Report for QIS OQI as of 28/06/2022 10:07:21 AM

# Report for QIS OQI -

# 20690 No Title Provided

## **OQI** Details

Status Closed Approved Subject Sample from sexual assault case (Gladstone)run on extraction batch CWIQEXT20080628\_01 posn 65 displays a minor DNA profile matching sample assault case (Nobby's Beach) posn 50. This sample also appears to have matching components present in sample posns blue case which were pooled and reported under Source of OQI Internal Problems (QHPSS) Date Identified | 15/09/2008

# **OQI Creator Contact Details**

Creator Jacqui WILSON
Organisational Unit/s Forensic Reporting and Intelligence
Service/s Coopers Plains

### **Investigator/Actioner Contact Details**

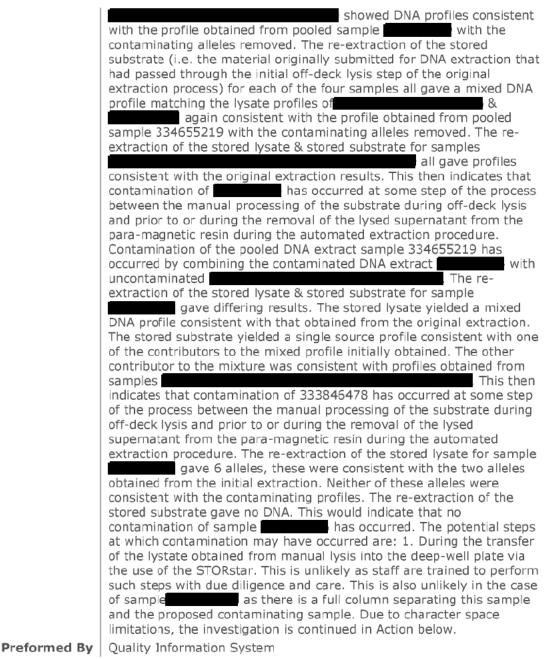
Actioner Allan MCNEVIN
Organisational Unit/s
Service/s
Site Location/s Coopers Plains

### **Investigation Details**

Investigation Completed Investigation Details

Root Cause Type | Procedure/Method/Process 09/12/2008 This OQI relates to potential contamination of the following samples by one of samples or during the processing of extraction batch CWIQEXT20080628 01. Samples were subsequently pooled after initial extraction and It is this lab-number that processed under lab-number was identified as being contaminated. During the investigation, the stored lysate and stored substrate for all ten samples were reextracted. The results from the original extraction and subsequent reextractions were analysed using GeneMapper ID-X software with a peak detection threshold of 20RFU to gain the most information. The re -extraction of the stored lysate (i.e. lysed material retained after removal from the para-magnetic resin during the automated DNA IQ showed the same profile as extraction process) for sample that obtained from the profiling of sample (the sample containing the pooled extracts). The lysate re-extractions for samples

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## **Action Details**

Action Complete 09/12/2008 Title

Action Fix Type | Other Investigation Cont'd: 2. **Action Description** Seepage of sample into an adjacent well (e.g. contamination of sample during cold storage of the lysed material in the deep-well plate. After the cessation of processing and the carrying out of investigations, it was noted in one instance that a heavily bloodstained lysate had condensed on the underside of the adhesive seal used to seal the stored plate. This had seeped across into an adjacent well. This was possibly due to insufficient application of the adhesive seal to the interstitial barrier. This mechanism is unlikely for sample due to the wells not being adjacent. 3. During the removal of the adhesive seal. It was noted during Audit 8227 that condensation on the underside of the adhesive seal was not removed after centrifugation. Given that two contamination events have occurred (most likely contamination of samples in a left-to-right manner, this scenario seems most likely. 4. Operator error during the manual addition of DNA IQ

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para-magnetic resin during the start of the automated extraction procedure (i.e. incorrect pipetting procedure), however this is unlikely as staff are trained to perform such pipetting steps with due diligence due to the and care. This mechanism is unlikely for sample wells not being adjacent. 5. During the mixing of the deep-well plate (containing 1.5mL of buffers and resin within a 2.2mL well) on the extraction platform DPC shaker. This had not been observed, however has been proposed a possible mechanism for adjacent well contamination during close scrutiny of the automated procedure. This mechanism is unlikely for sample due to the wells not being adjacent. 6. During the lysis removal from the para-magentic esin to the storage plate. This procedure occurs twice during the automated extraction protocol (fresh disposable tip for each step). If there was drippage of the lysate containing unbound DNA and this was to drip from one well to another well this may account for the contamination event. The same mechanism may occur where a bubble forms at the end of the pipette tip and bursts whilst still in the vicinity of another well. Action: As a result of previous OQI's raised and concerns identified around the automated DNA IQ extraction process, the extraction of samples using the automated DNA IQ procedure was halted on the 28-7-2008. Prior to this, Audit 8227 had been commissioned and carried out. A number of areas for improvement were identified through the audit, and these have been implemented or are under investigation as outlined in OQI's 20367, 20368 and 20369. After the cessation of the automated DNA IQ extraction protocol, a review of all batches processed through this protocol was carried out by a specially commissioned team. A number of potential contamination events were identified and each is to be investigated on batch-by-batch basis. Additionally, careful review of results obtained from samples processed through the automated DNA IQ extraction procedure prior to reporting will be carried out. Every DNA result obtained from these samples will be interpreted with caution. Modifications have been made to the automated DNA IQ extraction procedure (including the use of an alternative to the adhesive seal and an alternative resin mixing procedure). This modified procedure is undergoing extensive verification and approval from the DNA Analysis management team must be obtained prior to re-introduction. The contamination events and concerns and improvements etc. that surround the automated DNA IQ extraction procedure have been discussed at various departmental and team meetings.

#### Task Details

No Tasks found

## Follow-up And Approval

Follow-up Status Follow-up Status Comment Accepted

10/12/2008 1:45:27 PM Jacqui WILSON:

Agree with investigations and findings

Approval/Rejection Date 12/12/2008
Approval/Rejection 12/12/2008

Comment

12/12/2008 12:00:00 AM Paula TAYLOR:

No comment was recorded

### **Associations**

No Associations found

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## Records

No Records found

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