



Society for Wildlife Forensic Science

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Wildlife Genetics Proficiency Testing Program –Test # 082713

Consensus Report 12/04/2013

Test Start Date -08/27/2013

Test Due Date -11/01/2013

This document reports the results of the Wildlife Genetics Proficiency Testing Program. The National Fish and Wildlife Forensic Laboratory was the duty Lab and was responsible for sample preparation, sample verification, distribution, and gathering and reporting the results.

The results are self explanatory and are divided into three sections:

1. Results of Test for Species Origin
2. Results of Determination of Gender Origin (Not Applicable for Fish Test)
3. Results of Individual Identification

Each section contains the following:

1. The species source that you identified for Items 1, 2 and 3.
2. The methods used to make these identifications.

Scenario

A Wildlife Agent is investigating an illegal fishing incident involving salmon. The suspect claims the meat in his freezer is coming from Atlantic salmon. All three tissue samples were recovered from the suspect's freezer.

The Agent requests that the species origin of all submitted evidence be determined. It is not known where the fishing incident occurred.

Items Submitted

Item 1: Tissue from suspect's freezer.

Item 2: Tissue from suspect's freezer.

Item 3: Tissue from suspect's freezer.



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Wildlife Genetics Proficiency Testing Program Answers:

	Item 1	Item 2	Item 3
Species Origin	Steelhead, Rainbow Trout (<i>Oncorhynchus mykiss</i>)	Steelhead, Rainbow Trout (<i>Oncorhynchus mykiss</i>)	Blackfin Tuna (<i>Thunnus atlanticus</i>)
Gender Origin	Male	Male	Male
Accession No.	QA4B42-QA4B81	QA4B42-QA4B81	QA4K42-QA4K81
Provider	Northwest Fisheries Science Center Seattle, WA	Northwest Fisheries Science Center Seattle, WA	NOAA Fisheries Service National Seafood Inspection Laboratory Pascagoula, MS
Original ID	34874-09 Tumwater Dam Wenatchee River	34874-09 Tumwater Dam Wenatchee River	NSILBKT-01 Gulf of Mexico

Items 1 and 2 are from the same individual

The results of pre-distribution testing confirmed the expected results.



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I) Compilation of Confirmation Species Origin Results

1 Species Source

Lab	Item 1	Item 2	Item 3
M3B22N	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
J4L18F	Rainbow Trout	Rainbow Trout	Blackfin Tuna
B5H06W	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
D6S24F	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
R9H57A	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
L2P41S-1	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
L2P41S-2	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
K2M14C-1	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i> Blackfin Tuna
K2M14C-2	<i>Oncorhynchus mykiss</i>	<i>Oncorhynchus mykiss</i>	<i>Thunnus atlanticus</i>
B3E14C	Rainbow Trout	Rainbow Trout	Blackfin Tuna
M8B64N	<i>Oncorhynchus mykiss</i> Rainbow Trout	<i>Oncorhynchus mykiss</i> Rainbow Trout	<i>Thunnus atlanticus</i> Blackfin Tuna

2 Methods Used

Lab	Methods/ Genetic Marker(s)
M3B22N	DNA Sequence Analysis/Sequence portion of mtDNA Cytb
J4L18F	DNA Sequence Analysis/Cytochrome b
B5H06W	DNA Sequence Analysis/Sequence a portion of CytB gene of the mtDNA
D6S24F	DNA Sequence Analysis/using cyt b primers
R9H57A	DNA Sequence Analysis/COI, cyt b
L2P41S-1	DNA Sequence Analysis/COIII/ND3 & Cytb sequence
L2P41S-2	DNA Sequence Analysis/COIII/ND3 mtDNA & Cytochrome b mtDNA
K2M14C-1	DNA Sequence Analysis/cytochrome b for tuna; CO3/ND3 for salmonid
K2M14C-2	DNA Sequence Analysis/cytochrome b for tuna; COIII/ND3 for salmon
B3E14C	DNA Sequence Analysis/CO1 DNA barcoding
M8B64N	DNA Sequence Analysis/Hardy et.al (2010), J.AOAC. 94(1)/DNA Barcode



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II) Compilation of Gender Origin Results (*Not Applicable for Fish Test*)

1 Gender Origin

Lab	Item 1	Item 2	Item 3
M3B22N			
J4L18F			
B5H06W			
D6S24F			
R9H57A			
L2P41S-1			
L2P41S-2			
K2M14C-1			
K2M14C-2			
B3E14C			
M8B64N			

2 Methods Used

Lab	Methods/ Genetic Marker(s)
M3B22N	
J4L18F	
B5H06W	
D6S24F	
R9H57A	
L2P41S-1	
L2P41S-2	
K2M14C-1	
K2M14C-2	
B3E14C	
M8B64N	



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III) Compilation Test Results (*Not Applicable for Fish Test*)

Lab	<i>Individual typing is not performed on the following species identified in this proficiency test</i>	1) What could be the minimum number of animals represented in these 3 samples?	2) Which samples have the same genetic profile?
M3B22N			
J4L18F			
B5H06W			
D6S24F			
R9H57A			
L2P41S-1			
L2P41S-2			
K2M14C-1			
K2M14C-2			
B3E14C			
M8B64N			

3 Methods Used

Lab	Methods/ Genetic Marker(s)
M3B22N	
J4L18F	
B5H06W	
D6S24F	
R9H57A	
L2P41S-1	
L2P41S-2	
K2M14C-1	
K2M14C-2	
B3E14C	
M8B64N	



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Response Summary Total Participants: 11*

*Test Results not submitted by 3 participants

Confirmation	Item 1	Item 2	Item 3
Species Origin	11 (100%)	11 (100%)	11 (100%)
Gender Origin	NA	NA	NA
Individual Identification	NA		

Inconclusive	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	NA	NA	NA
Individual Identification	NA		

N/A	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	NA	NA	NA
Individual Identification	NA		

END OF REPORT