# **Justin Howes**

From:Justin HowesSent:Wednesday, 21 November 2018 12:37 PMTo:Cathie Allen; Paula BrisottoSubject:RE: Removal of the Microcon step - QPS advice

Hi

It is interesting to note that of the 5 samples (of 18) that were from Op Clarify to be M'conned, all five returned 'unsuitable' results (one subject to review)...

Interesting from the fact that this small sample size yielded 0% 'success'.

Justin



Justin Howes Team Leader - Forensic Reporting and Intelligence Team

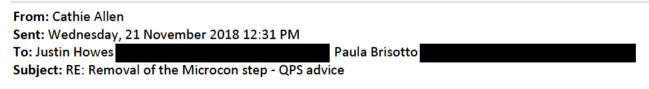
Forensic DNA Analysis, Forensic & Scientific Services Health Support Queensland, Queensland Health

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**Thanks Justin** 

I'm not feeling that great about it, to be honest.

Cheers Cathie



Cathie Allen Managing Scientist

Police Services Stream, Forensic & Scientific Services Health Support Queensland, Queensland Health

a 39 Kessels Road, Coopers Plains, QLD 4108 w www.health.qld.gov.au/healthsupport e Respect Engagement Integrity **Customers and patients first** Accountability Queensland Health acknowledges the Traditional Owners of the land, and pays respect to Elders past, present and future. From: Justin Howes Sent: Wednesday, 21 November 2018 12:29 PM To: Cathie Allen; Paula Brisotto Subject: RE: Removal of the Microcon step - QPS advice Thanks for sending on, and great email. jah Justin Howes Team Leader - Forensic Reporting and Intelligence Team Forensic DNA Analysis, Forensic & Scientific Services Health Support Queensland, Queensland Health m р a 39 Kessels Road, Coopers Plains, QLD 4108 www.health.qld.gov.au/healthsupport Integrity Customers and patients first Accountability Respect Engagement Queensland Health acknowledges the Traditional Owners of the land, and pays respect to Elders past, present and future. From: Cathie Allen Sent: Wednesday, 21 November 2018 12:15 PM To: Paula Brisotto Justin Howes Subject: FW: Removal of the Microcon step - QPS advice

FYI

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From: Cathie Allen
Sent: Wednesday, 21 November 2018 12:14 PM
To: 'Simpfendorfer.GerardM[OSC]'
Cc: Craig Russell; Neville.DavidH[OSC]; McNab.BruceJ[OSC]; Collopen.RubenB[OSC]
Subject: RE: Removal of the Microcon step - QPS advice

# Hi Gerard

Scientists in Forensic DNA Analysis apply scientific principles to processing and reworking of all samples that they review, as they are bound by the Code of Conduct for the Queensland Public Service and are committed to ensuring the best possible outcome for the Queensland Community. Reporting scientists are questioned under oath about the scientific decisions that they have made and provide answers based on scientific principles.

If the sample is reworked after a result has been released to the QPS, the QPS is advised electronically by a result line advising that the sample has undergone further processing as per the example below:

722995027 Trace DNA Kit 🗗

08/11/2018 P1800460114 D3647232 40

6D: TRACE DNA TAPELIFT COLLECTED FROM CENTRAL BODY OF STICK COLLECTED FROM S DECEASED CORDINGLEY - FND Scientific Section - Exam Suite 2 QHSS POS 722995027 DNA INSUFFICIENT FOR FURTHER PROCESSING QHSS POS 722995027 THIS SAMPLE HAS UNDERGONE FURTHER PROCESSING QHSS POS 722995027 COMPLEX MIXED PROFILE UNSUITABLE FOR INTERP OR COMPARISO

Cheers Cathie



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From: Simpfendorfer.GerardM[OSC]
Sent: Tuesday, 20 November 2018 3:35 PM
To: Cathie Allen
Cc: Craig Russell; Neville.DavidH[OSC]; McNab.BruceJ[OSC]; Collopen.RubenB[OSC]
Subject: Removal of the Microcon step - QPS advice

Hi Cathie,

And thank you for your response.

You mention there are a number of factors that would be taken into consideration regarding the balance between concentrating the sample vs preserving extract for other testing and you gave some examples including assessing the quality and quantity of the DNA as a key factor to obtaining a DNA profile.

- 1. Do you take these factors into consideration only when sending through the DNA Insufficient result for:
  - All exhibits?
  - P1 and P2 only exhibits?
  - P1 only exhibits?
- 2. Or do you take these factors in to consideration only when the QPS requests further processing of the exhibit?
- 3. Or do you take these factors in to consideration only when the QPS requests advice on other testing options?

If it is option 1 or 2, how do you provide this advice to the QPS to assist investigators, especially if in the Scientists expert opinion requesting a Microcon step may not be the best for obtaining a possible DNA result due to this process consuming all the available extract.

#### Kind regards



From: Cathie Allen Sent: Friday, 16 November 2018 4:01 PM To: Simpfendorfer.GerardM[OSC] Cc: Craig Russell ; Neville.DavidH[OSC] ; McNab.BruceJ[OSC]

Subject: RE: Removal of the microcon step from P1 worflow.

Hi Gerard

The quantification values between 0.001 and 0.008ng/uL is the range for the result line of DNA Insufficient – so this is the range that prior to Feb 2018 would have automatically proceeded for concentration.

There are a number of factors that would be taken into consideration regarding the balance between concentrating the sample vs preserving extract for other testing – some examples, but limited to, – the indication within the quantification of the Y chromosome, pooling of samples from a similar area prior to concentrating as this may have a better chance of concentrating the available DNA for a 'useable' profile, preserving 1 sample and concentrating another sample from similar areas (rather than doing both in the first instance), the quantification value and if it's likely to be a mixture, the sample type (ie tapelift from a particular exhibit vs swab from a more probative area) or targeting particular samples for concentration in the context of the case (rather than all priority 1 samples).

The quality and quantity of the DNA are the key factors in obtaining a DNA profile. For these samples, whilst there was a small amount of DNA, the quality of the DNA may have been quite good, which has meant that a DNA profile was able to be generated (I haven't looked into these samples, I'm providing information on a general basis). Whilst our processes provide a quantification value, indication of degradation and indication of Y chromosome, it's the generation of DNA profile that assists in highlighting the quality of the DNA that was available. The DNA in the sample may only just be above the acceptance criteria to be called an allele, and it may generate enough alleles to provide a Likelihood Ratio of >100 billion, however its viewing the DNA profile that can show the extent of the degradation or inhibition factors that may be associated. All of these factors are taken into consideration prior to requesting a Microcon. We have assessed a large amount of data to provide the best indication of how profiles have behaved and provide this advice to the QPS to assist.

Please let me know if you have any further questions.

## Cheers Cathie



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From: Simpfendorfer.GerardM[OSC]
Sent: Thursday, 15 November 2018 3:24 PM
To: Cathie Allen
Cc: Craig Russell; Neville.DavidH[OSC]; McNab.BruceJ[OSC]
Subject: RE: Removal of the microcon step from P1 worflow.

Hi Cathie,

Thank you for the below advice.

Could you advise is there a quant cut off where microcon would automatically occur?

What would be the decision making advice around preserving the sample and also enhancing chances of getting a result?

Also, why did these samples yield a result and could the factors involved be used to determine future processes?

Kind regards



Gerard Simpfendorfer Acting Inspector 4009415 DNA Management Section, Forensic Services Group Operations Support Command, Queensland Police Service

Phone: Internal PHQ Extension: 66916 Fax: Email: Address: Level 4 Police Headquarters, 200 Roma St, Brisbane, Qld, 4000 Postal: GPO Box 1440, Brisbane, Queensland 4001, Australia

From: Cathie Allen Sent: Thursday, 15 November 2018 9:20 AM To: Simpfendorfer.GerardM[OSC]

McNab.BruceJ[OSC]

Cc: Craig Russell ; Neville.DavidH[OSC] Subject: FW: Removal of the microcon step from P1 worflow. Importance: High

#### Hi Gerard and Bruce

I can confirm that the Microcon process has been applied to the below four sample as requested by the QPS on the dates listed below:

943309323 – Snr Sgt Simpfendorfer requested Microcon 29/10/2018 723709161 – Snr Sgt Simpfendorfer requested Microcon 06/11/2018 943366497 - Snr Sgt Simpfendorfer requested Microcon 06/11/2018 723709193 - Snr Sgt Simpfendorfer requested Microcon 06/11/2018

During a meeting on 1<sup>st</sup> of Feb 2018, Paul Csoban (previous Executive Director for FSS) and I met with Supt Dale Frieberg to discuss the Options Paper that had previously been provided to the QPS for decision. During this meeting, the Superintendent agreed that Option 2 was the preferred option, which was later confirmed via email (as per below). During the discussion, the second part of Option 2 (section a) was discussed, which related to Priority 1 samples and the Superintendent indicated that Priority 1 samples should be processed the same as Major crime (P2) and Volume crime samples (P3), which is not to be automatically progressed through the Microcon process. After the approval from the QPS in Feb 2018, all samples have not automatically progressed through the Microcon process. The QPS or a Forensic DNA Analysis staff member can request a Microcon process for a sample at any time.

Automatic progression of samples through the Microcon process means that all available DNA extract will be consumed, so no further testing can be conducted on these samples after this step. This means that if a sample could yield a profile by specific Y chromosome testing for example, there would be no extract available for that testing to be conducted. It also means that samples that are eligible to be pooled together, as they are from the same item or area, are not able to be as there is no DNA extract left to undertake pooling. Scientists or Forensic officers reviewing results in the context of a case are able to request a Microcon process for a sample or samples.

As the decision on the automatic Microcon process was made last financial year, the budget for this financial year has been adjusted for that consumable, so this will increase the cost.

If the QPS wishes for P1 samples to automatically be processed through the Microcon process, which leaves no available extract for other testing, this process can be re-introduced. Please confirm if the QPS requires the re-introduction of this step.

The Options Paper reviewed 1449 Major crime samples that had been progressed through the Microcon process over a one year period, as this was considered to be sufficient sample numbers to demonstrate a clear trend.

The laboratory is unable to search the FR to undertake any statistical analysis regarding 'useable' profile numbers – this was highlighted to FSS during development that large or medium scale interrogation of the FR could only be undertaken by the QPS, as they would need to construct the search and ensure the timing of the search was undertaken so as not to add extra burden to the FR during peak operational times. If the QPS were able to generate this data, the laboratory would undertake this analysis and provide feedback. The Microcon process was no longer automatically undertaken for P1 or P2 samples from the 12<sup>th</sup> of Feb 2018.

Whilst the Microcon process has not been automatically applied to Major crime samples (P2) since mid Feb, scientists have reviewed those results and requested a Microcon process if in the context of the case it could have been of potential benefit. If the QPS undertook a search of all 'DNA insufficient' results on P1 and P2 samples since the 12<sup>th</sup> of Feb, the laboratory could undertake an analysis of the cases to determine if additional testing through the Microcon process is required. This would require resources and would reduce the number of results that are reviewed by the lab until this analysis was completed.

I await your advice regarding this. If you have any further questions, please let me know how I can assist.

# Cheers Cathie



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From: Neville.DavidH[OSC] Sent: Wednesday, 14 November 2018 2:47 PM To: Cathie Allen Cc: Craig Russell; McNab.BruceJ[OSC]; Simpfendorfer.GerardM[OSC] Subject: Removal of the microcon step from P1 worflow. **Importance:** High

**Dear Cathie** 

During the course of the investigation into Operation Clarify over 15 samples were submitted as Priority 1. On initial testing, four samples were reported as having insufficient DNA present for further testing. Upon receipt of that result my staff requested additional testing and each of those samples yielded a result as follows:

943309323 - SINGLE SOURCE 20 LOCI DNA PROFILE LR > 100 BILLION (Deceased match); and POSSIBLE SUB-THRESHOLD INFORMATION

723709161 - SINGLE SOURCE DNA PROFILE - ASSUMED KNOWN CONTRIBUTOR – (Deceased match)

943366497 - SS DNA PROFILE 9 LOCI AND ABOVE LR > 100 BILLION (Deceased match)

723709193 - COMPLEX MIXED PROFILE UNSUITABLE FOR INTERP OR COMPARISON

Could you confirm if the profiles for the four samples listed above were obtained after micro-concentration was performed, please. Could you also confirm if the microcon step has been removed from the workflow as a matter of routine for P1 samples. My understanding as per the below was that this was only to occur for P2. If this process has been removed from the P1 workflow, could it please be reintroduced as it will stop delays in obtaining results that are considered urgent, please.

From: Frieberg.DaleJ[OSC]
Sent: Friday, 2 February 2018 3:38 PM
To: Cathie Allen O'Malley.TroyS[OSC]
Cc: Paul Csoban
Subject: RE: Options Paper for consideration
Hi Cathie and Paul,
Thank you for your time this afternoon and for discussion around this options paper. Thank you also t
As discussed, I am in agreement that:
<ul> <li>There is clear data that it is not an efficient use of time and resources to continue with the 'ai</li> </ul>
<ul> <li>Option 2. "Cease the 'auto-microcon' process for Priority 2 casework" Would appear to be a</li> </ul>
<ul> <li>Scientists time and resources would be better spent working samples with a higher DNA yield</li> </ul>
<ul> <li>It would be beneficial to amend the Forensic Register to provide an automated Q-Prime update</li> </ul>
<ul> <li>DNA staff can request this additional processing if/when a request is received from the investion</li> </ul>
I trust this is of assistance.
Kind regards,
Dale.
Dale Frieberg
Superintendent
Operations Commander Forensic Services Group
Operations Support Command
Queensland Police Service
(E)

The removal of the microcon step in the process was agreed to on 2 February 2018 by Supt Frieberg based on the advice included in the attached paper. This paper estimates that there would be less than a 2% reduction in the number of useable results if the step was eliminated.

Based on the fact that 3 out of 4 samples for this case yielded a result when testing was continued, anecdotally it would seem that we may be missing out on more than 2% of results.

Since eliminating this step, has your laboratory undertaken any statistical analysis to determine if there has been a drop in the proportion of samples that give a useable profile, please.

There are other serious matters including homicides where testing has stopped once advice was received that there is insufficient DNA for further testing. Based on the results for this case (75% success rate for the ones received back so far), would you recommend that these cases be re-examined please.

Could you please direct your response to Gerard and Bruce.



**David Neville** 

Inspector DNA Management Unit | Forensic Services Group Operations Support Command QUEENSLAND POLICE SERVICE

Phone Email Address



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