

HONOLULU ZOO
151 KAPAHULU AVE.
HONOLULU, HI 96815

INDEX VETERINARY SERVICES
Online results at www.vetconnect.com
West Region 800-444-4210
East/Central/Colorado 888-433-9987

1-808-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT, 920002

REQ #: 5403429 LAB #: 15713215
AGE: SEX: F COLLECTED: 03/01/2005
SPECIES: RECEIVED: 03/01/2005 07:02
BREED: ELEPHANT REPORTED: 03/01/2005 10:44

DOCTOR: OKIMOTO

TEST PROCEDURES

URINALYSIS

TEST PROCEDURES	RESULTS	REFERENCE RANGE	UNITS
COLLECTION METHOD	OTHER		
VOLUME	2.5		ML
COLOR	YELLOW		
CLARITY	CLOUDY		
SPECIFIC GRAVITY	1.004		
GLUCOSE	NEGATIVE		
BILIRUBIN	NEGATIVE		
KETONES	NEGATIVE		
BLOOD	NEGATIVE		
PH	8.5		
PROTEIN	NEGATIVE		
WBC	0-2		HPF
RBC	2-5		HPF
BACTERIA	MARKED (>40/HPF)		HPF
EPI CELL	1+ (1-3/LPF)		LPF
MUCUS	NONE SEEN		LPF
CASTS	NONE SEEN		LPF
CRYSTALS	NONE SEEN		LPF
OTHER	AMORPHOUS DEBRIS PRESENT		
UROBILINOGEN	NORMAL		

HONOLULU ZOO
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IDEXX VETERINARY SERVICES
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 West Region 800-444-4210
 East/Central/Colorado 888-433-9987

1-800-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT,920002

REQ #: 5403425
 AGE: SEX: F
 SPECIES:
 BREED: ASIAN ELEPHANT

LAB #: 15700342
 COLLECTED: 02/27/2005
 RECEIVED: 02/27/2005 07:07
 REPORTED: 02/27/2005 08:49

DOCTOR: OKIMOTO
 TEST PROCEDURES

LARGE ANIMAL PROFILE
 LARGE ANIMAL PANEL

	RESULTS	REFERENCE RANGE	UNITS
* ALK. PHOSPHATASE	117		IU/L
* AST (SGOT)	17		IU/L
* CK	211		IU/L
* GGT	9		IU/L
* ALBUMIN	2.5		g/dL
* TOTAL PROTEIN	7.9		g/dL
* GLOBULIN	5.4		g/dL
* TOTAL BILIRUBIN	0.5		mg/dL
* DIRECT BILIRUBIN	0.2		mg/dL
* BUN	2		mg/dL
* CREATININE	2.1		mg/dL
* CHOLESTEROL	45		mg/dL
* GLUCOSE	118		mg/dL
* CALCIUM	8.7		mg/dL
* PHOSPHORUS	2.2		mg/dL
* TC02 (BICARBONATE)	24		mEq/L
* CHLORINE	86		mEq/L
* POTASSIUM	3.3		mEq/L
* SODIUM	128		mEq/L
* A/C RATIO	0.5		
* B/C RATIO	1.0		
* INDIRECT BILIRUBIN	0.3		mg/dL
* NA/N RATIO	39		
* HEMOLYSIS INDEX	2		
* LIPEMIA INDEX	8		
* ANION GAP	21		mEq/L
CBC COMPREHENSIVE			
* WBC	8.2		THOUS./uL
* RBC	3.08		MILLION/uL

CONTINUED REPORT

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West Region 800-444-4210
East/Central/Colorado 888-433-9987

1-800-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT,9200R2

REQ #: 5403425
AGE: SEX: F
SPECIES:
BREED: ASIAN ELEPHANT

LAB #: 15700342
COLLECTED: 02/27/2005
RECEIVED: 02/27/2005 07:07
REPORTED: 02/27/2005 08:49

DOCTOR: OKIMOTO
TEST PROCEDURES

RESULTS

REFERENCE RANGE UNITS

TEST PROCEDURES	RESULTS	REFERENCE RANGE	UNITS
* PCV	121		fL
* MCH	42.4		Pg
* MCHC	35.1		g/dL
* NEUTROPHIL SEG	40		%
* LYMPHOCYTES	14		%
* MONOCYTES	45		%
* EOSINOPHIL	1		%
* AUTO PLATELET	481		THOUS./uL
* REMARKS			
SLIDE REVIEWED MICROSCOPICALLY.			
* ABSOLUTE NEUTROPHIL SEG	3280		/uL
* ABSOLUTE LYMPHOCYTE	1148		/uL
* ABSOLUTE MONOCYTE	3698		/uL
* ABSOLUTE EOSINOPHIL	82		/uL
FIBRINOGEN	400		MG/DL

HONOLULU 200
151 KAPAHULU AVE.
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IDEXX VETERINARY SERVICES
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West Region 800-444-4210
East/Central/Colorado 888-433-9987

1-800-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT, 020002

REQ #: 5403427
AGE: SEX: F
SPECIES:
BREED: ASIAN ELEPHANT

LAB #: 15700807
COLLECTED: 02/26/2005
RECEIVED: 02/27/2005 07:22
REPORTED: 02/27/2005 07:59

DOCTOR: ONIMOTO, B
TEST PROCEDURES

URINALYSIS

COLLECTION METHOD

VOLUME

COLOR

CLARITY

SPECIFIC GRAVITY

GLUCOSE

BILIRUBIN

KETONES

BLOOD

PH

PROTEIN

WBC

RBC

BACTERIA

EPI CELL

MUCUS

CASTS

CRYSTALS

OTHER

URIBILINOGEN

RESULTS

FREE-CATCH

0.5

YELLOW

TURBID

1.013

NEGATIVE

NEGATIVE

NEGATIVE

NEGATIVE

8.0

TRACE (<100 mg/dL)

0-2

0-2

MARKED (>40/HPF)

1+ (1-3/LPF)

NONE SEEN

NONE SEEN

2+ AMMONIUM MG PHOSPHATE (4-10/LPF) LPF

AMORPHOUS DEBRIS PRESENT

NORMAL

REFERENCE RANGE UNITS

ML

HPF

HPF

HPF

LPF

LPF

LPF

LPF

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HONOLULU, HI 96815

IDEXX VETERINARY SERVICES
Online results at www.vetconnect.com
West Region 800-444-4210
East/Central/Colorado 888-433-9987

1-800-971-7100 ACCOUNT #: 1823

PATIENT: ELEPHANT, 21294

REQ #: 5294505 LAB #: L4225297
AGE: SEX: F COLLECTED: 08/24/2004
SPECIES: RECEIVED: 08/24/2004 07:32
BREED: ASIAN ELEPHANT REPORTED: 08/28/2004 12:22

DOCTOR: OKIMOTO, B.
TEST PROCEDURES
AERONIC CULTURE

* SOURCE: RIGHT NIPPLE

STATUS: FINAL

* COMPLETED CULTURE RESULTS

BACILLUS SPECIES - 2+

Not considered pathogenic. Normal inhabitant of soil and water.

ENTEROBACTER CLOACAE - 4+

SUSCEPTIBILITY RESULTS:

S = Susceptibility I = Intermediate R = Resistant
Minimum Inhibitory Concentration (MIC) expressed in ug/mL
Results with no MIC values were performed by disc testing.

ORGANISM(S):	E.CLOACAE
AMIKACIN	*S <=2
AMPICILLIN	R >=32
AUGMENTIN	R
CARBENICILLIN	*S <=16
CEFTAZIDIME	*S <=8
CEFTIOFUR	*S <=1
CEPHALOTHIN	R >=32
CHLORAMPHENICOL	*S 8
CIPROFLOXACIN	*S <=0.5
ENROFLOXACIN	*S <=0.25
PENTAMICIN	*S <=0.5
PIPERACILLIN	*S <=8
TETRACYCLINE	*S 4
TICARCILLIN	*S <=16
TORBRAMYCIN	*S <=0.5

HONOLULU 200
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HONOLULU, HI 96815

✓
IDEXX VETERINARY SERVICES
Online results at www.vetconnect.com
West Region 800-444-4210
East/Central/Colorado 888-433-9987

1-800-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT.B21294

REQ #: 5294504 LAD #: 14225312
AGE: SEX: F COLLECTED: 08/24/2004
SPECIES: RECEIVED: 08/24/2004 07:33
BREED: ASIAN ELEPHANT REPORTED: 08/28/2004 12:52

DOCTOR: OKIMOTO, D.
TEST PROCEDURES
AEROBIC CULTURE

* SOURCE: LEFT NIPPLE
STATUS: FINAL

COMPLETED CULTURE RESULTS
ENTEROBACTER CLOACAE - 4+
TWO STRAINS ISOLATED

NON-HEMOLYTIC STAPHYLOCOCCUS SPECIES - 2+

SUSCEPTIBILITY RESULTS:

S = Susceptibility I = Intermediate R = Resistant
Minimum Inhibitory Concentration (MIC) expressed in ug/mL
Results with no MIC values were performed by disc testing.

ORGANISM(S):	ECLOACAE	ECLOACAE
AMIKACIN	S <=2	S <=2
AMPICILLIN	R >=32	R >=32
AUGMENTIN	R >=32	R >=32
CARBENICILLIN	S <=16	S <=16
CEFTAZIDIME	S <=8	S <=8
CEFTIOXUR	S <=1	S <=1
CEPHALOTHIN	R >=32	R >=32
CHLORAMPHENICOL	S 4	S R
CIPROFLOXACIN	S <=0.5	S <=0.5
ENROFLOXACIN	S <=0.25	S <=0.25
GENTAMICIN	S <=0.5	S <=0.5
PIPERACILLIN	S <=8	S <=8
TETRACYCLINE	S 4	S 4
TICARCILLIN	S <=16	S <=16
TOBRAMYCIN	S <=0.5	S <=0.5

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

- page 1 -

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 19Y 2M 4D

Collection Information >>

Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4038 Kg on 21.Sep.2004
Manual restraint used.

Date of Collection: 26.Feb.2005

Time of Collection:

Collected by:

Sample Collection Site: SAPHENOUS VEIN

Hematology >>

Analysis Information >>

Anticoagulant: EDTA
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: IDEXX

Date of Analysis: 26.Feb.2005

Time of Analysis:

Analysis by:

Automated analysis.

Tests and Results >>

ISIS Reference Values >>

					Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	<	8.2		14.78±	4.513	6.350	33.30	(1383)
RBC	*10 ⁶ /UL		3.08		3.11±	0.53	1.78	5.15	(1157)
HGB	GM/DL		13.1		13.3±	2.2	6.8	22.7	(1219)
HCT	%		37.3		37.7±	6.0	23.0	58.0	(1472)
MCV	fL		121		122.4±	13.9	58.2	213.2	(1148)
MCH	ug		42.5		43.3±	4.5	16.6	83.2	(1130)
MCHC	gm/dL		35.1		35.3±	3.4	16.9	68.6	(1188)
SEGS	% (*10 ³ /UL)		40	(3.280)	5.095±	3.038	0.291	23.90	(1138)
LYMPHOCYTES	% (*10 ³ /UL)	<	14	(1.148)	5.887±	3.303	0.196	22.20	(1142)
MONOCYTES	% (*10 ³ /UL)		45	(3.690)	3.209±	2.838	0.000	9.983	(935)
EOSINOPHILS	% (*10 ³ /UL)		1	(0.082)	0.523±	0.653	0.000	5.145	(846)
PLATE. EST.			481						
FIBRINOGEN	MG/DL		400		379±	206	0	810	(141)

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

- page 2 -

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 19Y 2M 4D

Collection Information >>

Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4038 Kg on 21.Sep.2004
Manual restraint used.

Date of Collection: 28.Feb.2005

Time of Collection:

Collected by:

Sample Collection Site: SAPHENOUS VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: IDEXX

Date of Analysis: 26.Feb.2005

Time of Analysis:

Analysis by:

Automated analysis.

Tests and Results >>

ISIS Reference Values >>

Mean	S.D.	Min.	Max.	(N)
89±	20	40	223	(924)
12±	4	4	28	(928)
1.6±	0.4	0.7	3.1	(899)
10.6±	0.8	7.1	13.3	(851)
5.0±	1.2	2.5	9.0	(846)
130±	5	107	169	(669)
4.6±	0.5	3.3	6.4	(678)
89±	4	77	103	(632)
26.4±	3.1	19.0	32.3	(50)
46±	13	0	99	(546)
8.0±	0.8	5.7	11.3	(869)
3.2±	0.5	1.9	4.5	(522)
4.9±	1.0	2.7	8.6	(514)
22±	12	4	99	(899)
0.2±	0.2	0.0	1.2	(635)
0.1±	0.1	0.0	1.3	(220)
0.1±	0.1	0.0	0.6	(211)
145±	73	93	288	(897)

GLUCOSE	MG/DL	>	118
BUN	MG/DL	<<	2
CREAT.	MG/DL	>	2.1
BUN/Cr ratio			0.952
CA	MG/DL	<<	8.7
PHOS	MG/DL	<<	2.2
Ca/P ratio			3.95
NA	MEQ/L		128
K	MEQ/L	<<	3.3
Na/K ratio			38.8
CL	MEQ/L		86
CO3	MMOL/L		24
CHOL	MG/DL		45
T. PROT. (C)	GM/DL		7.9
ALBUMIN (C)	GM/DL	<	2.5
GLOBULIN (C)	GM/DL		5.4
Alb/Glob rat			0.463
AST (SGOT)	IU/L		17
T. BILI.	MG/DL	>	0.5
D. BILI.	MG/DL		0.2
B. BILI.	MG/DL	>	0.3
T.K PHOS	MM/L		117

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

- page 3 -

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 19Y 2M 4D

Chemistry >>
Comments >>
Na/K ratio 39

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 19Y 2M 1D

Collection Information >>
Health Status: Abnormal
Fasting Time: 8-24 hours
Activity: Calm
Weight: 4038 Kg on 21.Sep.2004
Manual restraint used.

Date of Collection: 23.Feb.2005
Time of Collection:
Collected by: TP

ematology >>

Analysis Information >>

Anticoagulant: EDTA
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: IDEXX
Date of Analysis: 24.Feb.2005
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	12.0		14.78±	4.513	6.350	33.30	(1383)
RBC	*10 ⁶ /UL	3.45		3.11±	0.53	1.78	5.15	(1157)
HGB	GM/DL	14.9		13.3±	2.2	6.8	22.7	(1219)
HCT	%	36.5		37.7±	6.0	23.0	58.0	(1472)
MCV	fL	< 106		122.4±	13.9	58.2	213.2	(1148)
MCH	ug	43.2		43.3±	4.5	16.8	69.2	(1130)
MCHO	gm/dL	> 40.8		35.3±	3.4	16.9	68.6	(1188)
SEGS	% (*10 ³ /UL)	18	(2.160)	5.095±	3.038	0.291	23.90	(1138)
LYMPHOCYTES	% (*10 ³ /UL)	< 13	(1.560)	5.687±	3.309	0.196	22.20	(1142)
MONOCYTES	% (*10 ³ /UL)	> 69	(8.280)	3.209±	2.838	0.000	9.983	(935)
PLATE. EST.		401						

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 19Y 2M 1D

Collection Information >>
Health Status: Abnormal
Fasting Time: 8-24 hours
Activity: Calm
Weight: 4038 Kg on 21.Sep.2004
Manual restraint used.

Date of Collection: 23.Feb.2005
Time of Collection:
Collected by: TP

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: IDEXX
Date of Analysis: 24.Feb.2005
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

			Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL	80	89±	20	40	223	(924)
BUN	MG/DL	13	12±	4	4	28	(928)
CREAT.	MG/DL	1.8	1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio		7.22					
CA	MG/DL	< 9.4	10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	4.3	5.0±	1.2	2.5	9.0	(846)
Ca/P ratio		2.19					
NA	MEQ/L	133	130±	5	107	169	(669)
K	MEQ/L	< 3.6	4.6±	0.5	3.3	6.4	(678)
Na/K ratio		36.9					
CL	MEQ/L	93	89±	4	77	103	(632)
HCO3	MMOL/L	< 21	26.4±	3.1	19.0	32.3	(50)
CHOL	MG/DL	< 25	46±	13	0	99	(546)
T.PROT. (C)	GM/DL	8.1	8.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL	2.8	3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL	5.3	4.9±	1.0	2.7	8.6	(514)
Alb/Glob rat		0.528					
AST (SGOT)	IU/L	33	22±	12	4	99	(899)
T. BILI.	MG/DL	0.2	0.2±	0.2	0.0	1.2	(635)
D. BILI	MG/DL	0.1	0.1±	0.1	0.0	1.3	(220)
I. BILI.	MG/DL	0.1	0.1±	0.1	0.0	0.6	(211)
ALK PHOS	U/L	158	145±	78	23	688	(837)

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

- page 3 -

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 19Y 2M 1D

Collection Information >>

Health Status: Abnormal
Fasting Time: 8-24 hours
Activity: Calm
Weight: 4038 Kg on 21.Sep.2004
Manual restraint used.

Date of Collection: 23.Feb.2005
Time of Collection:
Collected by: TP

Chemistry >>

Tests and Results >>
Comments >>

ISIS Reference Values >>

Hemolysis index 28, Lipemia index 5

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323480

Date Received: 7/15/2004

Establishment No.: HI0KIM1

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

HONOLULU, HI 96815

State: HI

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046171	047416	6/30/04	920002
		Tissues	
		TRUNK WASH	

Mycobacteria Isolation
Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323477

Date Received: 7/15/2004

Establishment No.: HIOKIM1

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046168	047413	6/30/04	821294

Tissues
TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323479

Date Received: 7/15/2004

Establishment No.: HIOKIMI

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

HONOLULU, HI 96815

State: HI

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046170	047415	6/29/04	920002
		Tissues	
		TRUNK WASH	

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323479

Date Received: 7/15/2004

Establishment No.: HIOKIMI

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

HONOLULU, HI 96815

State: HI

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046170	047415	6/29/04	920002
		Tissues	
		TRUNK WASH	

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323476

Date Received: 7/15/2004

Establishment No.: HIOKIM1

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046172	047412	6/29/04	821294
		Tissues	
		TRUNK WASH	

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323478

Date Received: 7/15/2004

Establishment No.: H10KIM1

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046169	047414	6/28/04	920002

Tissues
TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 323475

Date Received: 7/15/2004

Establishment No.: HIOKIMI

Referral Number:

OKIMOTO, BEN F.

Owner: HONOLULU ZOO

151 KAPAHULU AVE.

City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
1046160	047411	6/28/04	B21294
		Tissues	
		TRUNK WASH	

Mycobacteria Isolation
Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7286 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 261976

Date Received: 6/23/2003

Establishment No.: H1OKIM1
OKIMOTO, BEN F.
151 KAPAHULU AVE.

Referral Number:
Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

791128 035154 ¹⁰09/03 VAIGAI 920002
Tissues
TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 261977

Date Received: 6/23/2003

Establishment No.: HIOKIM1
OKIMOTO, BEN F.
151 KAPAHULU AVE.

Referral Number:
Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

791129 035155 6/10/03 VAIGAI 920002

Tissues

TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 261978

Date Received: 6/23/2003

Establishment No.: H1OKIM1
OKIMOTO, BEN F.
151 KAPAHULU AVE.

Referral Number:
Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

791130 035158 6/13/03 VAIGAI 920002
.Tissues
TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

HONOLULU ZOO
151 KAPAHULU AVE
HONOLULU, HI 96815

Tel: 808-971-7180
Fax: 808-971-3950
Antech ID #: 15023

Reference No.	Doctor	Client	Pet Name	Received
IRAB46460094	OKIMOTO	ELEPHANT	920002	08/03/2003
Species	Breed	Sex	Pet Age	Reported
UNKNOWN		U	09:37	08/04/2003

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE	UNITS
----------------	---------	--------------------------	-------

CYTOLOGY

SOURCE: Three slides were submitted for evaluation of aspirates from an ear lump.

DESCRIPTION:

No inflammatory response seen; No organisms found. No neoplastic cells are identified. The sample is virtually acellular. The smears contain large amounts of keratin, some fat, and other debris.

MICROSCOPIC FINDINGS: PROBABLE KERATIN FILLED BENIGN CYST, IF ASPIRATES ARE REPRESENTATIVE

COMMENT:

Presence of keratin debris could indicate this is an epidermal inclusion cyst, a follicular cyst or benign cystic neoplasm of adnexal origin, such as a trichoepithelioma or pilomatrixoma. Suggest surgical excision and submit for histopathology for definitive diagnosis.

Robert A. Green, DVM, PhD
Diplomate, ACVP
1-888-838-4636

krm

Report Notes:

A N T E C H Diagnostics

FINAL 08/04/2003 09:37 ACN# IRAB46460094

Clinical Pathology Report - Specimen Spreadsheet
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985

Date	2.Dec.1999	6.May.2003	8.May.2003
Time		4:00.0	
Restraint	Manual	Manual	Manual
Health	Normal	Normal	Normal
Fasting	< 8 hours	< 8 hours	< 8 hours
Activity	Calm	Calm	Calm
Hematology laboratory	IDEXX	ANTECH	ANTECH
Hematology anticoagulant	EDTA	EDTA	EDTA
Hematology quality problems	hemolysis	none	none
WBC	*10 ³ /UL 14.6	15.0	17.5
RBC	*10 ⁶ /UL 2.98	3.3	3.2
HGB	GM/DL 15.0	15.0	13.7
HCT	% 36.6	42	
SEGS	% (*10 ³ /UL) 28 (4.088)		43 (7.525)
LYMPHOCYTES	% (*10 ³ /UL) 12 (1.752)		37 (6.475)
MONOCYTES	% (*10 ³ /UL) 60 (8.760)		20 (3.500)
PLATE. EST.	INCR	SLINC	INCR
PLATE. CNT.	*10 ³ /UL	997	
FIBRINOGEN	MG/DL 300		
Chemistry laboratory	IDEXX	ANTECH	ANTECH
Chemistry sample:	Serum	Serum	Serum
Chemistry quality problems	hemolysis	none	none
ALBUMIN (E)			
GLUCOSE	MG/DL 87	102	86
BUN	MG/DL 10	13	13
UREAT.	MG/DL 1.4	1.2	1.6
UA	MG/DL 10.8	10.1	10.0
PHOS	MG/DL 4.8	4.8	4.6
CA	MEQ/L 130	130	126
CL	MEQ/L 4.7	4.3	4.6
AL	MEQ/L 91	91	91
TCO3	MMOL/L 22		
CHOL	MG/DL 43	35	35
% PROT. (C)	GM/DL 8.7	8.4	8.8
T.BUNTN (C)	GM/DL 9.0	9.0	9.1

Clinical Pathology Report - Specimen Spreadsheet
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985

ALK. PHOS.	IU/L	197	126	121
CPK	IU/L	88	71	98
A/G RATIO	GM/DL	0.5		
ANION GAP	MEQ/L	22		
SGT	IU/L	9		

Clinical Pathology Report - Specimen Spreadsheet
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985

		23.Feb.2005	26.Feb.2005
Date			
Time			
Restraint		Manual	Manual
Health		Abnormal	Abnormal
Fasting		8-24 hours	< 8 hours
Activity		Calm	Calm
Hematology laboratory		IDEXX	IDEXX
Hematology anticoagulant		EDTA	EDTA
Hematology quality problems		none	none
WBC	*10 ³ /UL	12.0	8.2
RBC	*10 ⁶ /UL	3.45	3.08
HGB	GM/DL	14.9	13.1
HCT	%	38.5	37.3
PLT	% (*10 ³ /UL)	18 (2.160)	40 (3.280)
LYMPHOCYTES	% (*10 ³ /UL)	13 (1.560)	14 (1.148)
MONOCYTES	% (*10 ³ /UL)	69 (8.280)	45 (3.690)
EOSINOPHILS	% (*10 ³ /UL)		1 (0.082)
PLATE. EST.		401	481
UREA NITROGEN			400

Chemistry laboratory	IDEXX	IDEXX
Chemistry sample:	Serum	Serum
Chemistry quality problems	none	none

ALBUMIN (E)			
GLUCOSE	MG/DL	80	118
UN	MG/DL	13	2
UREA NITROGEN	MG/DL	1.8	2.1
CREATININE	MG/DL	0.4	0.7
CHOLESTEROL	MG/DL	4.3	2.2
ALP	MEQ/L	133	128
CL	MEQ/L	3.6	3.3
Ca	MEQ/L	93	86
CO2	MMOL/L	21	24
BUN	MG/DL	25	45
PROT. (C)	GM/DL	8.1	7.9
CRIMTN (C)	GM/DL	2.8	2.5

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 17Y 4M 13D

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4129 Kg on 12.Mar.2003
Manual restraint used.

Date of Collection: 8.May.2003
Time of Collection:
Collected by: TP
Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>

Anticoagulant: EDTA
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 9.May.2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	17.5		14.79±	4.513	6.350	33.30	(1383)
RBC	*10 ⁶ /UL	7.2		3.11±	0.53	1.79	5.15	(1157)
HGB	GM/DL	13.7		13.3±	2.2	6.8	22.7	(1219)
SEBS	% (*10 ³ /UL)	45	(7.525)	5.095±	3.038	0.291	23.90	(1138)
MCH	GMG	42.8		43.3±	4.5	16.5	63.2	(1130)
LYMPHOCTES	% (*10 ³ /UL)	37	(6.475)	5.687±	3.303	0.196	22.20	(1142)
MONOCYTES	% (*10 ³ /UL)	20	(3.500)	3.209±	2.838	0.000	9.983	(935)
PLATE. EST.			INCR					

Comments >>

RBC morphology normal, Platelets appear increased and are above 600,000/ul.

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 17Y 4M 13D

Collection Information >>
Health Status: Normal
Fasting Times: < 8 hours
Activity: Calm
Weight: 4129 kg on 12.Mar.2003
Manual restraint used.

Date of Collection: 8.May.2003
Time of Collection:
Collected by: TP
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 9.May.2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

			Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL	86	89±	20	40	223	(924)
BUN	MG/DL	13	12±	4	4	28	(928)
CREAT.	MG/DL	1.4	1.5±	0.4	0.7	3.1	(899)
BUN/Cr ratio		8.13					
CA	MG/DL	10.0	10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	4.6	5.0±	1.2	2.5	9.0	(646)
Ca/P ratio		2.17					
NA	MEQ/L	126	130±	5	107	169	(669)
K	MEQ/L	4.6	4.6±	0.8	3.3	6.4	(678)
Na/K ratio		27.4					
CL	MEQ/L	91	89±	4	77	103	(632)
CHDL	MG/DL	35	46±	13	0	95	(546)
T.PROT. (C)	GM/DL	8.8	8.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL	3.1	3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL	5.7	4.9±	1.0	2.7	8.6	(514)
Alb/Glob rat		0.544					
AST (SGOT)	IU/L	14	22±	12	4	99	(899)
ALT (SGPT)	IU/L	5	8±	15	0	300	(583)
T. BILI.	MG/DL	0.2	0.2±	0.2	0.0	1.2	(635)
ALK.PHOS.	IU/L	121	145±	73	23	668	(837)
CPK	IU/L	96	227±	170	30	1260	(427)

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: VAIBAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 17Y 4M 11D

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4129 Kg on 12.Mar.2003
Manual restraint used.

Date of Collection: 6.May.2003
Time of Collection: 4:00.0
Collected by: TP
Sample Collection Site: EAR VEIN

ematology >>

Analysis Information >>

Anticoagulant: EDTA
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 7.May.2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

WBC	*10 ³ /UL	15.0
RBC	*10 ⁶ /UL	3.3
HGB	GM/DL	15.0
HCT	%	42
MCV	fL	127
MCH	ug	45.5
MCHC	gm/dL	35.7
PLATE. EST.		BLINC
PLATE. CNT.	*10 ³ /UL >>	997

ISIS Reference Values >>

Mean	S.D.	Min.	Max.	(N)
14.78±	4.513	6.350	53.30	(1383)
3.11±	0.53	1.78	5.15	(1157)
13.3±	2.2	6.8	22.7	(1219)
37.7±	6.0	23.0	58.0	(1472)
122.4±	13.9	58.2	213.2	(1148)
43.3±	4.5	16.6	63.2	(1130)
35.5±	3.4	16.9	68.6	(1198)
474±	172	127	1085	(335)

Comments >>

RBC morphology normal

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: VAIGAI

Accession #: 920002
Female
Birth: 24.Dec.1985
Age: 17Y 4M 11D

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4129 Kg on 12.Mar.2003
Manual restraint used.

Date of Collection: 6.May.2003
Time of Collection: 4:00.0
Collected by: TP
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sampler: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 7.May.2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

			Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL	102	89±	20	40	223	(924)
BUN	MG/DL	13	12±	4	4	28	(928)
CREAT.	MG/DL	1.2	1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio		10.8					
CA	MG/DL	10.1	10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	4.8	5.0±	1.2	2.5	9.0	(646)
Ca/P ratio		2.10					
NA	MEQ/L	130	130±	8	107	169	(669)
K	MEQ/L	4.3	4.6±	0.5	3.3	6.4	(678)
Na/K ratio		30.2					
CL	MEQ/L	91	89±	4	77	103	(632)
CHOL	MG/DL	35	46±	13	0	99	(546)
T.PROT. (C)	GM/DL	8.4	8.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL	3.0	3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL	5.4	4.9±	1.0	2.7	8.6	(514)
Alb/Glob rat		0.556					
AST (SGOT)	IU/L	17	22±	12	4	99	(899)
ALT (SGPT)	IU/L	5	8±	15	0	300	(583)
T. BILI.	MG/DL	0.2	0.2±	0.2	0.0	1.2	(635)
ALK.PHOS.	IU/L	126	145±	73	23	688	(837)
CPK	IU/L	71	227±	170	30	1260	(427)

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 187966

Date Received: 7/05/2002

Establishment No.: HIOKIM1

Referral Number:

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

560033 025301 8/27 VAIGAI

Tissues
trunk wash

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 187965

Date Received: 7/06/2002

Establishment No.: HIOKIM1

Referral Number:

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

560032 025300 8/26 VAIGAI

Tissues
trunk wash

Mycobacteria Isolation

Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 187964

Date Received: 7/05/2002

Establishment No.: HIOKIM1

Referral Number:

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

580031 025289 6/25 VAIGAI

Tissues
trunk wash

Mycobacteria Isolation
Diagnosis: No Isolation Made

Vaigai Quarterly Foot Survey, June 26, 2002

Left Front



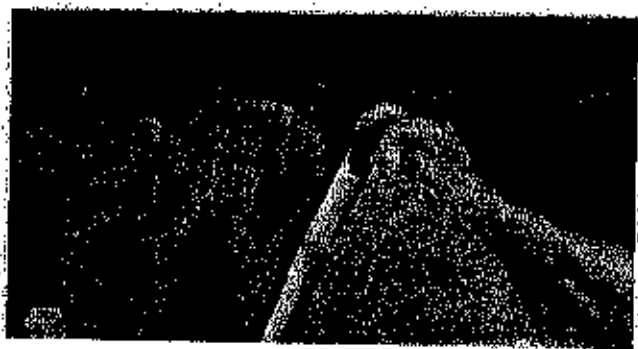
Right Front

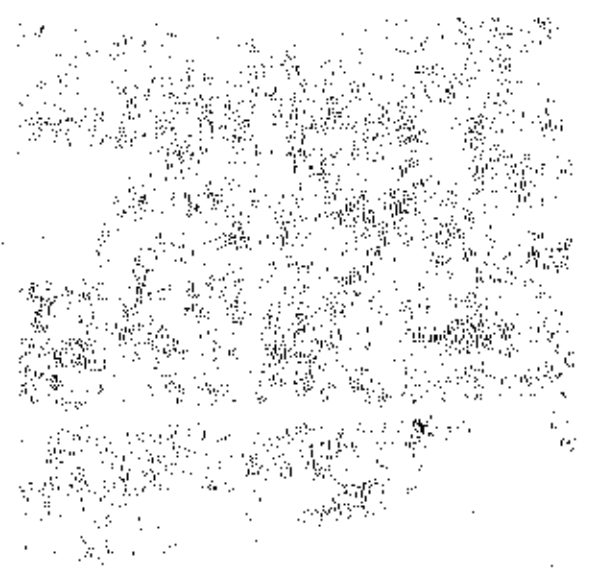
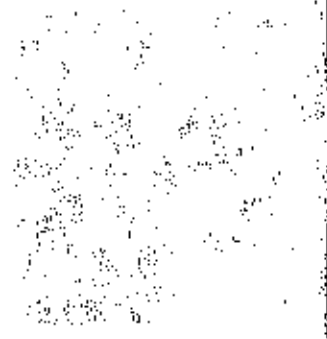
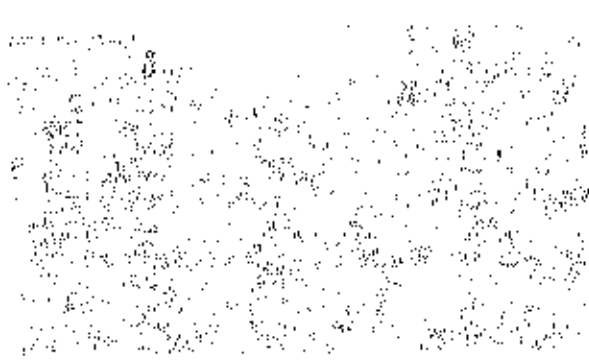


Left Rear



Right Rear





reaching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OPM, Room 404-W, Washington, D.C. 20250, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
NATIONAL VETERINARY SERVICES LABORATORIES
AMES, IOWA 50010

INSTRUCTIONS: Use a separate request for each species and each owner/broker. See reverse of Part 5 for definitions (Item 11) and instructions for identification (Item 19).

PAGE
OF

SPECIMEN SUBMISSION

1. NAME OF SUBMITTER (Last, First, MI)
Dr. Ron Okimoto

2. NAME OF OWNER/BROKER (Last, First, MI)
Honolulu Zoo

MAILING ADDRESS (Street, City, and State, Zip code)
151 Kapihulu Ave.
Honolulu, HI 96824 96815

CITY
Honolulu

STATE
HI

3. LOCATION OF ANIMALS
County
Honolulu

State
HI

4. HERD/FLOCK SIZE
2

5. NO. IN HERD/FLOCK AFFECTED

6. NO. IN HERD/FLOCK DEAD

7. EXAMINATIONS REQUESTED (Diseases and Test Procedures)
Mycobacterial culture with speciation

8. COLLECTED BY
Maurice Belasan

9. DATE COLLECTED
21 Jun 21 Jun 22 Jun 2000

10. AUTHORIZED BY
Dr. Ron Okimoto

11. PURPOSE OF SUBMISSION ("X" and fill in reverse side of Part 5 for definitions)
 General Diagnostic
 FAD/EP Diagnostic
 AVSL In-state Diagnostic
 Surveillance/Monitor
 Developmental/Basic Resrch
 Reagent Evaluation
 Import
 Export

12. COUNTRY OF ORIGIN/DESTINATION

13. REFERRAL NUMBER

14. PRESERVATION ("X" applicable item(s))
 None
 Ice Pack
 Dry Ice
 Formalin
 Borax
 Alcohol
 Other (specify)

15. SPECIMENS SUBMITTED ("X" applicable item(s))
 Blood
 Culture
 Extent
 Feeds
 Feces
 Milk
 Parasite
 Plant
 Semen
 Serum
 Spit
 Swab
 Tissue
 Urine
 Water
 Whole Blood
 Other (specify)
trunk wash

16. TOTAL NUMBER OF SPECIMENS SUBMITTED
6

17. SPECIES OR SOURCE ("X" any)
 Cattle
 Swine
 Sheep
 Goat
 Horse
 Donkey
 Environment
 Poultry
 Rabbit
 Chicken
 Turkey
 Other (specify)
Elephant

18. NUMBER OF SHIPPING CONTAINERS USED
1

19. NUMBER OF ANIMALS SAMPLED
2

20. BREED
Asian Elephant

21. IDENTIFICATION (see reverse side of Part 5)

Sample ID	Animal ID/Breed	AGE	SEX	IDENTIFICATION (see reverse side of Part 5)			
				Sample ID	Animal ID	AGE	SEX
1A	821294 - Mari - Ele	23y	F	2A	920002 - Valgal - Ele	15y	F
B-2A	821294 - Mari - Ele	23y	F	2B	920002 - Valgal - Ele	15y	F
1C	821294 - Mari - Ele	23y	F	2C	920002 - Valgal - Ele	15y	F

22. ADDITIONAL DATA (History, clinical signs, post mortem findings, remarks, tentative diagnosis, etc. Use additional sheets if necessary. Attach 5 copies.)

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 114704

Date Received: 7/02/2001

Establishment No.: H10KIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:
Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
359199	015039	6/20/01	VAIGAI 920002

Tissues

TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 114703

Date Received: 7/02/2001

Establishment No.: HIOKIMI

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:

HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:
Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
359198	015038	6/19/01	VAIGAI 920002
			Tissues
			TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 114702

Date Received: 7/02/2001

Establishment No.: HI0KIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:
Retain Tag:

Species: Elephant

NVSL ID	Case#	Sample ID	Animal ID
359197	015037	6/18/01	VAIGAI 920002
			Tissues
			TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

Accession: 53734

Date Received: 6/30/2000

Establishment No.: HIOKIMJ

OKIMOTO, BEN F.
351 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU
State: HI

HONOLULU, HI 96815
Fax:

Preservation:
Retain Tag:

Species Elephant

<u>NVSL ID</u>	<u>Case#</u>	<u>Sample ID</u>	<u>Animal ID</u>
----------------	--------------	------------------	------------------

170073	004663 2A		920002-VV16A Tissues TRUNK WASH
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Mycobacteria Isolation

Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1880 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

Accession: 53735

Date Received: 6/30/2000

Establishment No.: HI0KIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815
Fax:

Preservation:
Retain Tag:

Species Elephant

<u>NVSL ID</u>	<u>Case#</u>	<u>Sample ID</u>	<u>Animal ID</u>
170075	004664	2B	920002-VATGWD Tissues TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

Accession: 53736

Date Received: 6/30/2000

Establishment No.: HIOKIMI

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815
Fax:

Preservation:
Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
---------	-------	-----------	-----------

170077	004665 2C		928002-VATGAL Tissues TRUNK WASH
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Mycobacteria Isolation

Diagnosis: No Isolation Made

Conservation and Research Center – Endocrine Laboratory Report 1

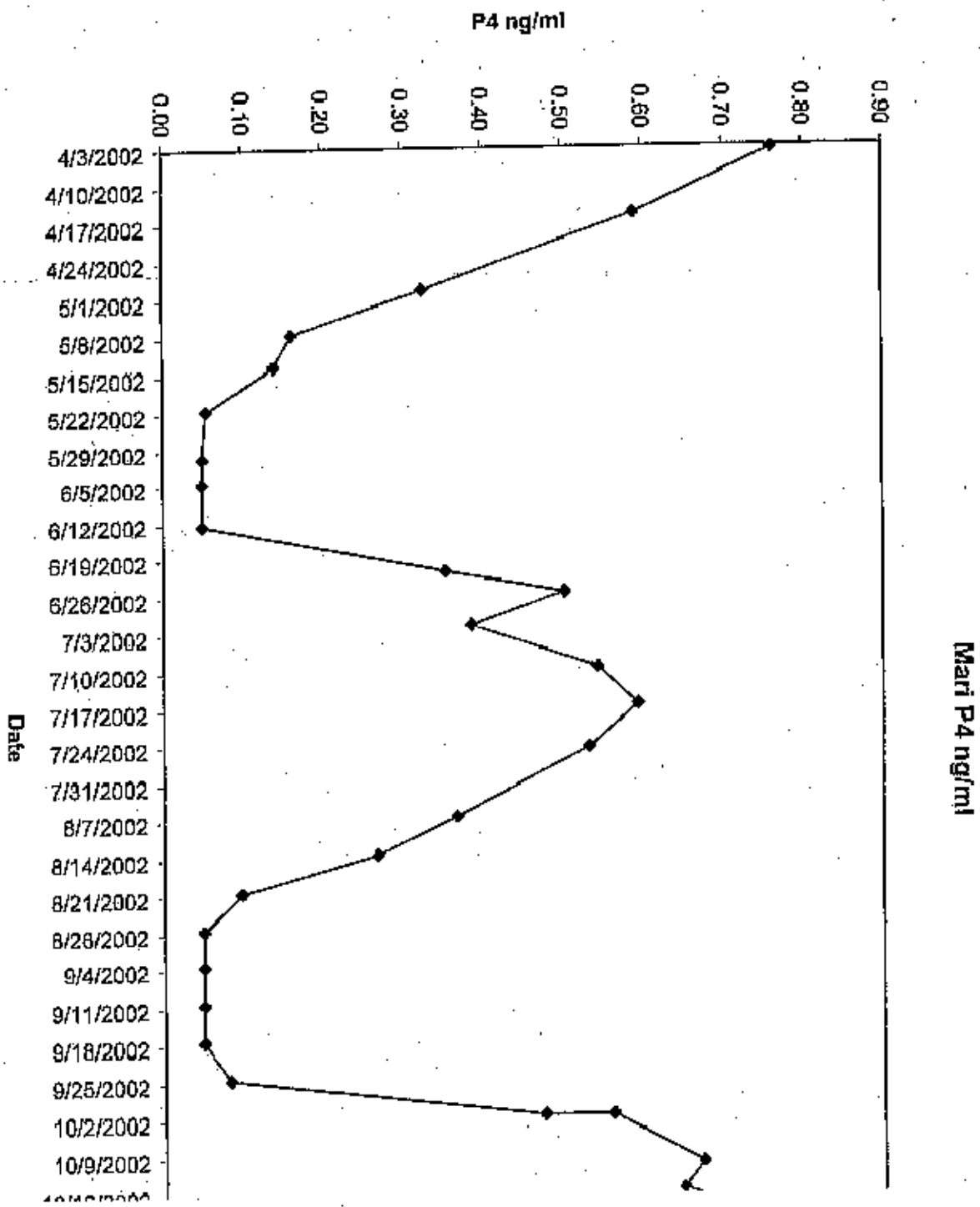
Date: 12/16/02 Performed by Abby Institution: Honolulu Zoo

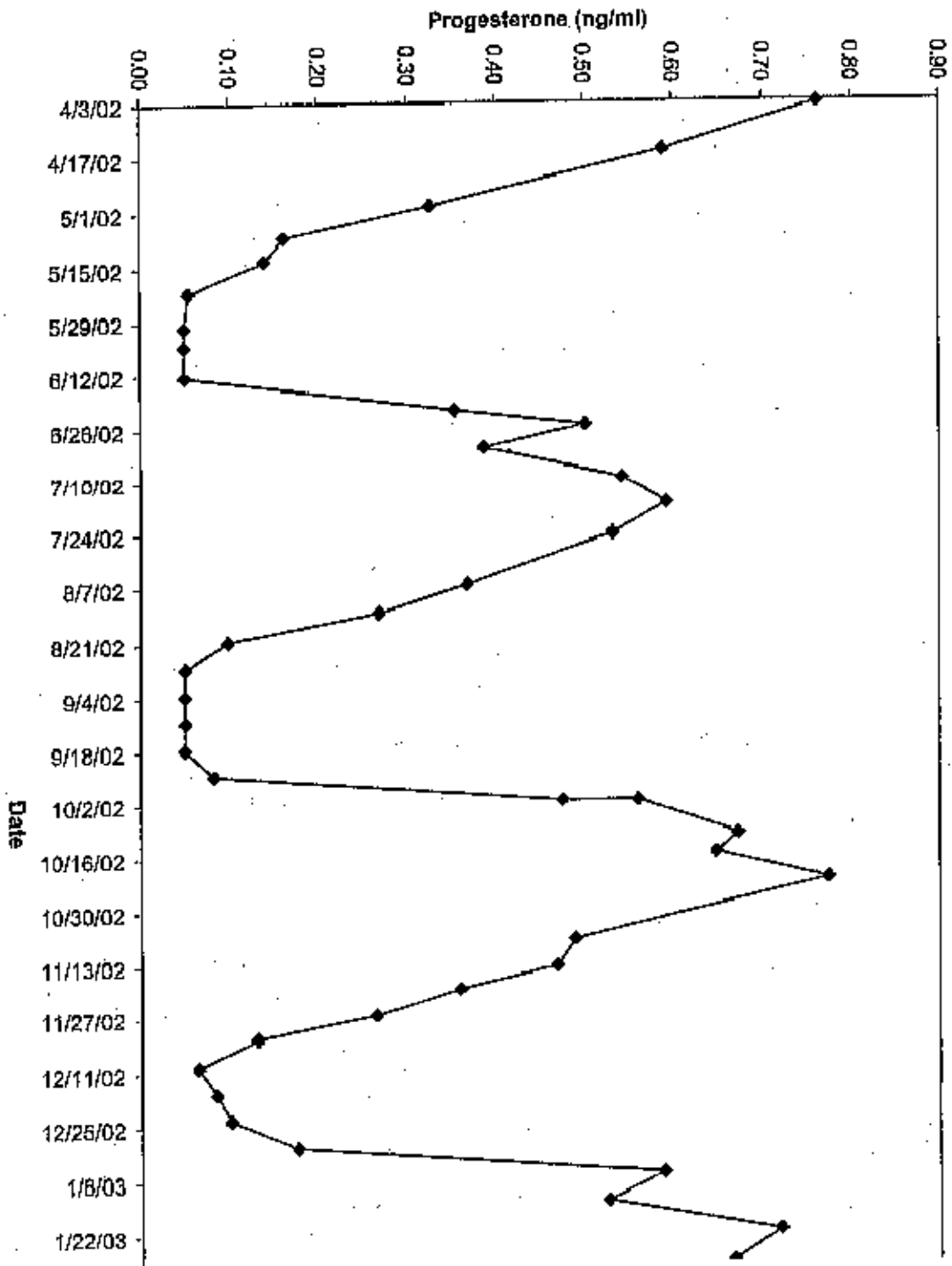
Species	Sex	ID	Sample Type	Sample Date	Purpose	P4 ng/ml
Asian Elephant	F	Mari	Serum	4/3/02		0.76
				4/15/02		0.59
				4/29/02		0.33
				5/7/02		0.16
				5/13/02		0.14
				5/21/02		0.05
				5/30/02		0.05
				6/4/02		0.05
				6/12/02		0.05
				6/21/02		0.35
				6/25/02		0.60
				7/1/02		0.39
				7/9/02		0.54
				7/16/02		0.59
				7/24/02		0.53
				8/6/02		0.37
				8/13/02		0.27
				8/20/02		0.10
				8/27/02		0.05
				9/3/02		0.05
				9/10/02		0.05
				9/17/02		0.05
				9/24/02		0.08
				10/1/02		0.48
				10/10/02		0.67
				10/15/02		0.65
				10/22/02		0.77
				10/1/02		0.56
				11/6/02		0.49
Asian Elephant	F	Vaigel	Serum	4/3/02		0.12
				4/15/02		0.05
				4/22/02		0.05
				4/29/02		0.05
				5/7/02		0.05

Conservation and Research Center – Endocrine Laboratory Report 1

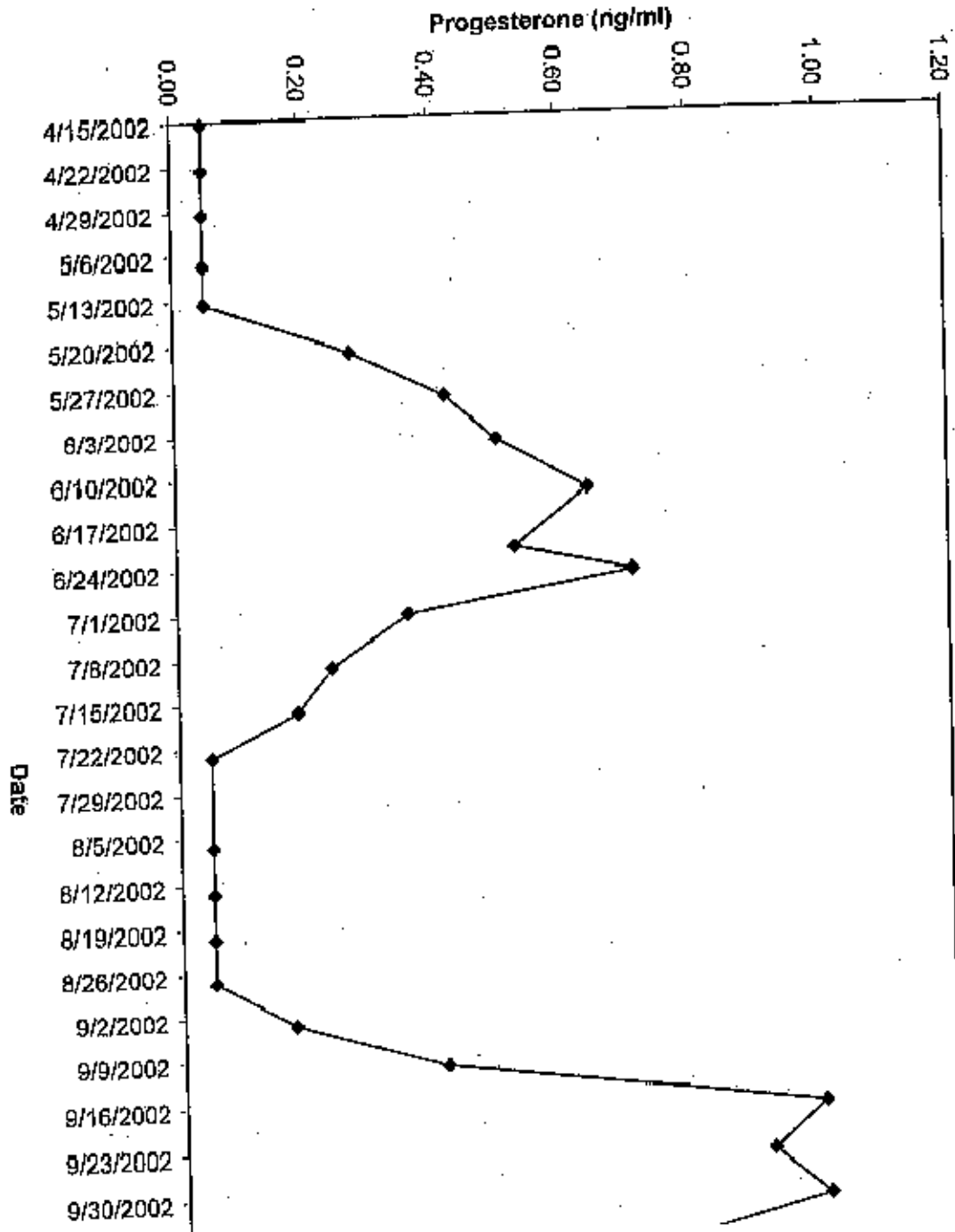
Date: 4/18/02 Performed by Nicole Institution: Honolulu Zoo

Species	Sex	ID	Sample Type	Sample Date	Purpose	P4 ng/ml
Asian Elephant	F	Mari	Serum	11/13/02		0.47
				11/19/02		0.36
				11/26/02		0.28
				12/2/02		0.13
				12/9/02		0.08
				12/16/02		0.08
				12/23/02		0.10
				12/30/02		0.18
				1/8/03		0.59
				1/13/03		0.53
				1/21/03		0.72
				1/29/03		0.67
				2/4/03		0.72
				2/11/03		0.65
				2/18/03		0.54
				2/25/03		0.36
				3/4/03		0.19
				3/11/03		0.09
				3/19/03		0.11
				3/24/03		0.05
4/1/03		0.37				
4/8/03		0.68				
Asian Elephant	F	Valgai	Serum	11/13/02		0.23
				11/19/02		0.11
				11/26/02		0.14
				12/2/02		0.10
				12/9/02		0.10
				12/16/02		0.08
				12/23/02		0.44
				12/30/02		0.76
				1/8/03		0.64
				1/13/03		0.80
1/21/03		0.74				
1/28/03		0.57				



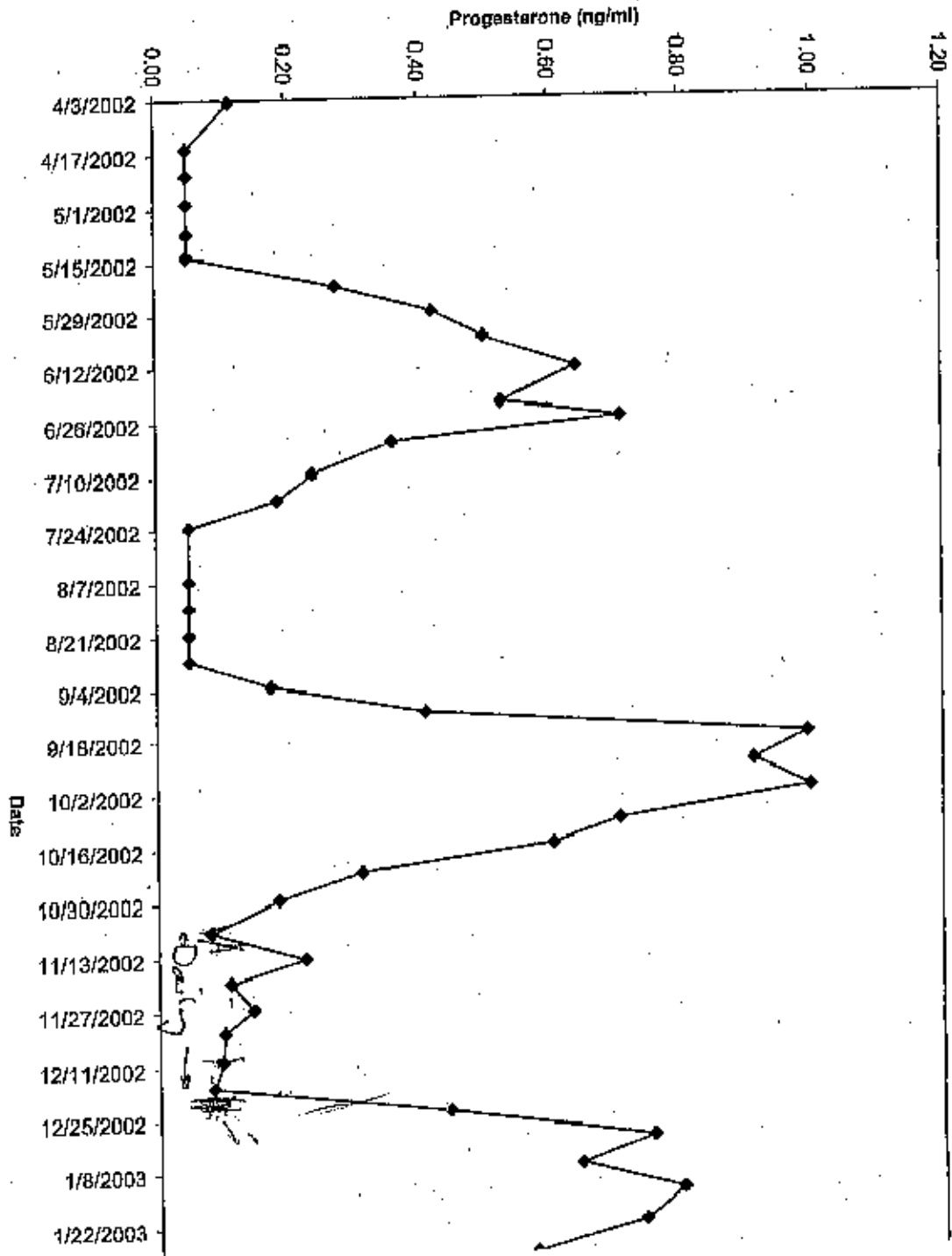


Honolulu - Mari - Asian Elephant - Progesterone



Vaigai - Asian Elephant - Honolulu Zoo - Progesterone

Honolulu - Valgai - Asian Elephant - Progesterone



SPECIMEN SUBMISSION

1. NAME OF SUBMITTER (Last, First, MI) **Dr. Ken Okimoto**

2. NAME OF OWNER/BROKER (Last, First, MI) **Honolulu Zoo**

3. ADDRESS (Street, City, and State, Zip code)
**151 Kapihulu Ave.
 Honolulu, HI 96815**

4. TELEPHONE NUMBER (Area Code and Number) **808 971-7180**

5. NO. IN HERD/FLOCK AFFECTED **2**

6. NO. IN HERD/FLOCK DEAD

7. EXAMINATIONS REQUESTED (Check one and Test Procedures)
Mycobacterial culture with speciation

8. COLLECTED BY **Maurice Bolanan**

9. DATE COLLECTED **20 Jun 21 Jun 22 Jun 2005**

10. AUTHORIZED BY **Dr. Ken Okimoto**

11. PURPOSE OF SUBMISSION (Check one) (See reverse side of Part 5 for definitions)

12. PRESERVATION (Check applicable item(s))

13. SPECIMENS SUBMITTED (Check applicable item(s))

14. SPECIES OR SOURCE (Check one)

15. NUMBER OF SHIPPING CONTAINERS USED **1**

16. TOTAL NUMBER OF SPECIMENS SUBMITTED **6**

17. NUMBER OF ANIMALS SAMPLED **2**

18. BREED **Asian Elephant**

19. IDENTIFICATION (See reverse side of Part 5)

Sample ID	Animal ID/Breed	AGE	SEX	Sample ID	Animal ID	AGE	SEX
1A	821294 - Mari - Ele	23y	F	2A	820002 - Valgal - Ele	15y	F
1B 2A	821294 - Mari - Ele	23y	F	2B	820002 - Valgal - Ele	15y	F
1C	821294 - Mari - Ele	23y	F	2C	820002 - Valgal - Ele	15y	F

20. ADDITIONAL DATA (History, clinical signs, post mortem findings, remarks, test results, etc. Use additional sheets if necessary. Attach 5 copies.)

HONOLULU ZOO
 151 KAPAHULU AVE
 HONOLULU, HI 96815

Tel: 808-971-7194
 Fax: 808-971-3950
 Antech ID #: 15023

Reference No.	Doctor	Client	Pet Name	Received
IRDC84359988	OKIMOTO	ELEPHANT	821294	03/18/2004
Species	Breed	Sex	Pet Age	Reported
ELEPHANT			12:46	03/20/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE UNITS
CULTURE, AEROBIC		
SOURCE	LEG	
Preliminary #1	03/18/2004	
NO GROWTH ON SOLID MEDIA	IN 24 HRS.	
Preliminary #2	03/19/2004	
NO GROWTH ON SOLID MEDIA	IN 48 HRS.	
Final Report	03/20/2004	
NO GROWTH ON SOLID MEDIA	IN 72 HRS.	

Report Notes:
 A N T E C H Diagnostics FINAL 03/20/2004 12:46 ACNH IRDC84359988

HONOLULU ZOO
 151 KAPAHULU AVE
 HONOLULU, HI 96815

Tel: 808-971-7194
 Fax: 808-971-3950
 Antech ID #: 15023

Reference No. IRBC83863295
 Doctor OKIMOTO

Client ELEPHANT
 Sex

Pet Name 821294
 Pet Age 13:28

Received 03/03/2004
 Reported 03/06/2004

Species Breed
 ELEPHANT

TEST PROCEDURE CULTURE, AEROBIC SOURCE RESULTS ADULT REFERENCE RANGE UNITS

Preliminary #1 MODERATE GROWTH OF GRAM POSITIVE ORGANISMS 03/03/2004
 Preliminary #2 MODERATE GROWTH OF GRAM POSITIVE ORGANISMS 03/04/2004

*** ORGANISM 1 ***
 MODERATE GROWTH ENTEROCOCCUS SPECIES

*** ORGANISM 2 ***
 MODERATE GROWTH OF GRAM POSITIVE ORGANISMS 03/05/2004
 Final Report ORGANISM #1 ENTEROCOCCUS SPECIES
 ORGANISM #2 COAGULASE NEGATIVE STAPH
 MODERATE GROWTH

SENSITIVITY 2

(S-Sensitive I-Intermediate R-Resistant)

ORGANISM:	1	2	3	4	5
301. AMIKACIN	R	S			
AMOXICILLIN	S	R			
303. AMPICILLIN	S	R			
305. AUGMEN / CLAVAMOX	S	S			
315. CEPHALEXIN	R	S			
317. CHLORAMPHENICOL	S	S			
319. CLINDAMYCIN	R	S			
325. ERYTHROMYCIN	S	S			
ENROFLOXACIN	S	S			
331. GENTAMYCIN	R	S			
337. NEOMYCIN	R	S			
321. OXACILLIN	R	S			
341. PENICILLIN	S	R			
345. POLYMYXIN B	R	S			
349. TMP / SULFA	R	R			
355. TETRACYCLINE	S	S			

HONOLULU ZOO
151 KAPAHULU AVE
HONOLULU, HI 96815

Tel: 808-971-7194
Fax: 808-971-3950
Antech ID #: 15023

Reference No. IRBC83863231	Doctor OKIMOTO	Client ELEPHANT	Pet Name 821294	Received 03/03/2004
Species ELEPHANT	Breed	Sex	Pet Age 13:27	Reported 03/06/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE UNITS
----------------	---------	-----------------------------

CULTURE, AEROBIC SOURCE	L R LEG ABSCESS	
Preliminary #1	03/03/2004	
MODERATE GROWTH OF GRAM POSITIVE ORGANISMS		
Preliminary #2	03/04/2004	

*** ORGANISM 1 ***
MODERATE GROWTH ENTEROCOCCUS SPECIES

*** ORGANISM 2 ***
MODERATE GROWTH OF GRAM POSITIVE ORGANISMS

Final Report	03/05/2004	
Organism #1	ENTEROCOCCUS SPECIES	
MODERATE GROWTH		
Organism #2	COAGULASE NEGATIVE STAPH	
MODERATE GROWTH		

SENSITIVITY 2

(S-Sensitive I-Intermediate R-Resistant)

ORGANISM:	1	2	3	4	5
301. AMIKACIN	R	S			
AMOXICILLIN	S	R			
303. AMPICILLIN	S	R			
305. AUGMENTIN / CLAVAMOX	S	S			
315. CEPHALEXIN	R	S			
317. CHLORAMPHENICOL	S	S			
319. CLINDAMYCIN	R	S			
325. ERYTHROMYCIN	S	S			
ENROFLOXACIN	S	S			
331. GENTAMYCIN	R	S			
337. NEOMYCIN	R	S			
321. OXACILLIN	R	S			
341. PENICILLIN	S	R			
345. POLYMYXIN B	R	S			
349. TMP / SULFA	R	R			
355. TETRACYCLINE	S	S			

SAM SILVERMAN, D.V.M., Ph.D.
Diplomate, American College of Veterinary Radiology
60 MARIE STREET, SAUSALITO, CA 94965
(415) 331-5212 Fax: (415) 332-2231
agman@sbcglobal.net

To: Honolulu Zoo Veterinary Clinic - Honolulu, Oahu, HI (HZ)
From: Sam Silverman, D.V.M., Ph.D.
Subject: Radiology Reports (#UZ-9)
Received: 2/27/2003 Reported: 2/27/2003
Faxed: 2/28/2003

Tel: (808) 971-7180
Fax: (808) 971-3950
For: 1 case
Transcribed: 2/27/2003
Transcribed by: EK

Interpretation:

1. Radiology Report:

Species: Pachyderm, Animal ID: Elephant/821294
Multiple dates Dr. O

Interpretation:

The dorsal palmar view of the right front foot demonstrates irregular periosteal reaction on the first digit of the toes marked, the changes are more severe in one digit. There is also an irregular contour to the distal humeral condyles bilaterally, laterality of the radiographs is not indicated, but there is one leg which is more prominently involved. Underlying osteolysis is not identified. There also appears to be periosteal reaction on the marked proximal row of carpal bones.

Conclusion:

Bilateral carpal DJD and low grade digital periosteal reaction, but no evidence of osteolysis.

Comments:

Small chip fractures could be present in the carpi. Additional radiographs at a higher MAS technique, possibly double exposure technique, may be indicated with oblique views also being performed. The digital lesions are not thought to be clinically significant. P III can be identified on all three digits and appears very normal.



SAM SILVERMAN, D.V.M., Ph.D.
Diplomate, American College of Veterinary Radiology
60 MARIE STREET, SAUSALITO, CA 94965
(415) 331-5212 Fax: (415) 332-2231
agman@sbcglobal.net

To: Honolulu Zoo Veterinary Clinic - Honolulu, Oahu, HI (HZ)

Tel: (808) 971-7180

From: Sam Silverman, D.V.M., Ph.D.

Fax: (808) 971-3950

Subject: Radiology Reports (#UZ-9)

For: 1 case

Received: 2/27/2003

Reported: 2/27/2003

Transcribed: 2/27/2003

Faxed: 2/28/2003

Transcribed by: EK

Interpretation:

1. Radiology Report:

Species: Pachyderm, Animal ID: Elephant/821294

Multiple dates Dr. O

Interpretation:

The dorsal palmar view of the right front foot demonstrates irregular periosteal reaction on the first digit of the toes marked, the changes are more severe in one digit. There is also an irregular contour to the distal humeral condyles bilaterally, laterality of the radiographs is not indicated, but there is one leg which is more prominently involved. Underlying osteolysis is not identified. There also appears to be periosteal reaction on the marked proximal row of carpal bones.

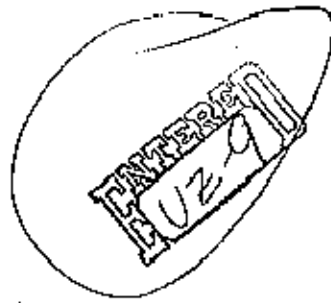
Conclusion:

Bilateral carpal DJD and low grade digital periosteal reaction, but no evidence of osteolysis.

Comments:

Small chip fractures could be present in the carpi. Additional radiographs at a higher MAS technique, possibly double exposure technique, may be indicated with oblique views also being performed. The digital lesions are not thought to be clinically significant. P III can be identified on all three digits and appears very normal.

Dr. Sam Silverman
Radiology Consultation
60 Marie Street
Sausalito, California 94965



Dr. Ben Okimoto
Honolulu Zoo
151 Kapahulu Ave.
Honolulu, Hawaii 96815
(808) 971-7180
(808) 971-3950 FAX
hnzoovet@hgea.org

Asian Elephant, #821294, female, 27 yr.

History:

10,500 lb in 8/02 (over 9' tall at the shoulders), put on reducing diet (she has maxed out body weight at 11,500 lb in '97). Found lame on RF leg on 2/6/03. On that day, even though she still could bear weight well on that leg, she would not bend it at the carpus and keepers thought there was some swelling at the medial aspect of the carpus. The nails and pad were normal, keepers thought maybe she injured the foot when digging into the sand. I didn't start any meds at that time. On 2/7 there was no change and I started keepers applying DMSO gel onto the carpal area. On 2/8 she was still favoring the leg and now seemed to be walking stiffly on that leg so we continued the DMSO but also started her on oral butazolidin at 5 gm per day. On 2/9 there was some slight decrease in swelling and some increase in her ability to bend the carpus but still walking stiffly so I increased the bute to 10 grams PO/SID. We have continued the bute and DMSO daily but have not seen any improvement through 2/13. Radiographs taken by equine vet with portable machine. Other than the lameness the elephant is acting and eating normally. She is still climbing in and out of dry concrete moat fronting the exhibit.

All radiographs taken of RF carpus and foot: AP, and Lat to Med. One lateral radiograph was taken of LF carpus but we forgot to label it ⊗, would appreciate your suggestions for how to improve technique.

Clinical Pathology Records -- Specimen Report,
HONOLULU ZOO

- page 1 -

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: MARI

Accession #: 821294
Female
Birth: 24.Jul.1975 (Estimated)
Age: 28Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4664 Kg on 12.Mar.2003
Manual restraint used.

Date of Collection: 6.May.2003
Time of Collection: 4:00.0
Collected by:
Sample Collection Site: EAR VEIN

ematology >>

Analysis Information >>

Anticoagulant: EDTA
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 7.May.2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

WBC	*10 ³ /UL	15.7
RBC	*10 ⁶ /UL	3.7
HGB	GM/DL	15.2
ICT	%	46
ICV	fL	124
ICH	uug	41.1
CHC	gm/dL	33.0
PLATE. EST.	SL IN	
PLATE. CNT.	*10 ³ /UL	635

ISIS Reference Values >>

Mean	S.D.	Min.	Max.	(N)
14.78±	4.513	6.350	33.30	(1383)
3.11±	0.55	1.78	5.15	(1157)
13.3±	2.2	6.8	22.7	(1219)
37.7±	6.0	23.0	58.0	(1472)
122.4±	13.9	58.2	213.2	(1148)
43.3±	4.6	16.6	63.2	(1130)
35.3±	3.4	16.9	68.6	(1188)
474±	172	127	1085	(335)

Comments >>

RBC morphology normal

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: MARI

Accession #: 821294
Female
Birth: 24 Jul 1975 (Estimated)
Age: 28Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4664 Kg on 12 Mar 2003
Manual restraint used.

Date of Collection: 6 May 2003
Time of Collection: 4:00:0
Collected by:
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 7 May 2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL	91		89±	20	40	223	(924)
BUN	MG/DL	16		12±	4	4	28	(928)
CREAT.	MG/DL	1.4		1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio		11.4						
CA	MG/DL	10.2		10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	4.1		5.0±	1.2	2.5	9.0	(646)
Ca/P ratio		2.49						
NA	MEQ/L	127		130±	5	107	169	(669)
CL	MEQ/L	4.4		4.6±	0.5	3.3	6.4	(678)
Na/K ratio		28.9						
DL	MEQ/L	87		89±	4	77	103	(632)
CHOL	MG/DL	52		46±	13	0	99	(546)
Γ-PROT. (C)	GM/DL	8.6		9.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL	3.0		3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL	5.6		4.9±	1.0	2.7	8.6	(514)
Alb/Glob rat		0.536						
AST (SGOT)	IU/L	9		22±	12	4	99	(899)
ALT (SGPT)	IU/L	5		8±	15	0	300	(583)
Γ-BILI.	MG/DL	0.1		0.2±	0.2	0.0	1.2	(633)
ALK.PHOS.	IU/L	98		145±	73	23	688	(837)
CPK	IU/L	119		227±	170	30	(260)	(427)

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
 Common Name: INDIAN ELEPHANT
 Name: MARI

Accession #: B21294
 Female
 Birth: 24.Jul.1975 (Estimated)
 Age: 28Y Est.

Collection Information >>

Health Status: Normal
 Fasting Time: 8-24 hours
 Activity: Calm
 Weight: 4664 Kg on 12.Mar.2003
 Manual restraint used.

Date of Collection: 8.May.2003
 Time of Collection:
 Collected by: TP
 Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>

Anticoagulant: EDTA
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: ANTECH
 Date of Analysis: 9.May.2003
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

Test	Units	Result	Reference
WBC	$\times 10^3/\text{UL}$	13.5	
RBC	$\times 10^6/\text{UL}$	3.5	
HGB	GM/DL	14.5	
HCT	%	40	
TCV	fL	114	
MPV	fL	41.4	
PLT	$\times 10^3/\text{UL}$	36.3	
PLT	$\times 10^3/\text{UL}$	36	(7.560)
PLT	$\times 10^3/\text{UL}$	1	(0.135)
PLT	$\times 10^3/\text{UL}$	33	(4.455)
PLT	$\times 10^3/\text{UL}$	6	(0.810)
PLT	$\times 10^3/\text{UL}$	4	(0.540)
PLT	$\times 10^3/\text{UL}$	245	

ISIS Reference Values >>

Mean	S.D.	Min.	Max.	(N)
14.78±	4.513	6.350	33.30	(1383)
3.11±	0.83	1.78	5.15	(1157)
13.3±	2.2	6.8	22.7	(1219)
37.7±	6.0	23.0	58.0	(1472)
122.4±	13.9	58.2	213.2	(1148)
43.3±	4.5	16.6	63.2	(1130)
35.3±	3.4	16.9	68.6	(1188)
3.075±	3.038	0.291	23.90	(1138)
1.211±	2.006	0.000	11.40	(274)
5.687±	3.303	0.176	22.20	(1142)
3.209±	2.838	0.000	9.983	(935)
0.523±	0.653	0.000	5.145	(846)
474±	172	127	1085	(333)

Comments >>

RBC morphology normal. Platelet clumps present on slide; estimate reflects the contribution of clumped platelets. Clumping prevents accurate automated or manual platelet counting and falsely decreases the reported result, which reflects the minimum platelet number.

Clinical Pathology Records - Specimen Report
HONOLULU IGO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: MARI

Accession #: B21294
Female
Birth: 24 Jul 1975 (Estimated)
Age: 28Y Est.

Collection Information >>

Date of Collection: 8 May 2003
Time of Collection:
Collected by: TP
Sample Collection Site: EAR VEIN

Health Status: Normal
Fasting Time: 8-24 hours
Activity: Calm
Weight: 4664 kg on 12 Mar 2003
Manual restraint used.

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: ANTECH
Date of Analysis: 9 May 2003
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>
Mean S.D. Min. Max. (N)

GLUCOSE	MG/DL	80	89±	20	40	223	(924)
BUN	MG/DL	> 17	12±	4	4	28	(929)
CREAT.	MG/DL	1.9	1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio		8.95					
CA	MG/DL	10.2	10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	3.8	5.0±	1.2	2.5	9.0	(646)
Ca/P ratio		2.68					
NA	MEQ/L	< 124	130±	5	107	169	(669)
K	MEQ/L	5.0	4.6±	0.5	3.3	6.4	(678)
Na/K ratio		24.8					
CL	MEQ/L	89	89±	4	77	103	(632)
CHCL	MG/DL	54	46±	13	0	99	(546)
T.PROT. (G)	GM/DL	> 9.1	9.0±	0.8	5.7	11.3	(889)
ALBUMIN (G)	GM/DL	3.2	3.2±	0.5	1.9	4.5	(522)
GLOBULIN (G)	GM/DL	5.9	4.9±	1.0	2.7	8.6	(514)
A1b/Glob rat		0.542					
AST (SGOT)	IU/L	11	22±	12	4	99	(899)
ALT (SGPT)	IU/L	5	8±	15	0	300	(583)
T. BILL.	MG/DL	0.1	0.2±	0.2	0.0	1.2	(638)
ALK.PHOS.	IU/L	90	145±	73	23	688	(837)
CPK	IU/L	122	227±	170	30	1260	(427)

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 261972

Date Received: 8/23/2003

Establishment No.: HI0KIM1
OKIMOTO, BEN F.
151 KAPAHULU AVE.

Referral Number:
Owner: HONOLULU ZOO
City: HONOLULU

HONOLULU, HI 96815

State: HI

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

791125 035151 6/9/03 MARI 821294
Tissues
TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 261973 Date Received: 6/23/2003

Establishment No.: HIOKIM1 Referral Number:
OKIMOTO, BEN F. Owner: HONOLULU ZOO
151 KAPAHULU AVE. City: HONOLULU

State: HI
HONOLULU, HI 96815
Fax:

Preservation:

Retain Tag: Species: Elephant

NVSL ID Case# Sample ID Animal ID

791126 035152 6/10/03 MARI 821294
Tissues
TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 261974

Date Received: 6/23/2003

Establishment No.: HIOKIM1
OKIMOTO, BEN F.
151 KAPAHULU AVE.

Referral Number:
Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

791127 035153 48/13/03 MARI 821294

Tissues

TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

Conservation and Research Center – Endocrine Laboratory Report

Date: 12/16/02 Performed by Abby Institution: Honolulu Zoo

Species	Sex	ID	Sample Type	Sample Date	Purpose	P4 ng/ml
Asian Elephant	F	Marl	Serum	4/3/02		0.76
				4/15/02		0.59
				4/29/02		0.33
				5/7/02		0.16
				5/13/02		0.14
				5/21/02		0.05
				5/30/02		0.05
				6/4/02		0.05
				6/12/02		0.05
				6/21/02		0.35
				6/25/02		0.50
				7/1/02		0.39
				7/9/02		0.54
				7/16/02		0.59
				7/24/02		0.53
				8/6/02		0.37
				8/13/02		0.27
				8/20/02		0.10
				8/27/02		0.05
				9/3/02		0.05
				9/10/02		0.05
				9/17/02		0.05
				9/24/02		0.08
				10/1/02		0.48
				10/10/02		0.67
				10/16/02		0.65
				10/22/02		0.77
				10/1/02		0.56
				11/6/02		0.49
Asian Elephant	F	Valgal	Serum	4/3/02		0.12
				4/15/02		0.05
				4/22/02		0.05
				4/29/02		0.05
				5/7/02		0.05

Conservation and Research Center – Endocrine Laboratory Report

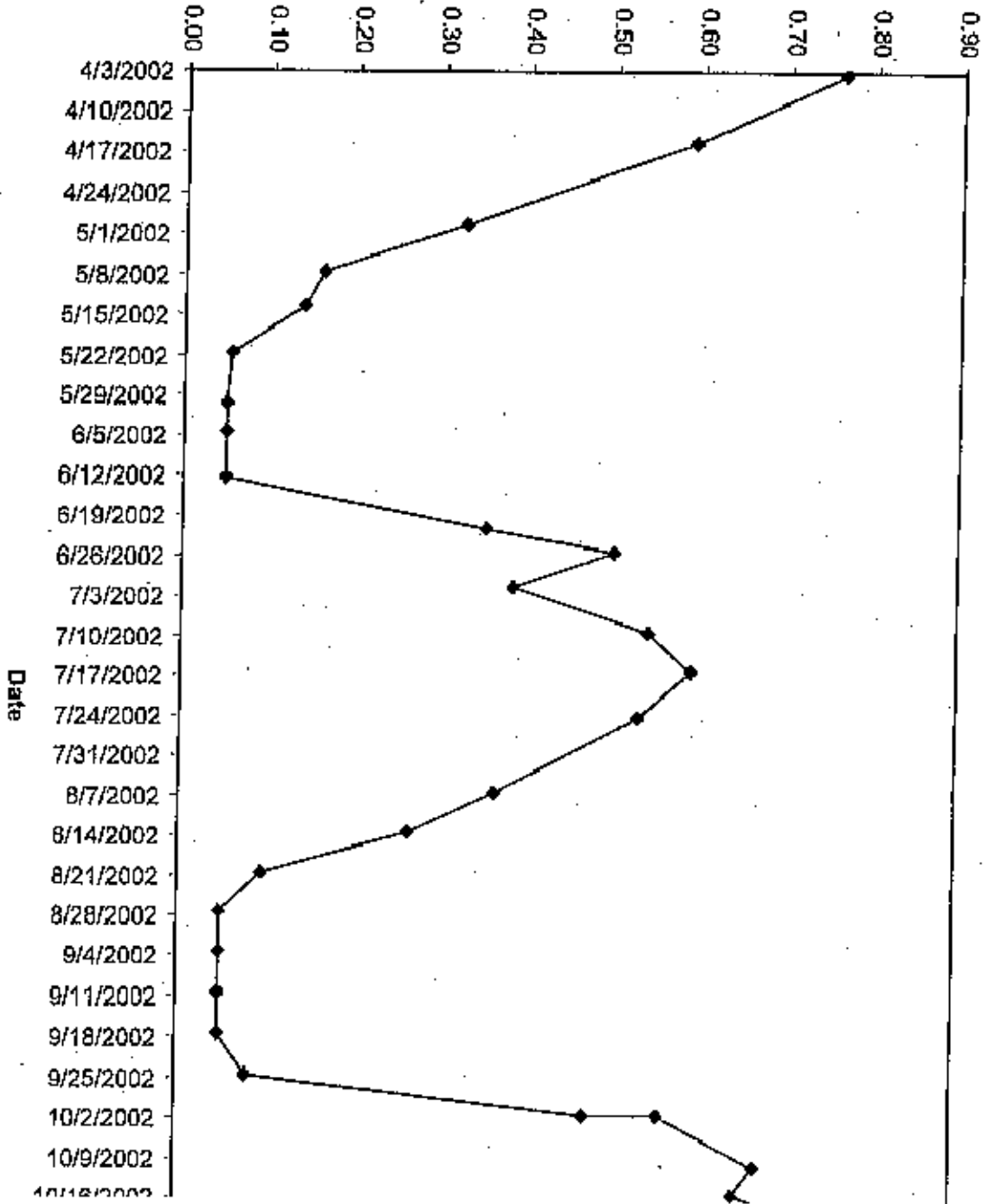
Date: 4/18/02

Performed by Nicole

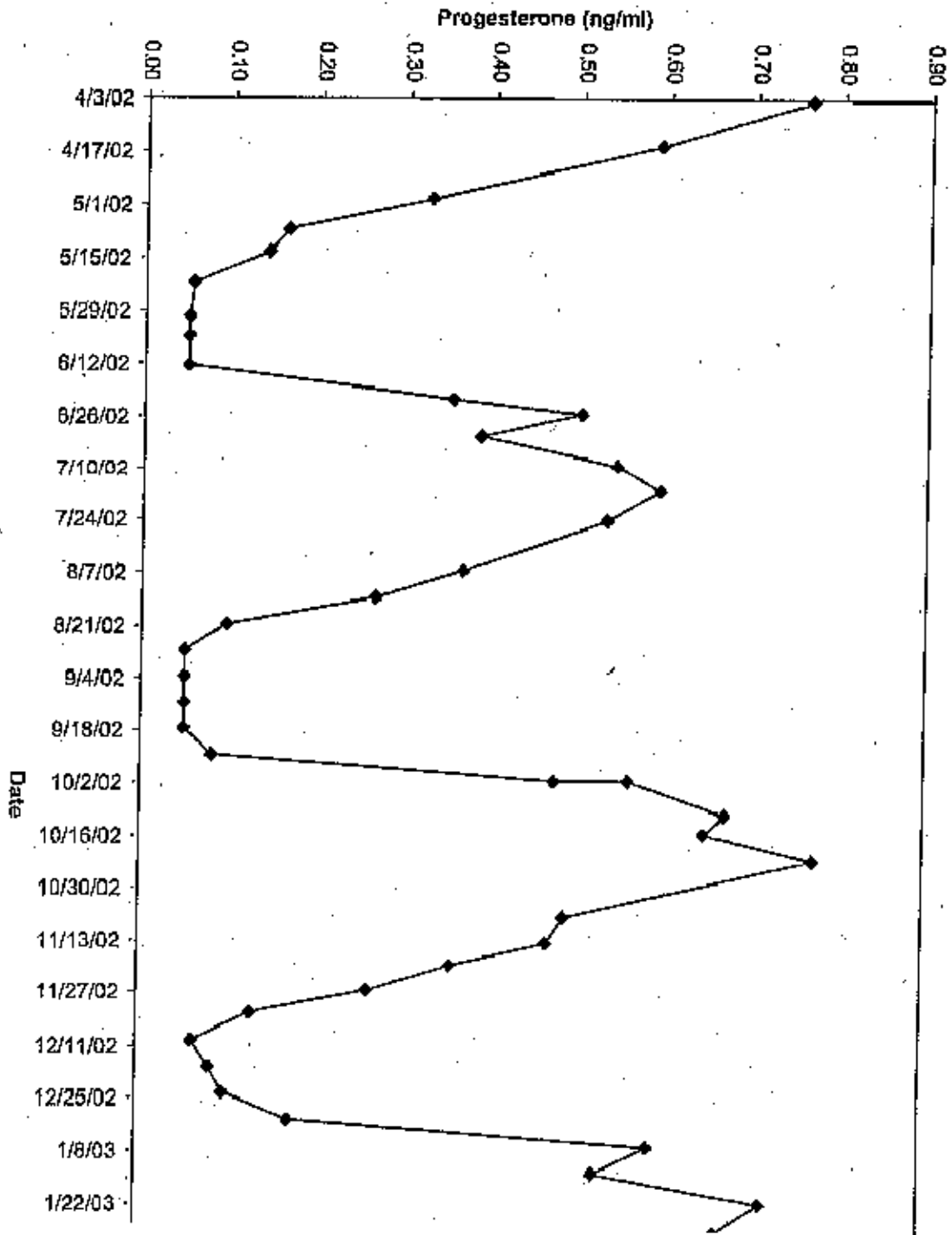
Institution: Honolulu Zoo

Species	Sex	ID	Sample Type	Sample Date	Purpose	P4 ng/ml
Asian Elephant	F	Meri	Serum	11/13/02		0.47
				11/19/02		0.36
				11/26/02		0.26
				12/2/02		0.13
				12/9/02		0.06
				12/16/02		0.08
				12/23/02		0.10
				12/30/02		0.18
				1/6/03		0.59
				1/13/03		0.53
				1/21/03		0.72
				1/29/03		0.67
				2/4/03		0.72
				2/11/03		0.65
				2/18/03		0.54
				2/25/03		0.36
				3/4/03		0.19
				3/11/03		0.09
				3/19/03		0.11
				3/24/03		0.05
				4/1/03		0.37
				4/8/03		0.69
Asian Elephant	F	Valgai	Serum	11/13/02		0.23
				11/19/02		0.11
				11/26/02		0.14
				12/2/02		0.10
				12/9/02		0.10
				12/16/02		0.08
				12/23/02		0.44
				12/30/02		0.76
				1/6/03		0.64
				1/13/03		0.80
				1/21/03		0.74
				1/29/03		0.57

P4 ng/ml

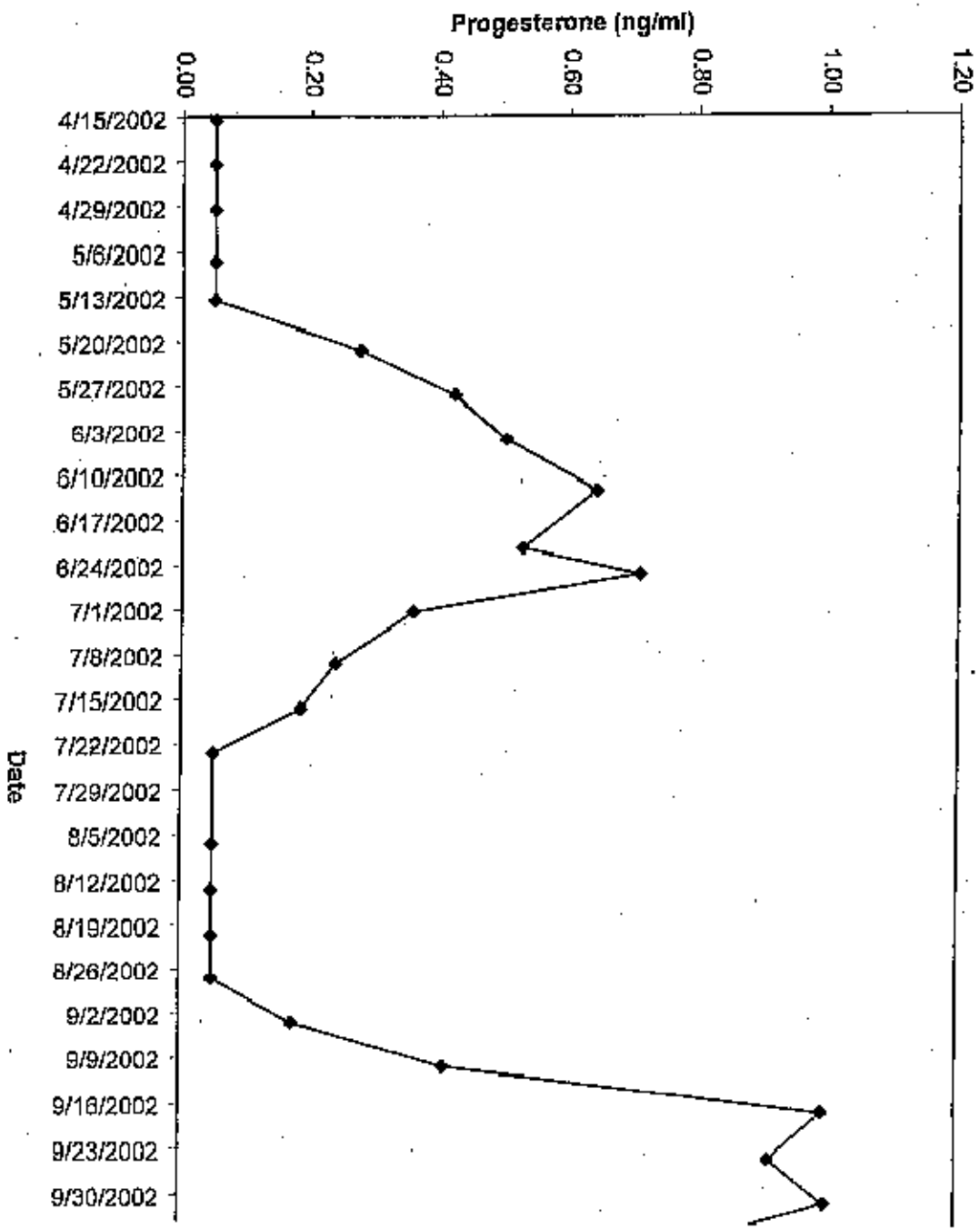


Mari P4 ng/ml

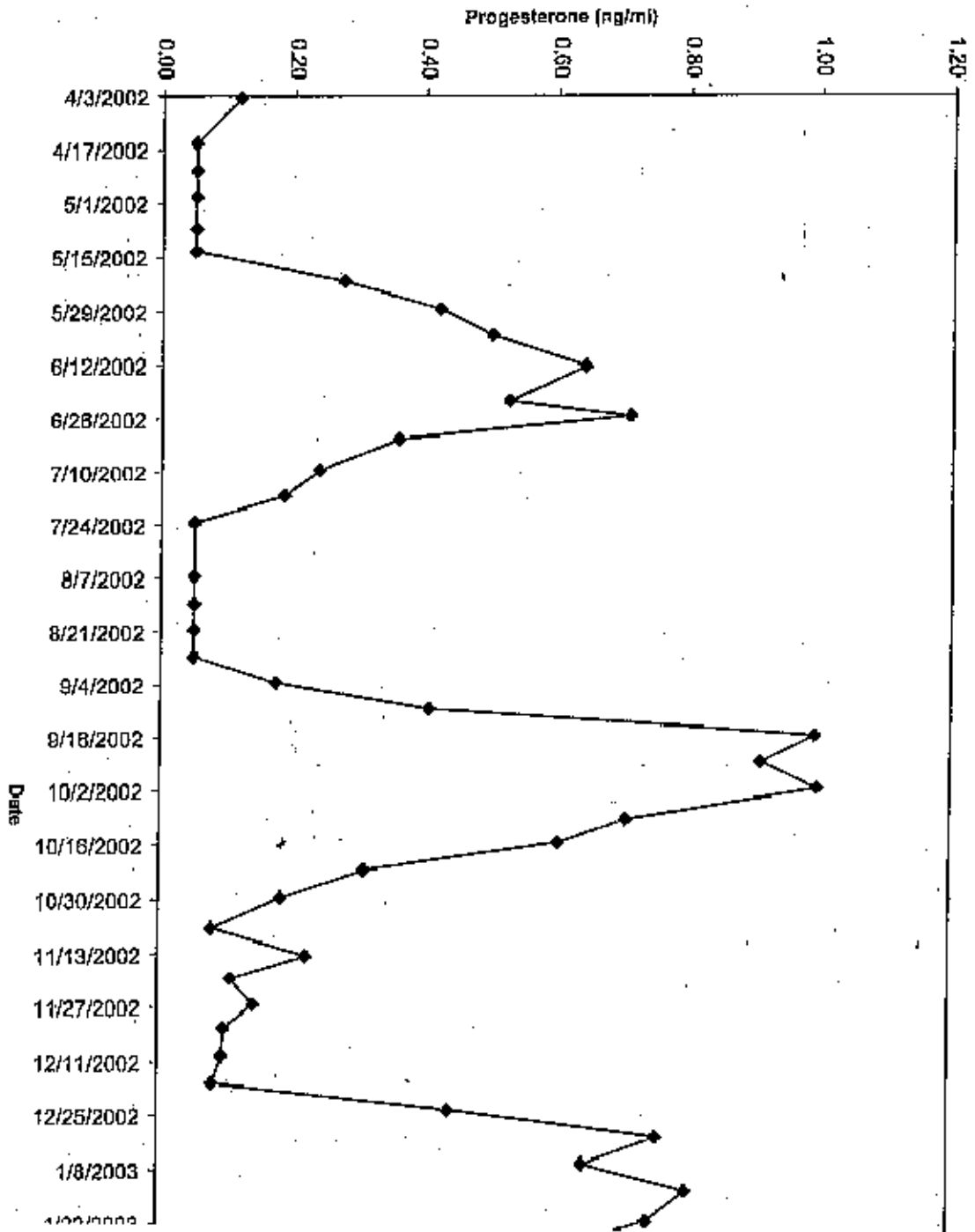


Honolulu - Mari - Asian Elephant - Progesterone

Vaigai - Asian Elephant - Honolulu Zoo - Progesterone

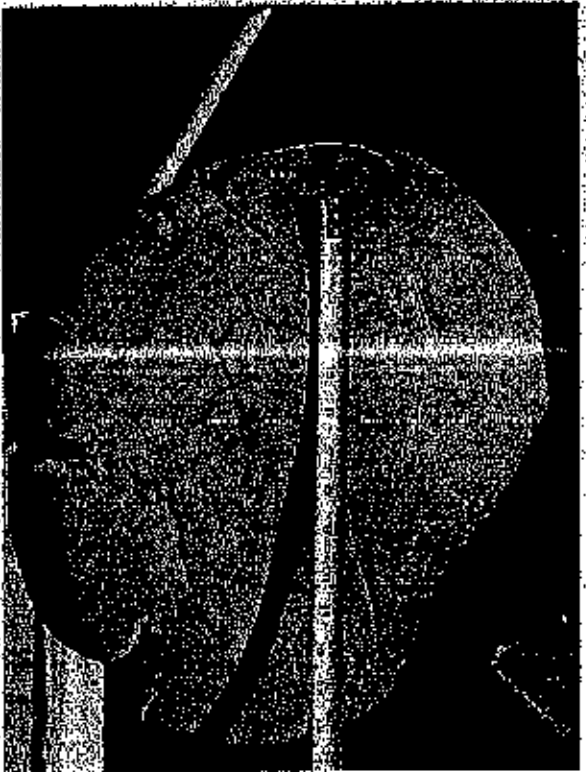


Honolulu - Valgai - Asian Elephant - Progesterone

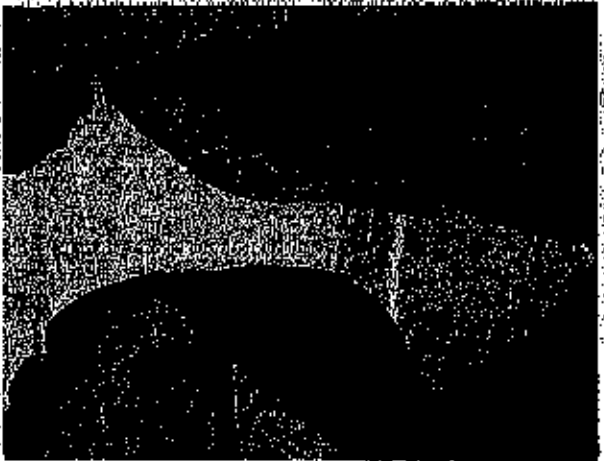


Manit Quarterly Foot Survey, June 26, 2002

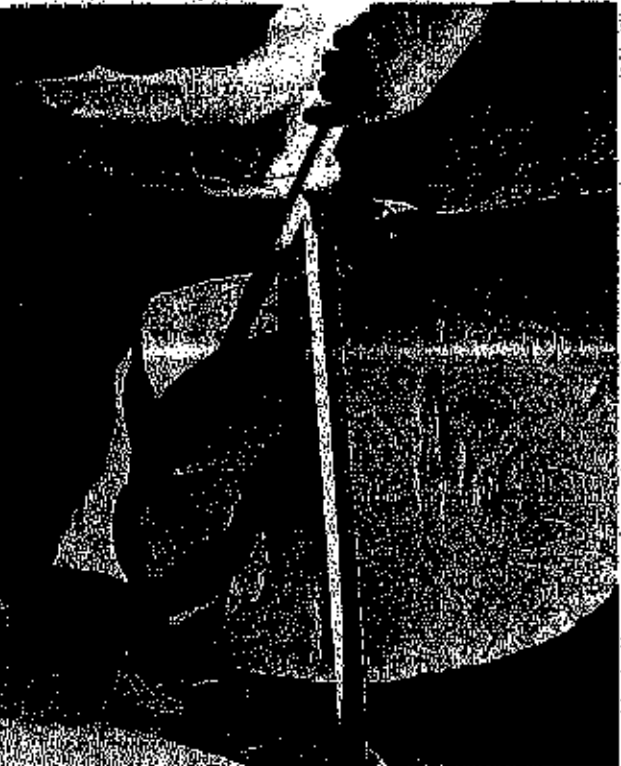
Left Front Foot



Right Front Foot



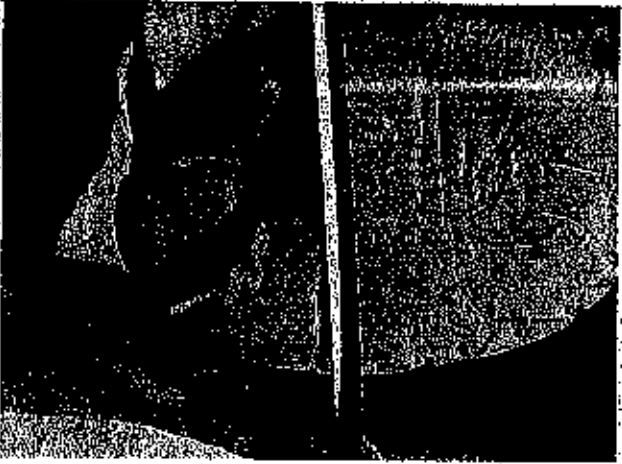
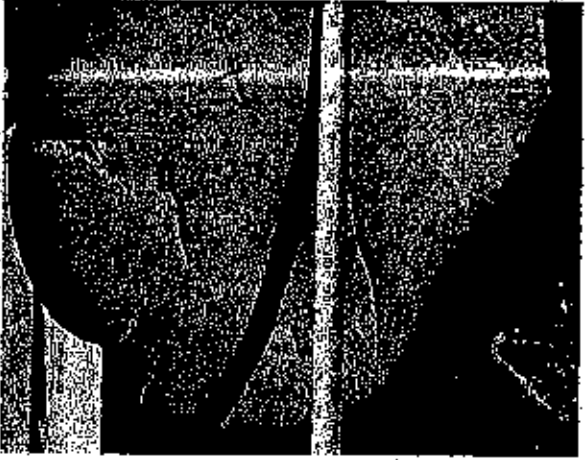
Left Rear Foot



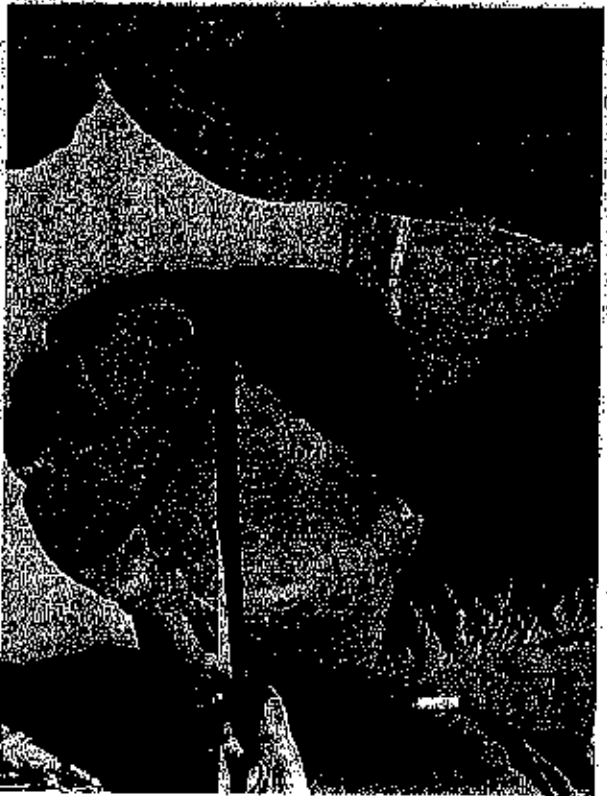
Right Rear Foot



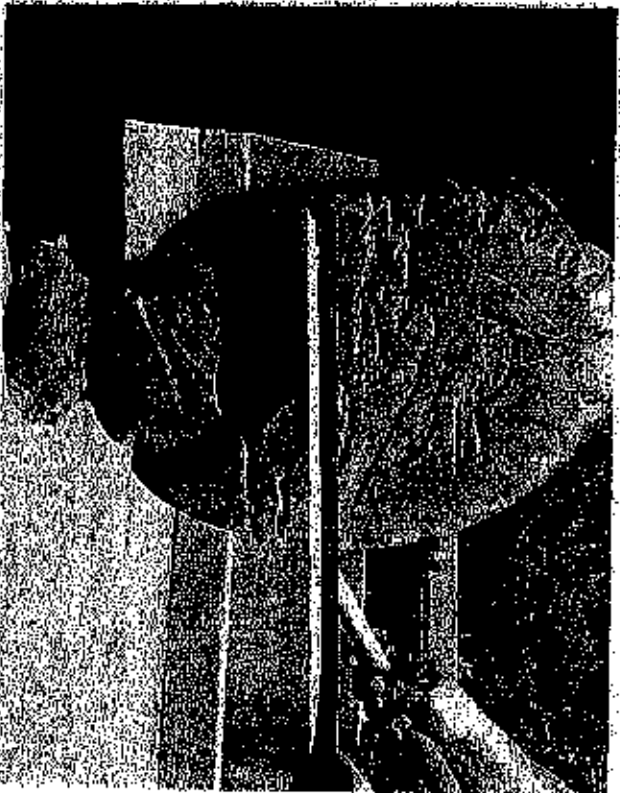
of Survey, June 26, 2002



Right Front Foot



Right Rear Foot



Clinical Pathology Records - Specimen Report
HONOLULU, ZOO

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: MARI

Accession #: 821294
Female
Birth: 24.Jul.1975 (Estimated)
Age: 27Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 5036 Kg on 28.Aug.2001
Manual restraint used.

Date of Collection: 26.Feb.2002
Time of Collection:
Collected by: TP
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: IDEXX
Date of Analysis: 27.Feb.2002
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

			Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL	87	89±	20	40	223	(924)
BUN	MG/DL	9	12±	4	4	28	(928)
CREAT.	MG/DL	1.5	1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio		6.00					
CA	MG/DL	11.0	10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	3.9	5.0±	1.2	2.5	9.0	(646)
Ca/P ratio		2.82					
NA	MEQ/L	129	130±	5	107	169	(669)
K	MEQ/L	4.5	4.6±	0.5	3.3	6.4	(678)
Na/K ratio		28.7					
CL	MEQ/L	90	89±	4	77	103	(632)
HCO3	MMOL/L	< 23	26.4±	3.1	19.0	32.3	(50)
CHOL	MG/DL	51	46±	13	0	99	(546)
T.PROT. (C)	GM/DL	8.8	8.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL	3.1	3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL	5.7	4.9±	1.0	2.7	8.6	(514)
A1b/Glob rat		0.544					
AST (SGOT)	IU/L	10	22±	12	4	99	(899)
T. BILI.	MG/DL	0.2	0.2±	0.2	0.0	1.2	(635)
D. BILI	MG/DL	0.2	0.1±	0.1	0.0	1.3	(220)
C. BILI.	MG/DL	0.0	0.1±	0.1	0.0	0.6	(211)
ALK.PHOS.	IU/L	139	145±	73	23	688	(837)

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

- page 3 -

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: INDIAN ELEPHANT
Name: MARI

=====
Accession #: 821294
Female
Birth: 24.Jul.1975 (Estimated)
Age: 27Y Est.
=====

Chemistry >>
Comments >>
Na/K ratio= 29

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7286 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 187963

Date Received: 7/05/2002

Establishment No.: HI0KIM1

Referral Number:

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

560030 025298 6/27 MARI
Tissues
trunk wash

Mycobacteria Isolation
Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 683-7266 Fax (515) 683-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 187962

Date Received: 7/05/2002

Establishment No.: H1OKIM1

Referral Number:

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

NVSL ID	Case#	Sample ID	Animal ID
560029	025297	6/26	MARI
		Tissues	
		trunk wash	

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 187961

Date Received: 7/05/2002

Establishment No.: H10KIM1

Referral Number:

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner: HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species: Elephant

NVSL ID Case# Sample ID Animal ID

560028	025296	6/25	MARI
		Tissues	
		trunk wash	

Mycobacteria Isolation
Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Date Received: 7/02/2001

Accession: 114701

Establishment No.: HICKIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
359195	015036	6/20/01	MARI 821294 Tissues TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339

Accession: 114700

Date Received: 7/02/2001

Establishment No.: HI0KIMI

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

State: HI

HONOLULU, HI 96815

Fax:

Preservation:

Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
359193	015035	6/19/01	MARI 821294
			Tissues
			TRUNK WASH

Mycobacteria Isolation

Diagnosis: No Isolation Made

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish)
1-800-877-8339
Date Received: 7/02/2001

Accession: 114699
Establishment No.: HIOKIMI

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU
State: HI

HONOLULU, HI 96815
Fax:

Preservation:
Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
359191	015034	6/18/01	MARI 821294 Tissues TRUNK WASH

Mycobacteria Isolation
Diagnosis: No Isolation Made

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

Accession: 53731

Date Received: 6/30/2000

Establishment No.: HI0KIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

HONOLULU, HI 96815

State: HI

Fax:

Preservation:

Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
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170067	004660	1A	
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821294-MART

Mycobacteria Isolation

Diagnosis: ~~No Isolation Made~~

Tissues

TRUNK WASH

Accession: 53732

Date Received: 6/30/2000

Establishment No.: HI0KIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

HONOLULU, HI 96815
Fax:

State: HI

Preservation:
Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
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170068	004661	IB	
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821294-MARI
Mycobacteria Isolation

Diagnosis: No Isolation Made

Tissues

TRUNK WASH

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7266 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1

Accession: 53733

Date Received: 6/30/2000

Establishment No.: HIQKIM1

OKIMOTO, BEN F.
151 KAPAHULU AVE.

Owner:
HONOLULU ZOO
City: HONOLULU

HONOLULU, HI 96815
Fax:

State: HI

Preservation:
Retain Tag:

Species Elephant

NVSL ID	Case#	Sample ID	Animal ID
---------	-------	-----------	-----------

170072	004662	1C	
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821294-MARI

Mycobacteria Isolation

Diagnosis: No Isolation Made

Tissues

TRUNK WASH

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
 Common Name: Asiatic elephant
 Name: MARI

Accession #: 821294
 Female
 Birth: 24.Jul.1975 (Estimated)
 Age: 30Y Est.

Collection Information >>

Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 4378 Kg. on 21.Sep.2004
 Manual restraint used.

Date of Collection: 28.Feb.2005
 Time of Collection:
 Collected by: BO
 Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>

Anticoagulant: EDTA
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: IDEXX
 Date of Analysis: 28.Feb.2005
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

WBC	*10 ³ /UL	<	9.9
RBC	*10 ⁶ /UL		3.4
HGB	GM/DL		13.8
HCT	%		39.3
MCV	fL		116
MCH	uug		40.6
MCHC	gm/dL		35.1
SEGS	% (*10 ³ /UL)		40 (3.960)
LYMPHOCYTES	% (*10 ³ /UL)	<	15 (1.485)
MONOCYTES	% (*10 ³ /UL)		44 (4.356)
EOSINOPHILS	% (*10 ³ /UL)		1 (0.099)
PLATE. EST.			369
FIBRINOGEN	MG/DL		300

ISIS Reference Values >>

Mean	S.D.	Min.	Max.	(N)
14.78±	4.513	6.350	33.30	(1383)
3.11±	0.53	1.78	5.15	(1157)
13.3±	2.2	6.8	22.7	(1219)
37.7±	6.0	23.0	58.0	(1472)
122.4±	13.9	58.2	213.2	(1148)
43.3±	4.5	16.6	63.2	(1130)
35.3±	3.4	18.9	68.6	(1188)
5.095±	3.038	0.291	23.90	(1138)
5.687±	3.303	0.196	22.20	(1142)
3.209±	2.838	0.000	9.983	(935)
0.523±	0.653	0.000	5.145	(846)
379±	206	0	810	(141)

Comments >>

wbc corrected for presence of nucleated rbc's, blood count verified by repeat analysis, slide viewed microscopically.

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: MARI

Accession #: 821294
Female
Birth: 24 Jul. 1975 (Estimated)
Age: 30Y Est.

Collection Information >>

Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4378 Kg on 21. Sep. 2004
Manual restraint used.

Date of Collection: 26. Feb. 2005
Time of Collection:
Collected by: BO
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: IDEXX
Date of Analysis: 26. Feb. 2005
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL		82	89±	20	40	223	(924)
BUN	MG/DL	<	4	12±	4	4	28	(928)
CREAT.	MG/DL	>>	2.5	1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio			1.60					
CA	MG/DL		9.9	10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL		4.2	5.0±	1.2	2.5	9.0	(846)
Ca/P ratio			2.36					
NA	MEQ/L	>	137	130±	5	107	169	(669)
K	MEQ/L		4.6	4.6±	0.5	3.3	6.4	(678)
Na/K ratio			29.8					
CL	MEQ/L	>	96	89±	4	77	103	(632)
HCO3	MMOL/L		27	28.4±	3.1	19.0	32.3	(50)
CHOL	MG/DL		54	46±	13	0	99	(546)
T. PROT. (C)	GM/DL		8.8	8.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL		2.9	3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL		5.9	4.9±	1.0	2.7	8.8	(514)
Alb/Glob rat			0.492					
AST (SGOT)	IU/L		10	22±	12	4	99	(899)
T. BILI.	MG/DL		0.3	0.2±	0.2	0.0	1.2	(635)
D. BILI	MG/DL		0.1	0.1±	0.1	0.0	1.3	(220)
I. BILI.	MG/DL		0.2	0.1±	0.1	0.0	0.6	(211)
ATK QUOC	TIU/L		111	146±	72	99	200	(837)

Clinical Pathology Records - Specimen Report
HONOLULU ZOO

- page 3 -

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: Asiatic elephant
Name: MARI

Accession #: 821294
Female

Birth: 24.Jul.1975 (Estimated)
Age: 30Y Est.

Chemistry >>

Comments >>

Na/K ratio 30

Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
 Common Name: Asiatic elephant
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Accession #: 821294
 Female
 Birth: 24.Jul.1975 (Estimated)
 Age: 30Y Est.

Collection Information >>

Health Status: Abnormal
 Fasting Time: 8-24 hours
 Activity: Calm
 Weight: 4378 Kg on 21.Sep.2004
 Manual restraint used.

Date of Collection: 23.Feb.2005
 Time of Collection: :
 Collected by: TP

Hematology >>

Analysis Information >>

Anticoagulant: EDTA
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: IDEXX
 Date of Analysis: 24.Feb.2005
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	12.0		14.78±	4.513	6.350	33.30	(1383)
RBC	*10 ⁶ /UL	3.11		3.11±	0.53	1.78	5.15	(1157)
HGB	GM/DL	12.4		13.3±	2.2	6.8	22.7	(1219)
HCT	%	36.2		37.7±	6.0	23.0	58.0	(1472)
MCV	fL	116		122.4±	13.9	58.2	213.2	(1148)
MCH	ug	39.9		43.3±	4.5	16.6	63.2	(1130)
MCHC	gm/dL	34.3		35.3±	3.4	16.9	68.6	(1188)
SEGS	% (*10 ³ /UL)	37	(4.440)	5.095±	3.038	0.291	23.90	(1138)
LYMPHOCYTES	% (*10 ³ /UL) <	11	(1.320)	5.687±	3.303	0.198	22.20	(1142)
MONOCYTES	% (*10 ³ /UL) >	51	(6.120)	3.209±	2.838	0.000	9.983	(935)
EOSINOPHILS	% (*10 ³ /UL)	1	(0.120)	0.523±	0.653	0.000	5.145	(846)
PLATE. EST.		409						
FIBRINOGEN	MG/DL	200		379±	206	0	810	(141)

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Date of Collection: 23.Feb.2005
 Time of Collection: :
 Collected by: TP

Chemistry >>

Analysis Information >>
 Chemistry Sample: Serum
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: IDEXX
 Date of Analysis: 24.Feb.2005
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL	81		89±	20	40	229	(924)
BUN	MG/DL	13		12±	4	4	28	(928)
CREAT.	MG/DL	1.7		1.6±	0.4	0.7	3.1	(899)
BUN/Cr ratio		7.65						
CA	MG/DL	< 9.5		10.6±	0.8	7.1	13.3	(851)
PHOS	MG/DL	4.2		5.0±	1.2	2.5	9.0	(646)
Ca/P ratio		2.26						
NA	MEQ/L	131		130±	5	107	169	(669)
K	MEQ/L	< 3.6		4.6±	0.5	3.3	6.4	(678)
Na/K ratio		38.4						
CL	MEQ/L	91		89±	4	77	103	(632)
HCO3	MMOL/L	27		26.4±	3.1	19.0	32.3	(50)
CHOL	MG/DL	40		46±	13	0	99	(546)
T.PROT. (C)	GM/DL	7.7		8.0±	0.8	5.7	11.3	(889)
ALBUMIN (C)	GM/DL	< 2.6		3.2±	0.5	1.9	4.5	(522)
GLOBULIN (C)	GM/DL	5.1		4.9±	1.0	2.7	8.6	(514)
Alb/Glob rat		0.510						
AST (SGOT)	IU/L	15		22±	12	4	99	(899)
T. BILI.	MG/DL	0.2		0.2±	0.2	0.0	1.2	(635)
D. BILI.	MG/DL	0.1		0.1±	0.1	0.0	1.3	(220)
L. BILI.	MG/DL	0.1		0.1±	0.1	0.0	0.6	(211)
ALK PHOS	IU/L	130		145±	79	93	888	(837)

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Chemistry >>

Tests and Results >>

Comments >>

Hemolysis index 1, Lipemia index 4

ISIS Reference Values >>

HONOLULU ZOO
151 KAPAHULU AVE.
HONOLULU, HI 96815

INDEX VETERINARY SERVICES
Online results at www.vetconnect.com
West Region 800-444-4210
East/Central/Colorado 888-433-9987

1-800-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT.821294

REQ #: 5403424
AGE: SEX: F
SPECIES:
BREED: ASIAN ELEPHANT

LAB #: L5700789
COLLECTED: 02/27/2005
RECEIVED: 02/27/2005 07:16
REPORTED: 02/27/2005 08:49

DOCTOR: ORIMOTO

TEST PROCEDURES

LARGE ANIMAL PROFILE

LARGE ANIMAL PANEL

	RESULTS	REFERENCE RANGE	UNITS
ALX. PHOSPHATASE	111		IU/L
AST (SGPT)	10		IU/L
CK	80		IU/L
GGT	8		IU/L
ALBUMIN	2.9		g/dL
TOTAL PROTEIN	8.8		g/dL
GLOBULIN	5.9		g/dL
TOTAL BILIRUBIN	0.3		mg/dL
DIRECT BILIRUBIN	0.1		mg/dL
BUN	4		mg/dL
CREATININE	2.5		mg/dL
CHOLESTEROL	54		mg/dL
GLUCOSE	82		mg/dL
CALCIUM	9.9		mg/dL
PHOSPHORUS	4.2		mg/dL
TCO2 (BICARBONATE)	27		mEq/L
CHLORIDE	96		mEq/L
POTASSIUM	4.6		mEq/L
SODIUM	137		mEq/L
A/G RATIO	0.5		
B/C RATIO	1.6		
INDIRECT BILIRUBIN	0.2		mg/dL
HA/R RATIO	30		
HEMOLYSIS INDEX	3		
LIPEMIA INDEX	8		
ANION GAP	19		mEq/L
CBC COMPREHENSIVE			
* WBC	9.9		THOUS./uL
* RBC	3.40		MILLION/uL

CONTINUED REPORT

HONOLULU ZOO
151 KAPAHULU AVE.
HONOLULU, HI 96815

IDEXX VETERINARY SERVICES
Online results at www.vetconnect.com
West Region 800-444-4210
East/Central/Colorado 800-433-9987

1-800-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT, B21294

REQ #: 5403424
AGE: SEX: F
SPECIES:
BREED: ASIAN ELEPHANT

LAB #: 15700709
COLLECTED: 02/27/2005
RECEIVED: 02/27/2005 07:16
REPORTED: 02/27/2005 08:49

DOCTOR: OKIMOTO

TEST PROCEDURES

TEST PROCEDURES	RESULTS	REFERENCE RANGE	UNITS
* MCV	116		fL
* MCH	40.7		pg
* MCHC	35.2		g/dL
* NRBC	2		/100 WBC
* NEUTROPHIL SEG	40		%
* LYMPHOCYTES	15		%
* MONOCYTES	44		%
* EOSINOPHIL	1		%
* AUTO PLATELET	359		THOUS./uL
* REMARKS			

WBC CORRECTED FOR PRESENCE OF NUCLEATED WBC'S
BLOOD COUNT VERIFIED BY REPEAT ANALYSIS.

SLIDE REVIEWED MICROSCOPICALLY.

* ABSOLUTE NEUTROPHIL SEG	3060		/uL
* ABSOLUTE LYMPHOCYTE	1465		/uL
* ABSOLUTE MONOCYTE	4356		/uL
* ABSOLUTE EOSINOPHIL	99		/uL
FIBRINOGEN	300		MG/DL

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151 KAPAHULU AVE.
HONOLULU, HI 96815

IDEXX VETERINARY SERVICES
Online results at www.vetconnect.com
West Region 800-444-4210
East/Central/Colorado 888-433-9907

1-888-971-7180 ACCOUNT #: 1823

PATIENT: ELEPHANT, B21294

REQ #: 5403426
AGE: SEX: F
SPECIES:
BREED: ASIAN ELEPHANT

LAB #: 15700791
COLLECTED: 02/26/2005
RECEIVED: 02/27/2005 07:22
REPORTED: 02/27/2005 07:59

DOCTOR: OKIMOTO, D
TEST PROCEDURES
URINALYSIS

	RESULTS	REFERENCE RANGE	UNITS
COLLECTION METHOD	OTHER		
VOLUME	90.0		ML
COLOR	YELLOW		
CLARITY	HAZY		
SPECIFIC GRAVITY	1.009		
GLUCOSE	NEGATIVE		
BILIRUBIN	NEGATIVE		
KETONES	NEGATIVE		
BLOOD	NEGATIVE		
PH	7.5		
PROTEIN	NEGATIVE		
WBC	0-2		HPF
RBC	0-2		HPF
BACTERIA	MARKED (>40/HPF)		HPF
EPI CELL	RARE (<1/LPF)		LPF
FOCUS	NONE SEEN		LPF
CASTS	NONE SEEN		LPF
CRYSTALS			LPF
	3+ CALCIUM OXALATE (11-50/LPF)		LPF
UROBILINOGEN	NORMAL		

HONOLULU ZOO
 151 KAPAHULU AVE
 HONOLULU, HI 96815

Tel: 808-971-7194
 Fax: 808-971-3950
 Antech ID #: 15023

Reference No.	Doctor	Client	Pet Name	Received
IRBC82610367	OKIMOTO	ELEPHANT	821294	01/23/2004
Species	Breed	Sex	Pet Age	Reported
OTHER			11:37	01/26/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE	UNITS
CULTURE, AEROBIC			
SOURCE	ABSCESS		
Preliminary #1	01/24/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 24 HOURS.			
Preliminary #2	01/25/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 48 HOURS.			
Final Report	01/26/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 72 HOURS.			

Report Notes:
 A N T E C H Diagnostics FINAL 01/26/2004 11:37 ACNH IRBC82610367

HONOLULU ZOO
151 KAPAHULU AVE
HONOLULU, HI 96815

tel: 808-971-7194
fax: 808-971-3950
Antech ID #: 15023

Reference No.	Doctor	Client	Pet Name	Received
IRBC82610616	LEIMUJU	ELEPHANT	821294	01/23/2004
Species	Breed	Sex	Pet Age	Reported
UNKNOWN			11:38	01/26/2004

TEST PROCEDURE	RESULTS	HULL REFERENCE RANGE	UNITS
CULTURE, PERUJIL			
SOURCE L LEG ABSCESS			
Preliminary #1	01/24/2004		
NO GROWTH ON SOLID MEDIA IN 24 HRS.			
Preliminary #2	01/25/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 48 HOURS.			
Final Report	01/26/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 72 HOURS.			

Report Notes:

ANTECH Diagnostics

FINAL 01/26/2004 11:38

ACNH IRBC82610616

HONOLULU ZOO
151 KAPAHULU AVE
HONOLULU, HI 96815

Tel: 808-971-7194
Fax: 808-971-3950
Antech ID #: 15023

Reference No. IRBC82789308	Doctor OKIMOTO	Client ELEPHANT	Pet Name 821294	Received 01/29/2004
Species ELEPHANT	Breed	Sex F	Pet Age 19:45	Reported 02/04/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE	UNITS
CULTURE, AEROBIC SOURCE	OUTSIDE WOUND		
Preliminary #1	01/30/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 24 HOURS.			
Preliminary #2	01/31/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 48 HOURS.			
Preliminary #3	02/01/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 72 HOURS.			
Preliminary #4	02/02/2004		
OF POTENTIAL PATHOGENS TO BE IDENTIFIED, ISOLATED FROM BROTH.			
Final Report	02/04/2004		
Organism #1	FLAVOBACTERIUM MENINGOSEPTICUM		
ISOLATED FROM BROTH.			

SENSITIVITY (S-Sensitive I-Intermediate R-Resistant)

ORGANISM:	1	2	3	4	5
301. AMIKACIN	R				
AMOXICILLIN	R				
303. AMPICILLIN	R				
305. AUGMEN / CLAVAMOX	R				
307. CARBENCILLIN	R				
315. CEPHALEXIN	R				
317. CHLORAMPHENICOL	R				
ENROFLOXACIN	R				
327. FURADANTIN	R				
331. GENTAMYCIN	R				
333. KANAMYCIN	R				
337. NEOMYCIN	R				
345. POLYMYXIN B	R				
349. TMP / SULFA	R				
355. TETRACYCLINE	R				
359. TOBRAMYCIN	R				

HONOLULU ZOO
 151 KAPAHULU AVE
 HONOLULU, HI 96815

Tel: 808-971-7194
 Fax: 808-971-3950
 Antech ID #: 15023

Reference No. IRBC82789264	Doctor OKIMOTO	Client ELEPHANT	Pet Name 821294	Received 01/29/2004
Species ELEPHANT	Breed	Sex F	Pet Age 16:55	Reported 02/01/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE	UNITS
CULTURE, AEROBIC SOURCE	INSIDE WOUND		
Preliminary #1	01/30/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 24 HOURS.			
Preliminary #2	01/31/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 48 HOURS.			
Final Report	02/01/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 72 HOURS.			

Report Notes:

A N T E C H Diagnostics

FINAL 02/01/2004 16:55

ACNH IRBC82789264

HONOLULU 200
151 KAPAHULU AVE
HONOLULU, HI 96815

Tel: 808-971-7194
Fax: 808-971-3950
Antech ID #: 15023

Reference No. IRBC82789344	Doctor OKIMOTO	Client ELEPHANT	Pet Name 821294	Received 01/29/2004
Species ELEPHANT	Breed	Sex F	Pet Age 16:56	Reported 02/01/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE	UNITS
CULTURE, AEROBIC SOURCE	INSIDE WOUND 2		
Preliminary H1	01/30/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 24 HOURS.			
Preliminary H2	01/31/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 48 HOURS.			
Final Report	02/01/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 72 HOURS.			

Report Notes:

A N T E C H Diagnostics

FINAL 02/01/2004 16:56

ACNH IRBC82789344

HONOLULU ZOO
 151 KAPAHULU AVE
 HONOLULU, HI 96815

Tel: 808-971-7194
 Fax: 808-971-3950
 Antech ID #: 15023

Reference No. IRBC84360192 Doctor OKIMOTO Client ELEPHANT Pet Name 82194 Received 03/18/2004
 Species Breed UNKNOWN Sex Pet Age 15:54 Reported 03/21/2004

TEST PROCEDURE	RESULTS	ADULT REFERENCE RANGE	UNITS
CULTURE, AEROBIC SOURCE	LEG ABSCESS		
Preliminary #1	03/18/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 24 HOURS.			
Preliminary #2	03/19/2004		
NO GROWTH ON DIRECT PLATING MEDIA AND BROTH CULTURE IN 48 HOURS.			
Preliminary #3	03/20/2004		
FEW COLONIES OF POTENTIAL	PATHOGENS TO BE IDENTIFIED.		
Final Report	03/21/2004		
Organism #1	COAGULASE NEGATIVE STAPH		
FEW COLONIES			

SENSITIVITY (S-Sensitive I-Intermediate R-Resistant)

ORGANISM:	1	2	3	4	5
301. AMIKACIN	S				
AMOXICILLIN	R				
303. AMPICILLIN	R				
305. AUGMEN / CLAVAMOX	S				
315. CEPHALEXIN	S				
317. CHLORAMPHENICOL	S				
319. CLINDAMYCIN	R				
325. ERYTHROMYCIN	R				
ENROFLOXACIN	S				
331. GENTAMYCIN	S				
337. NEOMYCIN	S				
321. OXACILLIN	S				
341. PENICILLIN	R				
345. POLYMYXIN B	R				
349. TMP / SULFA	S				
355. TETRACYCLINE	R				
361. VANCOMYCIN	S				

Report Notes: