**By email**

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Our ref: 08/03/cf/2985

17 March 2021

Dear Vicky Stewart,

**Re: Case ref: 2985 - Freedom of Information - PCR amplification cycle number**

Thank you for your request received on 08 March 2021 addressed to Public Health England (PHE). In accordance with Section 1(1)(a) of the Freedom of Information Act 2000 (the Act), I can confirm that PHE does not hold the information as specified by your request.

***Request***

***Regarding the use of the PCR test to test DNA samples for the viral RNA of the SARS-CoV-2 virus:***

***How many amplification cycles are being used when searching for different hallmarks of the SARS-CoV-2 virus as standard?***

***Please can you provide me with the number of amplification cycles used as standard for the aforementioned test on a weekly basis, from 1st March 2020 up until today the 8th March 2021 when testing UK citizens for SARS-CoV-2.***

***If Public Health England is not the authority issuing guidance for the number of amplification cycles used, please direct me to the appropriate authority which is in charge of making this decision.***

***Response***

Under Section 16 of the Freedom of Information (FOI) Act, public authorities have a duty to provide advice and assistance, please see the below information and guidance that explain PCR testing and cycle threshold.

There over 80 different commercial PCR tests and several platforms used in the UK – each comes with its own standardised interpretation – some may provide Ct values some may not. All labs are asked to perform preliminary checks on the limits of detection and create a standard operating procedure based on guidance above to interpret a positive or negative result.

The below document provides guidance for procedures to be implemented in laboratories to provide assurance of positive SARS-CoV-2 RNA results during periods of low prevalence, when there is a reduction in the predictive value of positive test results.

This guidance is applicable to all laboratories to help guide the interpretation of positive results. The document provides background information, explains the problem and details actions that should be considered by all laboratories providing SARS-CoV-2 RNA testing.

<https://www.gov.uk/government/publications/sars-cov-2-rna-testing-assurance-of-positive-results-during-periods-of-low-prevalence/assurance-of-sars-cov-2-rna-positive-results-during-periods-of-low-prevalence>

There is an extensive menu of tests currently used to detect SARS-CoV-2 in a sample. Whilst most of these tests are PCR based, there are also assays that use alternative technology for the detection of SARS-CoV-2 nucleic acid.

Currently there are over 80 different testing platforms in use across the various networks of laboratories and the thresholds for result interpretation will be configured in each case by the manufacturers of the assays and the instrumentation.

Each laboratory will regularly assess the performance of their assays within their local quality management system. The results are monitored in accordance with defined quality control procedures. Whilst each laboratory has a statutory duty to report positive cases to Public Health England, additional information such as Ct values in the case of PCR tests, is not submitted.

Understanding cycle threshold (Ct) in SARS-CoV-2 RT-PCR – may be a document that you find useful. Please see the link below:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/926410/Understanding\\_Cycle\\_Threshold\\_Ct\\_in\\_SARS-CoV-2\\_RT-PCR\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/926410/Understanding_Cycle_Threshold_Ct_in_SARS-CoV-2_RT-PCR_.pdf)

If you have any queries regarding the information that has been supplied to you, please refer your query to me in writing in the first instance. If you remain dissatisfied and would like to request an internal review, then please contact us at the address above or by emailing [foi@phe.gov.uk](mailto:foi@phe.gov.uk).

Please note that you have the right to an independent review by the Information Commissioner's Office if a complaint cannot be resolved through the PHE complaints procedure. The Information Commissioner's Office can be contacted by calling the ICO's helpline on 0303 123 1113, visiting the ICO's website at [www.ico.org.uk](http://www.ico.org.uk) or writing to the ICO at Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF.

Yours sincerely  
FOI Team