

Cathie Allen

From: Cathie Allen
Sent: Monday, 11 May 2015 9:06 AM
To: Kirsten Scott
Subject: RE: Mixture (male:Female) results from Quant Trio - feedback by 5pm 15th May.

Hi Kirsten

I don't necessarily think that anything needs to be repeated. I think that a qualifier/s included within the report of what we found and how we will use that in casework should be sufficient.

Cheers
Cathie

From: Kirsten Scott
Sent: Friday, 8 May 2015 3:52 PM
To: Megan Mathieson; Amanda Reeves; Kylie Rika; Justin Howes; Allan McNevin; Emma Caunt; Sharon Johnstone; Cathie Allen
Subject: Mixture (male:Female) results from Quant Trio - feedback by 5pm 15th May.

Afternoon All,

Pierre is currently writing the final report for Quant Trio, so the full set of data and results will be available in the next couple of weeks, however I did want to give you a quick preview of some of the Quant Trio mixture data, in case you think some of the data is not adequate or requires repetition.

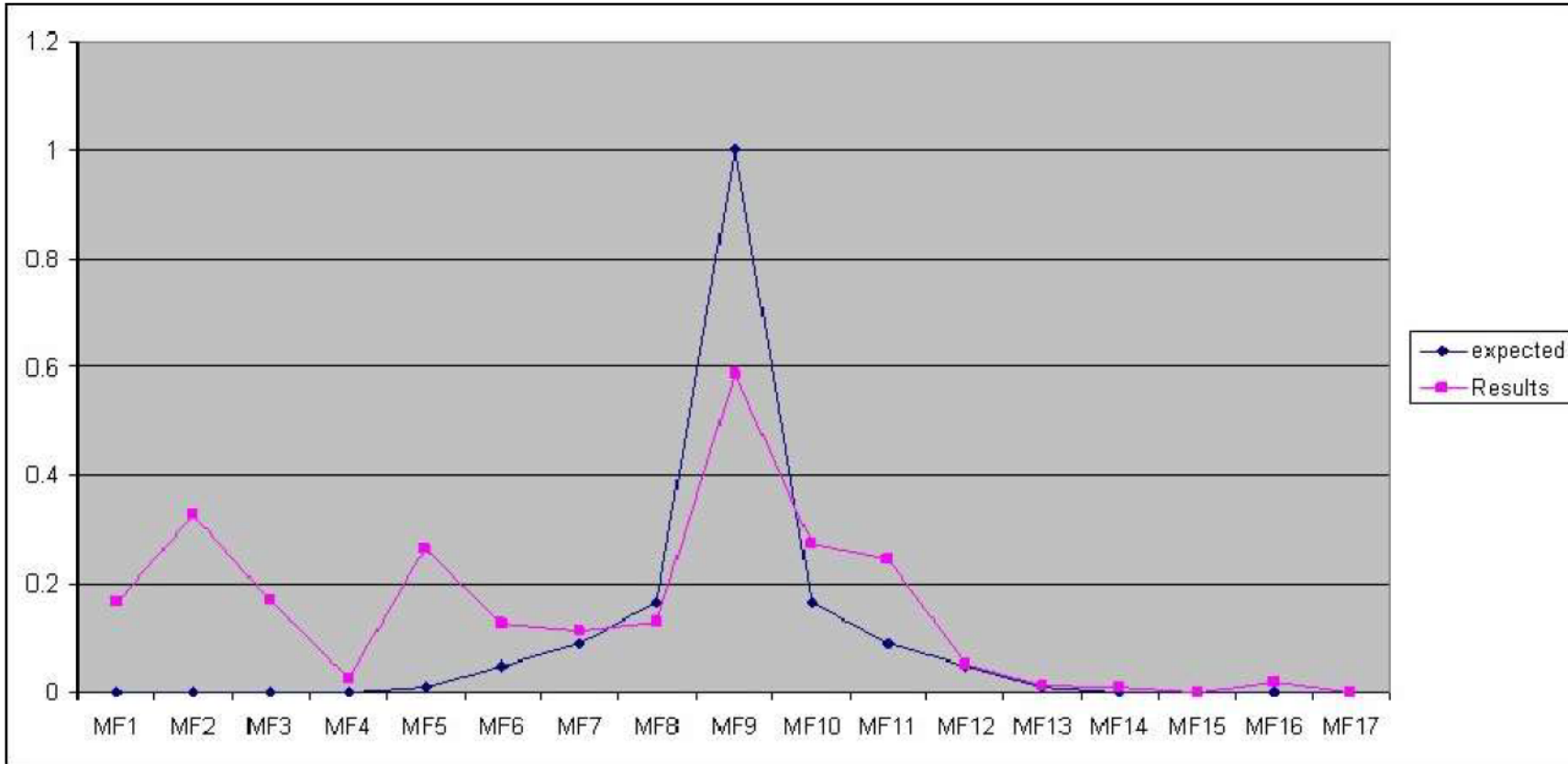
Data from the mixture study in this project is summarised in the table and graph below – it is an evaluation of Quant Trio's ability to determine the proportion of male to female DNA in extracts. These results indicate that when there is a large proportion of male DNA in comparison to with the amount of female DNA (MF1-MF5), Quant Trio did not report results that were very consistent with expected (in the MF1-MF5 range). I think there are two contributions to this result:

- Firstly that at these high dilutions (100:1-4000:1) accurate pipetting to construct the dilutions and then aliquot diluted DNA becomes physically challenging.
- Secondly that the kit may be optimised for small amounts of male DNA in a high female DNA environment (as this is of most significance to general casework interpretations eg. SAIKS)

Can you please review the data as shown below and if you think the data as shown is not adequate or requires repetition let me know by 5pm 15th May?

Any other feedback, suggestions or explanations for this data are also appreciated.

Additional information or data can be provided if required



Sample	Male:Female Ratio	Ratio	SAT		Y-Target	
			Ct	Quant value	Ct	Quant value
MF1	4000:1	0.00025	32.02205	0.03820	31.61387	0.04594
MF2	2000:1	0.0005	32.62618	0.02526	31.92395	0.03765
MF3	1500:1	0.0006666666	32.70058	0.02506	32.31022	0.03025
MF4	1000:1	0.001	30.72410	0.09605	30.46812	0.09867
MF5	100:1	0.01	30.78113	0.09496	30.07393	0.12911
MF6	20:1	0.05	32.44180	0.02849	32.11263	0.03269
MF7	10:1	0.1	31.04209	0.07651	30.66069	0.08659
MF8	5:1	0.2	31.59037	0.05193	31.21141	0.05985
MF9	1:1	1	29.82469	0.18145	30.24774	0.11441

MF10	1:5	0.2	31.31025	0.06362	33.42494	0.01377
MF11	1:10	0.1	31.53057	0.05418	33.78366	0.01065
MF12	1:20	0.05	32.79605	0.02222	37.57111	0.00109
MF13	1:100	0.01	30.98511	0.07963	37.37260	0.00110
MF14	1:1000	0.001	31.58307	0.05243	38.11446	0.00058
MF15	1:1500	0.000666666	32.59609	0.02599	undetermined	undetermined
MF16	1:2000	0.0005	32.45841	0.03023	38.40884	0.00057
MF17	1:4000	0.00025	31.84974	0.04327	undetermined	undetermined

Thanks
Kirsten

Dr Kirsten Scott

A/Team Leader - Evidence Recovery & Quality Team

Forensic DNA Analysis

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

Department of Health | Queensland Government

