

FORENSIC BIOLOGY PROTOCOLS FOR FORENSIC STR ANALYSIS

GeneMarker and STR Analysis Appendix Manual		
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GeneMarker® and STR Analysis Appendix

1 STR Analysis Controls: LIMS Guidance

1.1 Allelic Ladder Failure

	RESOLUTION*	CHECKBOX/ F11 COMMENT	3500 RERUN SECTION
AL	a) Re-aliquot analysis set b) Reinject	Ladder Pass? Uncheck	n/a
AMP POS	n/a	No Data	n/a
AMP NEG	n/a	No Data	n/a
E NEG	n/a	No Data	n/a

1.2 Amplification Positive Failure

	RESOLUTION*	CHECKBOX/ F11 COMMENT	3500 RERUN SECTION
AL	n/a	Ladder Pass? Check	n/a
AMP POS	a) Re-aliquot analysis set b) Reamp analysis set c) Reinject d) Re-aliquot control	Fail	n/a n/a n/a
AMP NEG	refer to specific control	Pass/Fail	Sample Status Value System for Rerun (if applicable)
E NEG	refer to specific control	Pass/Fail	Sample Status Value System for Rerun (if applicable)

1.3 Peak(s) in Amplification Negative Control

	RESOLUTION*	CHECKBOX/ F11 COMMENT	3500 RERUN SECTION
AL	n/a	Ladder Pass? Check	n/a
AMP POS	refer to specific control	Pass/Fail	Sample Status Value System for Rerun (if applicable)
AMP NEG	a) Re-aliquot control b) Reamp analysis set	Fail	Peak(s) present / Fusion or PPY23
E NEG	refer to specific control	Pass/Fail	Sample Status Value System for Rerun (if applicable)

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1.4 Peak(s) in Extraction Negative Control

	RESOLUTION*	CHECKBOX/ F11 COMMENT	3500 RERUN SECTION
AL	n/a	Ladder Pass? Check	n/a
AMP POS	refer to specific control	Pass/Fail	Sample Status Value System for Rerun (if applicable)
AMP NEG	refer to specific control	Pass/Fail	Sample Status Value System for Rerun (if applicable)
E NEG	a) Re-aliquot control b) Reamp analysis set c) Do Not Rerun	Fail	Peak(s) present / Fusion or PPY23 Do Not Rerun

* Refer to the [STR Analysis on 3500xL Genetic Analyzers Manual](#) for further guidance on retesting strategies.

2 **GeneMarker® Codes**

Code	Sample Status
**	All peak labels removed
#	No or poor size standard
^^	Excessive elevated baseline
##	Excessive spikes
+	Migration shift
^	Peak(s) Present

Code	Rerun System
U	PowerPlex Fusion®
P	PowerPlex Y23®
N/A	Do Not Rerun

Code	Re-aliquot Dilution
D.2	1/5 dilution
D.1	1/10 dilution
D.05	1/20 dilution
D.01	1/100 dilution
No code	No dilution

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