Wildlife Genetics Proficiency Testing Program –Test # 021716

Consensus Report 07/14/2016

Test Start Date -02/17/2016
Test Due Date -04/22/2016

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
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 a poaching incident involving white-tailed deer. The suspect claims the meat in his freezer is coming from one white-tailed deer. All three tissue samples were recovered from the suspect's freezer.

The Agent requests that the species and gender origins of all submitted evidence be determined. He is also interested in knowing whether the three submitted evidence items are from the same individual animal. It is not known where the poaching 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.

Wildlife Genetics Proficiency Testing Program Answers:

	Item 1	Item 2	Item 3
Species Origin	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
Gender Origin	Male	Male	Female
Accession No.	QA2L56-QA2M24	QA2L56-QA2M24	QA2I77-QA2J45
Provider	Wyoming Game and Fish	Wyoming Game and Fish	Texas Parks and Wildlife
Original ID	HA81/82 Platte River Wilderness Area	HA81/82 Platte River Wilderness Area	Comal County

Items 1 and 2 are from the same individual

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

I) Compilation of Species Origin Results

1 Species Source

Lab	Item 1	Item 2	Item 3
M3B22N	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
J4L18F	Deer of the Genus *Odocoileus*	Deer of the Genus *Odocoileus*	Deer of the Genus *Odocoileus*
B5H06W	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
D6S24F	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
S2F23G	*Odocoileus sp.*	*Odocoileus sp.*	*Odocoileus sp.*
R2J94A-1	*Odocoileus sp.* Deer species not determined due to lack of geographical information.	*Odocoileus sp.* Deer species not determined due to lack of geographical information.	*Odocoileus sp.* Deer species not determined due to lack of geographical information.
R2J94A-2	*Odocoileus sp.* Deer species not determined due to lack of geographical information.	*Odocoileus sp.* Deer species not determined due to lack of geographical information.	*Odocoileus sp.* Deer species not determined due to lack of geographical information.
B1V83W	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
P2W87T	*Odocoileus hemionus* (Mule deer)	*Odocoileus hemionus* (Mule deer)	*Odocoileus virginianus* (White-tailed deer)
K2R46H-1	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
K2R46H-2	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
K2R46H-3	Mule Deer *Odocoileus hemionus*	Mule Deer *Odocoileus hemionus*	White-tailed Deer *Odocoileus virginianus*
D3H13G-1	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
D3H13G-2	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
D3H13G-3	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
C3F65S	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
M1S68R	Mule Deer *(Odocoileus hemionus)*	Mule Deer *(Odocoileus hemionus)*	White-tailed Deer *(Odocoileus virginianus)*
B4W11V-1	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
B4W11V-2	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
B4W11V-3	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus*
J2R15F-1	*Odocoileus hemionus* (Mule deer)	*Odocoileus hemionus* (Mule deer)	*Odocoileus virginianus* (White-tailed deer)
J2R15F-2	Mule Deer	Mule Deer	White-tailed Deer

	(Odocoileus hemionus)	*(Odocoileus hemionus)*	*(Odocoileus virginianus)*
K1W95S-1 K1W95S-3	*Odocoileus spp*	*Odocoileus spp*	*Odocoileus spp*
K1W95S-1 K1W95S-4	*Odocoileus spp* Item 1 and 2 had the same sequence, which matched Haplotype "E" in WDFW's database. Out of 354 samples in WDFW's database, 18 samples are identified as having Haplotype E, 15 of those samples are from *O. hemionus* and three are from *O. virginianus*.	*Odocoileus spp* Item 1 and 2 had the same sequence, which matched Haplotype "E" in WDFW's database. Out of 354 samples in WDFW's database, 18 samples are identified as having Haplotype E, 15 of those samples are from *O. hemionus* and three are from *O. virginianus*.	*Odocoileus spp* Item 3 matched WDFW's Haplotype "H". Of the 99 samples in WDFW's database identified as Haplotype H, 92 are from *O. hemionus* and seven are from *O. virginianus*.
K1W95S-2 K1W95S-3	Deer (*Odocoileus spp*.)	Deer (*Odocoileus spp*.)	Deer (*Odocoileus spp*.)
K1W95S-2 K1W95S-4	Deer (*Odocoileus spp*.) The 12s rRNA sequences for all three samples matched Deer. In our lab, identification of deer to species is done using known haplotype frequencies from deer herds in WA State. The haplotype of Items 1 and 2 does not match any of the known haplotypes found in WA State. However, without knowledge of where the poaching occurred, the uncertainty of the species designation is too high for a confident species ID.	Deer (*Odocoileus spp*.) The 12s rRNA sequences for all three samples matched Deer. In our lab, identification of deer to species is done using known haplotype frequencies from deer herds in WA State. The haplotype of Items 1 and 2 does not match any of the known haplotypes found in WA State. However, without knowledge of where the poaching occurred, the uncertainty of the species designation is too high for a confident species ID.	Deer (*Odocoileus spp*.) The 12s rRNA sequences for all three samples matched Deer. In our lab, identification of deer to species is done using known haplotype frequencies from deer herds in WA State. The haplotype of Item 3 matches WDFW haplotype H, which is much more frequently found in *Odocoileus hemionus*. However, without knowledge of where the poaching occurred, the uncertainty of the species designation is too high for a confident species ID.
A2G87C	*Odocoileus hemionus*	*Odocoileus hemionus*	*Odocoileus virginianus* (White tail Deer)
R4R65C-1 R4R65C-2	*Odocoileus sp.*	*Odocoileus sp.*	*Odocoileus sp.*

R4R65C-3 R4R65C-4			
B4C27D	*Odocoileus virginianus* OR *O. hemionus* There was insufficient diversity in the CYTB/COI region to categorically decide between mule and white tail deer	*Odocoileus virginianus* OR *O. hemionus* There was insufficient diversity in the CYTB/COI region to categorically decide between mule and white tail deer	*Odocoileus virginianus* OR *O. hemionus* There was insufficient diversity in the CYTB/COI region to categorically decide between mule and white tail deer
R1J97A	*Odocoileus hemionus/ O. virginianus* ACWG does not have protocols established to distinguish between mule deer or white tailed deer as these are not species that our lab currently works on.	*Odocoileus hemionus/ O. virginianus* ACWG does not have protocols established to distinguish between mule deer or white tailed deer as these are not species that our lab currently works on.	*Odocoileus hemionus/ O. virginianus* ACWG does not have protocols established to distinguish between mule deer or white tailed deer as these are not species that our lab currently works on.
M8B64N	*Odocoileus sp.*	*Odocoileus sp.*	*Odocoileus sp.*
L4W29E	Genus *Odocoileus*	Genus *Odocoileus*	Genus *Odocoileus*
J6B42V-1 J6B42V-2 J6B42V-3	*Odocoileus sp.*	*Odocoileus sp.*	*Odocoileus sp.* (Mule or White-tailed Deer)
T3R37M-1 T3R37M-2 T3R37M-3 T3R37M-4 T3R37M-5	*Odocoileus sp.* Identification to the genus level only is a current limitation of our laboratory for members of the genus *Odocoileus.*	*Odocoileus sp.* Identification to the genus level only is a current limitation of our laboratory for members of the genus *Odocoileus.*	*Odocoileus sp.* Identification to the genus level only is a current limitation of our laboratory for members of the genus *Odocoileus.*

2 Methods Used

Lab	Methods/ Genetic Marker(s)
M3B22N	DNA Sequence Analysis/ Seq. analysis of portion of mtDNA Cytochrome b locus STR Analysis/ STR Analysis of Deer Set A multiplex
J4L18F	DNA Sequence Analysis/ Amp of Cyt-b Region & Seq. Analysis
B5H06W	DNA Sequence Analysis/ Portion of Cyt. B and Control Region Genes STR Analysis/ Deer Set A & STR Multiplex
D6S24F	DNA Sequence Analysis/ Portion of cyt b. genes STR Analysis/ Deer Set A STR multiplex
S2F23G	DNA Sequence Analysis/ 5' segment of mtDNA cytochrome b
R2J94A-1	DNA Sequence Analysis/ mitochondrial 16S ribosomal RNA gene
R2J94A-2	DNA Sequence Analysis/ mitochondrial 16S ribosomal RNA gene
B1V83W	Isoelectric Focusing/ Staining for Esterase
P2W87T	DNA Sequence Analysis/ Analysis of CytB region of mtDNA
K2R46H-1	Immunodiffusion/ Ouchterlony (anti-cervid, anti-ursid) Isoelectric Focusing/ Phosphoglucose Isomerase (PGI), SOD & EAP
K2R46H-2	Immunodiffusion/ Ouchterlony Isoelectric Focusing/ PGI, SOD, EAP
K2R46H-3	Immunodiffusion/ Ouchterlony Isozyme Analysis/ PGI SOD EAP Isoelectric Focusing/ PGI SOD EAP
D3H13G-1	Cross over electrophoresis/Counter Immunoelectrophoresis (CIEP) Isoelectric Focusing/ Phosphoglucose Isomerase (PGI) and Albumin
D3H13G-2	Cross over electrophoresis/Counter Immunoelectrophoresis (CIEP) Isoelectric Focusing/ Phosphoglucose Isomerase (PGI) and Albumin
D3H13G-3	Cross over electrophoresis/Counter Immunoelectrophoresis (CIEP) Isoelectric Focusing/ Phosphoglucose Isomerase (PGI) and Albumin
C3F65S	Isoelectric Focusing/ Phosphoglucose Isomerase, Albumin Counter Immunoelectrophoresis
M1S68R	Immunodiffusion/ Ouchterlony Deer anti-sera Isoelectric Focusing/ PGI; EAP
B4W11V-1	DNA Sequence Analysis/ tRNA and Cytochrome b genes STR Analysis/ FCB193
B4W11V-2	DNA Sequence Analysis/ tRNA and Cytochrome b genes STR Analysis/ FCB193
B4W11V-3	DNA Sequence Analysis/ tRNA and Cytochrome b genes STR Analysis/ FCB193
J2R15F-1	Immunodiffusion/ Ouchterlony (Anti-Cervid) Isoelectric Focusing/ PGI & EAP with PhastSystem
J2R15F-2	Immunodiffusion/ Ouchterlony using Cervid antiserum Isoelectric Focusing/ EAP & PGI with PhastSystem

K1W95S-1 K1W95S-3 K1W95S-1 K1W95S-4	DNA Sequence Analysis/ 12s rRNA DNA Sequence Analysis/ 12s rRNA
K1W95S-2 K1W95S-3 K1W95S-2 K1W95S-4	DNA Sequence Analysis/ 12s rRNA mtDNA sequencing DNA Sequence Analysis/ 12s rRNA mtDNA sequencing
A2G87C	DNA Sequence Analysis/mtDNA Cytochrome b
R4R65C-1 R4R65C-2 R4R65C-3 R4R65C-4	DNA Sequence Analysis/ Cytochrome B
B4C27D	DNA Sequence Analysis/ Sanger mito sequencing CYT B, COI STR Analysis/ Deer STR analysis
R1J97A	DNA Sequence Analysis/ COI & Cyt b – Sanger sequencing
M8B64N	DNA Sequence Analysis/ COI – Hardy et al. (2011)
L4W29E	DNA Sequence Analysis/ Cytochrome B sequencing
J6B42V-1 J6B42V-2 J6B42V-3	DNA Sequence Analysis/ COI, CytB, 16S
T3R37M-1 T3R37M-2 T3R37M-3 T3R37M-4 T3R37M-5	DNA Sequence Analysis

II) Compilation of Gender Origin Results

1 Gender Origin

Lab	Item 1	Item 2	Item 3
M3B22N	Male	Male	Female
J4L18F	Male	Male	Female
B5H06W	Male	Male	Female
D6S24F	Male	Male	Female
S2F23G	Male	Male	Female
R2J94A-1	N/A	N/A	N/A
R2J94A-2	N/A	N/A	N/A
B1V83W	Male	Male	Female
P2W87T	Male	Male	Female
K2R46H-1	Male	Male	Female
K2R46H-2	Male	Male	Female
K2R46H-3	Male	Male	Female
D3H13G-1	Male	Male	Female
D3H13G-2	Male	Male	Female
D3H13G-3	Male	Male	Female
C3F65S	Male	Male	Female
M1S68R	Male	Male	Female
B4W11V-1	Male	Male	Female
B4W11V-2	Male	Male	Female
B4W11V-3	Male	Male	Female
J2R15F-1	Male	Male	Female
J2R15F-2	Male	Male	Female
K1W95S-1 K1W95S-3 K1W95S-1 K1W95S-4	Male Male	Male Male	Female Female
K1W95S-2 K1W95S-3 K1W95S-2 K1W95S-4	Male Male	Male Male	Female Female
A2G87C	Male	Male	Female
R4R65C-1 R4R65C-2 R4R65C-3 R4R65C-4	Male	Male	Female
B4C27D	Male	Male	Female
R1J97A	N/A	N/A	N/A

M8B64N	N/A	N/A	N/A
L4W29E	N/A	N/A	N/A
J6B42V-1 J6B42V-2 J6B42V-3	Male	Male	Female
T3R37M-1 T3R37M-2 T3R37M-3 T3R37M-4 T3R37M-5	N/A	N/A	N/A

2 Methods Used

Lab	Methods/ Genetic Marker(s)
M3B22N	Amplification of SRY locus in STR multiplex, which produces amplicon characteristic for MALE mammals
J4L18F	Sex test using PCR co-amp of ZFX/Y and SRY gene regions
B5H06W	Fragment analysis/ Capillary electrophoresis testing for the presence or absence of a portion of the SRY gene linked to the male sex chromosome of mammals
D6S24F	Fragment analysis & capillary electrophoresis testing for the presence or absence of a portion of the SRY gene linked to the male sex chromosome of mammals
S2F23G	A PCR test for the presence/absence of the HMG segment of the SRY gene that is linked to the Y-chromosome of mammals
R2J94A-1	-
R2J94A-2	-
B1V83W	Zfx/fy
P2W87T	PCR amplification of nuclear DNA using 2 sets of primers-one set specific to region on Y chromosome (presence or absence determines gender) and the other set specific to region of X chromosome (ensures reaction worked)-3C+3D; Zfx+Zfy. PCR amplified product is run on a gel to determine gender (2 bands=male; 1 band=female).
K2R46H-1	PCR gender typing and capillary electrophoresis of the zinc-finger control region of the X-chromosome and SRY gene on the Y-chromosome
K2R46H-2	PCR amplification of the SRY gene and ZFX control region
K2R46H-3	PCR amplification/analysis of the ZFX/ZFY control region and SRY gene
D3H13G-1	Amplification of the zinc finger protein of the X- chromosome and the testes determining factor (if present) using PCR
D3H13G-2	Amplification of the zinc finger protein of the X- chromosome and the testes determining factor (if present) using PCR
D3H13G-3	Amplification of the zinc finger protein of the X- chromosome and the testes determining factor (if present) using PCR
C3F65S	Amplification of the ZFX region on the X-chromosome, SRY region on the Y-chromosome
M1S68R	PCR amplification and analysis of ZFX and ZFY using PAGE PCR amplification and analysis of SRY using CE
B4W11V-1	Deer SRY
B4W11V-2	Deer SRY
B4W11V-3	Deer SRY
J2R15F-1	ZFX/ SRY PCR gender typing via Capillary Electrophoresis
J2R15F-2	Capillary Electrophoresis of dye-labelled ZFX/ SRY PCR products
K1W95S-1 K1W95S-3 K1W95S-1 K1W95S-4	SRY - sex- determining region Y chromosome ZF - zinc finger SRY - sex- determining region Y chromosome ZF - zinc finger

K1W95S-2 K1W95S-3 K1W95S-2 K1W95S-4	SRY - sex- determining region Y chromosome ZF - zinc finger (X chromosome control) SRY - sex- determining region Y chromosome ZF - zinc finger (X chromosome control)
A2G87C	PCR & SRYB3/SRYB5 and ZFX/ZFY primers in a single reaction
R4R65C-1 R4R65C-2 R4R65C-3 R4R65C-4	PCR amplification of the ZFX/ZFY and SRY genes
B4C27D	SRY, ZFX/ZFY PCR Fragment analysis
R1J97A	-
M8B64N	-
L4W29E	I do not have validated sex-determination markers of this genus of deer.
J6B42V-1 J6B42V-2 J6B42V-3	PCR amplification of ZFX/Y and SRY genes
T3R37M-1 T3R37M-2 T3R37M-3 T3R37M-4 T3R37M-5	No established gender testing protocol, no tests completed for 1, 2, and 3.

III) Compilation of Individual Identification Results

Lab	*Individual typing is not performed on the following species identified in this proficiency test*	1) What could be the minimum number of animals represented in these 3 samples?	2) Which samples have the same genetic profile?
M3B22N	-	2	Item 1 & Item 2 share the same composite genotype
J4L18F	Items 1, 2, 3	-	-
B5H06W	-	2	PT1 and PT2
D6S24F	-	2	PT-1 & PT-2
S2F23G	*Odocoileus sp.* PT1, PT2 & PT3	-	-
R2J94A-1	-	2	Item 1 and Item 2
R2J94A-2	-	2	Item 1 and Item 2
B1V83W	N/A	2	Item 1 & Item 2
P2W87T	N/A	2	Based on 7 microsatellite loci, Item 1 and Item 2 cannot be excluded as originating from the same animal.
K2R46H-1	Item 3	2	Item 1 and Item 2
K2R46H-2	It3 – Pt 021716-blue was included but not analyzed	2	Item 1 Item 2
K2R46H-3	Item 3	2	Item 1 and Item 2
D3H13G-1	-	2	Items #1 and #2
D3H13G-2	-	2	Items #1 and #2
D3H13G-3	-	2	Items #1 and #2
C3F65S	*Odocoileus virginianus*	2	Item 1 and Item 2
M1S68R	-	2	Item 1 and Item 2
B4W11V-1	-	2	Item 1 and Item 2
B4W11V-2	-	2	Item 1 and Item 2
B4W11V-3	-	2	Item 1 and Item 2
J2R15F-1	-	2	Item #1 & #2
J2R15F-2	-	2	Item 1 & Item 2
K1W95S-1 K1W95S-3	-	2	Samples (Items) 1 and 2 had SAME genetic profile, using WDFW Deer STR panel Sample 3 had a DIFFERENT genetic profile from Samples 1 and 2 using the WDFW Deer STR panel

K1W95S-1 K1W95S-4	-	2	Samples (Items) 1 and 2 had SAME genetic profile, using WDFW Deer STR panel Sample 3 had a DIFFERENT genetic profile from Samples 1 and 2 using the WDFW Deer STR panel
K1W95S-2 K1W95S-3 K1W95S-2 K1W95S-4	- -	2 2	Two deer, one male and one female. Items 1 and 2 were both identified as male deer (*Odocoileus spp*.) and had identical STR genotypes. Two deer, one male and one female. Items 1 and 2 were both identified as male deer (*Odocoileus spp.)* and had identical STR genotypes.
A2G87C	-	2	Sample 1 and Sample 2 have the same genetic profiles
R4R65C-1 R4R65C-2 R4R65C-3 R4R65C-4	-	2	Item 1 & Item 2
B4C27D	-	2	Item 1 and Item 2
R1J97A	N/A	N/A	N/A
M8B64N	N/A	N/A	N/A
L4W29E	*Odocoileus*	-	-
J6B42V-1 J6B42V-2 J6B42V-3	-	-	-
T3R37M-1 T3R37M-2 T3R37M-3 T3R37M-4 T3R37M-5	-	2	Samples 1 & 2 have the same genetic profile. Sample 3 has a different profile than 1 & 2, meaning it was collected from a separate individual animal.

3 Methods Used

Lab	Methods/ Genetic Marker(s)
M3B22N	STR Analysis/ Cervid1, BM1225, BM4107, RT24, BM4208, T7, T159S, RT7
J4L18F	-
B5H06W	STR Analysis/ 8 STR loci: Cervid1, BM1225, BM4107, RT24, BM4208, T7, T159S, RT7
D6S24F	STR Analysis/ 8 loci: Cervid1, BM1225, BM4107, RT24, BM4208, T7, T159S, RT7
S2F23G	-
R2J94A-1	STR Analysis/ Deer MPX1: BM4107, T7, OvirA, Rt30, Rt7 Deer MPX2: Rt5, BM1225, OheN, BM4208, OheQ
R2J94A-2	STR Analysis/ Deer MPX1: BM4107, T7, OvirA, Rt30, Rt7 Deer MPX2: Rt5, BM1225, OheN, BM4208, OheQ
B1V83W	STR Analysis/ BM1225, Cervid1, RT24, RT7, BM4107, BM4208, T7, T159S
P2W87T	STR Analysis/ MAP2C, BM1225, RT9, RT24, IGF, FCB193, RT30
K2R46H-1	STR Analysis/ M, P, Q, D, R, O, K, N
K2R46H-2	STR Analysis/ Panel CD: M, P, D, Q Panel FG: K, N, O, R
K2R46H-3	STR Analysis/ D, K, N, O, R, P, Q, M
D3H13G-1	STR Analysis/ RT1, RT5, INRA040, RT13, RT24, RT30, Cerv1, ETH152, BM1225, BM4107, T7 and BM4208
D3H13G-2	STR Analysis/ RT1, RT5, INRA040, RT13, RT24, RT30, Cerv1, ETH152, BM1225, BM4107, T7 and BM4208
D3H13G-3	STR Analysis/ RT1, RT5, INRA040, RT13, RT24, RT30, Cerv1, ETH152, BM1225, BM4107, T7 and BM4208
C3F65S	STR Analysis/ RT1, RT5, INRA040, RT13, RT30, BM4107, T7, BM4208
M1S68R	STR Analysis/ Cervid 1, BM1225, BM4107, RT24, BM4208, T7, T159S, RT7
B4W11V-1	STR Analysis/ ADCYC, AGLA226, BL42, BM203, BM4107, BM4208, BM6438, BM6506, CELB9, CELJP15, CERVID1, CERVID2, ETH152, FCB193, GNZ204, RM006, SRCRSP1, TGLA94
B4W11V-2	STR Analysis/ ADCYC, AGLA226, BL42, BM203, BM4107, BM4208, BM6438, BM6506, CELB9, CELJP15, CERVID1, CERVID2, ETH152, FCB193, GNZ204, RM006, SRCRSP1, TGLA94
B4W11V-3	STR Analysis/ ADCYC, AGLA226, BL42, BM203, BM4107, BM4208, BM6438, BM6506, CELB9, CELJP15, CERVID1, CERVID2, ETH152, FCB193, GNZ204, RM006, SRCRSP1, TGLA94
J2R15F-1	STR Analysis/ CDFW Deer Panel: OheC273, OheT7, OheC89, OheT32, OheT217, OheT27r, OheT159S, OheC106a
J2R15F-2	STR Analysis/ CDFW Deer Panel: OheC273, OheT7, OheC89, OheT32, OheT217, OheT27r, OheT159S, OheC106a

K1W95S-1 K1W95S-3 K1W95S-1 K1W95S-4	STR Analysis/ WDFW Deer Panel/ BM1225, BM4107, C89, Cervid1, CRSP-1, RT24, RT5, RT7, T159, T7, Texan-4 STR Analysis/ WDFW Deer Panel/ BM1225, BM4107, C89, Cervid1, CRSP-1, RT24, RT5, RT7, T159, T7, Texan-4
K1W95S-2 K1W95S-3 K1W95S-2 K1W95S-4	STR Analysis/ WDFW deer STR microsatellite panel One subsample from each of the three Items was missing the genotype for CRSP-1. Otherwise, all genotypes were complete Marker set: BM1225, BM4107, C89, Cervid1, CRSP-1, RT24, RT5, RT7, T159, T7, Texan-4 STR Analysis/ WDFW deer STR microsatellite panel All samples had complete genotypes Marker set: BM1225, BM4107, C89, Cervid1, CRSP-1, RT24, RT5, RT7, T159, T7, Texan-4
A2G87C	STR Analysis/ P, D, N, Q, ILSTS011, BAM203
R4R65C-1 R4R65C-2 R4R65C-3 R4R65C-4	STR Analysis/BM4107, T7, OvirA, Rt30, Rt7, Rt5, BM1225, OheN, BM4208, OheQ
B4C27D	STR Analysis/ Cervid1, RT7, L, BM6506, N, RT5, INRA011, Q, S, OARFCB193, O, BM6438, BL25, P , K, RT13, D, BL42, BM888, BM4107, BM1225, BM4208, T7
R1J97A	-
M8B64N	-
L4W29E	STR Analysis/ INRA131, RM95, TGLA127, TGLA40, TGLA337, RM188, RM12, IDVGA55, FCB193
J6B42V-1 J6B42V-2 J6B42V-3	-
T3R37M-1 T3R37M-2 T3R37M-3 T3R37M-4 T3R37M-5	STR Analysis/ OarFCB193, Cervid1, INRA011, BL-42, RT-5, O, Q, BM6438, BL-25, K, P, RT-13 Genotypes profiles of 1, 2, and 3 are included in the attached document

Response Summary Total Participants: 43

Confirmation	Item 1	Item 2	Item 3
Species Origin	43 (100%)	43 (100%)	43 (100%)
Gender Origin	33 (77%)	33 (77%)	33 (77%)
Individual Identification	35 (81%)		

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

N/A	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	10 (23%)	10 (23%)	10 (23%)
Individual Identification	8 (19%)		

Out of Consensus	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	0 (0%)	0 (0%)	0 (0%)
Individual Identification	0 (0%)		

END OF REPORT