

From: Neville.DavidH[OSC]
Sent: Mon, 21 Feb 2022 17:39:36 +1100
To: Lara Keller
Subject: RE: Testing thresholds

Hi Lara

Thanks for sending this through. I did have it already. Based on the paper, a recommendation was made to QPS that testing of samples containing less than 0.008ng/uL of DNA should discontinue because the chance of obtaining a profile would be less than 2%. As a result of this research, QHFSS advised that they would report samples below this threshold as 'insufficient DNA for further testing' and that QPS could request testing to continue if the sample was critical to a case. With the exception of 'Priority One' samples, the QPS agreed to discontinue testing at that point as a matter of routine based on the advice.

In November 2021 the QPS undertook a review of the success rate of obtaining a profile when it requested testing to continue for samples initially reported as 'insufficient DNA for further testing'. This revealed that 30% of the samples yielded a useable DNA profile when testing was continued.

It is the difference between 2% (expected) and 30% (observed) that I am concerned about.

Regards



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command



From: Lara Keller [redacted]
Sent: Monday, 21 February 2022 16:24
To: Neville.DavidH[OSC] [redacted]
Cc: Frieberg.DaleJ[OSC] [redacted] Cathie Allen
[redacted] Lara Keller [redacted]
Subject: RE: Testing thresholds

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Hello David

Not sure if you have a copy of this paper. It may go some way to answering your enquiries.

Cathie is back tomorrow and I will ask her to call you with an update.

Thanks and kind regards

Lara



Lara Keller, B App Sc (MLS), Grad Cert Health Mgt, MAIMS, CMgr FIML
A/Executive Director
Forensic and Scientific Services
Prevention Division, Queensland Health

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From: Neville.DavidH[OSC] [REDACTED] >
Sent: Monday, 21 February 2022 10:21 AM
To: Cathie Allen [REDACTED]
Cc: Frieberg.DaleJ[OSC] [REDACTED] >; Lara Keller
[REDACTED]
Subject: FW: Testing thresholds

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Dear Cathie

I understand the difficulty of the ongoing coverage by the *The Australian* of the [REDACTED] case. This must be causing significant stress for you and your staff.

Unfortunately I have been drawn into comment internally on peripheral matters raised by the outlet on 18 February 2022.

[article.](#)

It claims that the Queensland lab requires crime scene samples to have the equivalent of at least 22 cells to be fully tested, otherwise they are deemed to have insufficient DNA. It claims that the threshold is double the 11 cells required in NSW, and almost three times the eight cells that the product manufacturer has used to obtain good quality DNA profiles.

I know you are busy, but since 1 December 2021 I have raised concerns in relation to the truncating of testing based on DNA quant values because of the significant number of below threshold samples yielding a profile when testing is continued. This remains a high priority matter for the QPS. To date I have not received any feedback or explanation as to difference between the predicted (<2%) and observed success rates (30%) for samples that reportedly contained a low concentration.

Could you please provide advice as to how the Queensland threshold for testing accords with other jurisdictions. Can you also please advise the outcome of any internal review that you have undertaken based on the information I provided. I need this information as a matter of urgency to brief the executive in relation to this matter.

Regards



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command

From: Neville.DavidH[OSC] [REDACTED]

Sent: Friday, 17 December 2021 17:23

To: Cathie Allen [REDACTED]

Cc: Frieberg.DaleJ[OSC] [REDACTED]

'Lara [REDACTED]

Subject: Re: Op [REDACTED]

Hi Cathie

Thanks for the clarification. That was my understanding too. I was of the belief that QHFSS stopped doing this as a matter of routine for low quant samples because there was a lower than 2 percent chance of success. However, QPS has found the success rate to be 30 percent when we requested this to be done. It is the difference between these success rates that I am interested in.

Have a good weekend

David Neville
Inspector, FSG
[REDACTED]

From: Cathie Allen [REDACTED]

Sent: Friday, December 17, 2021 5:06 pm

To: Neville.DavidH[OSC]

Cc: Lara Keller; Frieberg.DaleJ[OSC]

Subject: RE: Op [REDACTED]

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Hi David

Thank you for the follow-up email regarding samples within this case.

To ensure that we're all on the same page, I'd like to clarify the process. If samples that have been deemed 'insufficient DNA for further processing' are processed further, they all first undergo a concentration step, followed by amplification. This is in contrast with samples that are not deemed in this range, as these samples amplification, without a concentration step. Just wanted to draw to

your attention that there is additional work undertaken on the DNA extract to attempt to achieve a DNA result for the samples deemed 'insufficient DNA for further processing'.

Cheers

Cathie



Cathie Allen BSc, MSc (Forensic Science) (She/Her*)

Managing Scientist

Social Chair, Organising Committee for 25th International Symposium of the Australian and New Zealand Forensic Science Society (ANZFSS), Brisbane, 11 – 15 Sept 2022

Police Services Stream, Forensic & Scientific Services

Prevention Division, Queensland Health



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From: Neville.DavidH[OSC] [REDACTED]
Sent: Friday, 17 December 2021 12:04 PM
To: Cathie Allen [REDACTED]
Cc: Lara Keller [REDACTED]; Frieberg.DaleJ[OSC]
Subject: RE: Op [REDACTED]

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Hi Cathie

In addition to the items on the list provided previously, last week we requested a blood swab ([REDACTED]) to be retested which was originally reported as "insufficient DNA for further testing". This sample was taken from blood on a broken shard of glass as depicted in the photo below.

Given the nature of the stain and inert substrate, we were surprised with the original result which is what prompted the request to further test. Today we were advised that subsequent testing yielded a single source 20 loci profile. This was an excellent result solving the crime which would have been otherwise missed.

The image below is attached to the exhibit screen which was visible to the laboratory staff. The results of presumptive testing are also included on that screen. I wondered if lab staff use this information when making a decision on stopping testing?

Forwarded for you information and consideration along with the other material provided.



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command



From: Neville.DavidH[OSC] [REDACTED]
Sent: Thursday, 16 December 2021 12:56
To: Cathie Allen [REDACTED]
Cc: Frieberg.DaleJ[OSC] [REDACTED]; Lara Keller
[REDACTED]
Subject: Re: Op [REDACTED]

Hi Cathie
Thanks, this is a high priority for us, we would appreciate advice as soon as possible please.

David Neville
Inspector, FSG

[REDACTED]


From: Cathie Allen [REDACTED]
Sent: Thursday, December 16, 2021 12:42 pm
To: Neville.DavidH[OSC]
Cc: Frieberg.DaleJ[OSC]; Lara Keller
Subject: RE: Op [REDACTED]

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Hi David

Thank you for your email and feedback regarding this. We will review scientific data available to us and will provide further advice to the QPS in due course.

Cheers
Cathie


Cathie Allen BSc, MSc (Forensic Science) (She/Her*)
Managing Scientist
Social Chair, Organising Committee for 25th International Symposium of the
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[REDACTED]

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From: Neville.DavidH[OSC] [REDACTED]
Sent: Monday, 13 December 2021 2:06 PM
To: Cathie Allen [REDACTED]
Cc: Harris.LibbyA[OSC] [REDACTED]
Subject: RE: Op [REDACTED]

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Hi Cathie

Since sending you my last message I found some correspondence from February 2018 where QHFSS made a recommendation to QPS that testing of samples that contained less than 0.008ng/uL of DNA should discontinue because the chance of obtaining a profile was less than 2%. Samples below this threshold were previously micro concentrated in an effort to attain a profile. Based on the advice from QHFSS, the QPS agreed to discontinue testing including micro concentration under such circumstances and the result would be reported as "DNA Insufficient for further testing" (DIFFT). I am assuming this is the information I was seeking in the below request.

Based on the results obtained for [REDACTED] I asked my staff to undertake a wider review of the success rate of further testing of items that were originally reported as DIFFT during 2021. This revealed 51 out of 160 samples provided a profile when the QPS requested testing to continue. These items are listed in the attached.

On 14 November 2018 I raised similar concern in relation to [REDACTED] after 3 out of 4 samples yielded a result when QPS requested testing to continue. At that time QHFSS provided reassurance that the success rate would be lower than 2% and that the matter should be treated as an aberration. As a result the QPS agreed to continue the truncation of testing for items below the threshold quantity of DNA and limit automated micro concentration to P1 samples only.

Given the result of the recent cases where continued testing was successful, might it be timely to review the practice of truncating testing of lower quant items? For instance, is the threshold value still valid? Also, with the implementation of the latest version of STRMix that can deconvolute more complex mixtures, is it more likely to get a result now?

I think the 30% success rate of retesting warrants a little further examination to make sure we are maximising our chances of solving crime, particularly for major crime matters.

I look forward to discussing this further with you.



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command



From: Neville.DavidH[OSC]

Sent: Friday, 3 December 2021 10:07

To: Cathie Allen [REDACTED]

Subject: RE: Op [REDACTED]

Thanks Cathie

I appreciate the timely feedback. Based on our conversation the other day, I am assuming these discussions occurred in 2008. Is there any correspondence that was provided to base this decision on that you can provide, please? For our reference and moving into the future, what is the actual percentage that your dataset has indicated? Obviously this information will be helpful in guiding future requests for retesting.



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command



From: Cathie Allen [REDACTED]
Sent: Friday, 3 December 2021 09:55
To: Neville.DavidH[OSC] [REDACTED]
Cc: Justin Howes [REDACTED]
Subject: RE: Op [REDACTED]

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Hi David

Thanks for the additional information on those samples from that particular case. We'll have a look into them and get back to you when we can.

After we had conducted a review of a large dataset, it was found that below a particular quantitation threshold and in line with manufacturer's specifications, a very small percentage of samples may provide some type of DNA profile, if they proceeded through DNA processing. This information was provided to the QPS, and the QPS advised that it would prefer that those samples that didn't exceed the quant threshold were not processed through to a DNA profile. We've monitored this and have found that with a larger dataset, the small percentage didn't vary.

We'll provide advice for this particular case when we're able to.

Cheers
Cathie



Cathie Allen BSc, MSc (Forensic Science) (She/Her*)
Managing Scientist
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From: Neville.DavidH[OSC] [REDACTED]
Sent: Wednesday, 1 December 2021 1:48 PM
To: Cathie Allen [REDACTED]
Cc: Justin Howes [REDACTED]
Subject: RE: Op [REDACTED]

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Hi Cathie

To provide further context, it has been raised with me that 33 items were examined with advice being received, "DNA Insufficient for further testing". A request was made for these items to be further worked. Ten of these then returned a result with persons being identified with LR's of >100 billion. I have attached a spreadsheet that includes the results. I wondered if there was a particular reason for this case as to why approx. 30% of the samples yielded a result after the work was requested. Can you please advise what the actual threshold is and advice as to whether this needs to be reviewed.

Finally, sorry to sound demanding, can you also provide information on your expected likelihood of success in normal casework (i.e the likelihood of DNA insufficient samples yielding a result if testing is continued).

Cheers



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command
[REDACTED]

From: Neville.DavidH[OSC]
Sent: Wednesday, 1 December 2021 10:24
To: Cathie Allen [REDACTED]
Subject: Op [REDACTED]

Hi Cathie

I wondered if you might be available at some time today to have a brief chat about some results from Op [REDACTED] If Justin was available too, that might be helpful. Can we teams please?



David Neville
Inspector
Biometrics
Forensic Services Group
Operations Support Command



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