

Medical History Report - Summary for Individual Specimen
KANSAS CITY ZOOLOGICAL PARK

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LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 1670
African elephant                       Age: 30Y Est.        Birth: 17.Sep.1978
Name: LOIS
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.....2008....

- 22.Jul Clinical note recorded. (CSS)
- 23.Jul Blood sample: (EDTA) Hematology/Chemistry/Serology results.
WBC:8.60 *10³/UL; HCT: 36.0%; BUN:8 MG/DL;
Clots in hematology sample
Urine sample analysis results: (10:00.0)
Clinical note recorded. (WKS)
- 25.Jul Clinical note recorded. (ANL)
Clinical note recorded. (ERT)
- 30.Jul Clinical note recorded. (ERT)

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Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

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Clinical Note:

22.Jul.2008

Dispensed 1 box 12cc syringes, 1 flat of purple top tubes for blood draws. (CSS)

Clinical Note:

23.Jul.2008

Routine physical exam-Ophthalmic exam WNL, oropharyngeal exam, WNL. Vulva, mammary glands also WNL. 4 small, old holes in left ear, 3 holes in right ear as well as old divit along ventral edge and 2 areas of depigmentation along medial aspect. Rt stifle continues to be swollen (as has been seen historically-either old walled off abscess, or luxated patella), Hind limb conformation-mild medial deviation of rear tarsi potentially due to historical chaining, and mildly impacts ambulation-pick up leg and moves rather than pivoting. -attempts at radiographs unsuccessful, but obtained radiographs all 4 feet. Loss of tail hair along dorsal aspect. Right temporal gland larger than left but otherwise normal. Rt tusk deviated ventromedially as has been observed historically-no sulci discharge. Two old scarred lumps-one over left hemithorax and one over left flank (previous abscess on flank). Trunk WNL, LFF- Interdigital loss of pad and undermined caudal aspect, RFF, interdigital loss of pad between toes, but pad itself WNL. LRF and RRF look good. Vulva WNL. BPs- 211/161/172/31, 218/155/176/30, 217/159/183/29, 219/149/173/30 and 204/147/171/31 with respi of 8/min. Blood for CBC/profile, WNV, etc. Not able to get stifle radiographs-will retry at some point (machine not working). Obtained stool and urine for routine exam as well at the time of PE. (WKS)

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

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African elephant                       Age: 30Y Est.        Birth: 17.Sep.1978
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Collection Information >>                Date of Collection: 23.Jul.2008
Health Status: Abnormal                  Time of Collection:
Fasting Time: < 8 hours                  Collected by:
Activity: Calm                           Sample Collection Site: EAR VEIN
Weight: 3843 Kg on 16.Nov.2005
Manual restraint used.

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Hematology >>
Analysis Information >>                  Laboratory: ANTECH
Anticoagulant: EDTA                     Date of Analysis: 24.Jul.2008
Storage: Refrigerated (<48 hours)      Time of Analysis: 5:04
Sample Quality: clotted                  Analysis by:
                                          Automated analysis.

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Tests and Results >>

WHITE BLOOD CELL COUNT	8.6		*10 ³ /UL
RED BLOOD CELL COUNT	2.8		*10 ⁶ /UL
HEMOGLOBIN	12.3		GM/DL
HEMATOCRIT	36		%
MCV	129		fL
MCH	43.9		uug
MCHC	34.2		gm/dL
SEGMENTED NEUTROPHILS	47	(4.042)	% (*10 ³ /UL)
LYMPHOCYTES	< 17	(1.462)	% (*10 ³ /UL)
MONOCYTES	35	(3.010)	% (*10 ³ /UL)
EOSINOPHILS	1	(0.086)	% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)
ESTIMATED PLATELET COUNT	INCR		
PLATELET COUNT	> 845		*10 ³ /UL
ABSOLUTE BASOPHILS	0		/UL
ABSOLUTE EOSINOPHILS	86		\UL
ABSOLUTE LYMPHOCYTES	1462		/UL
ABSOLUTE MONOCYTES	3010		/UL
ABSOLUTE SEGS	4042		/UL
FIBRINOGEN	333		MG/DL
MEAN CORPUSCULAR HEMOGLOBIN	43.9		UUG
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION	35		%
MEAN CORPUSCULAR VOLUME	127		U(3)

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Morphology Results >>
ROULEAUX 3+

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Comments >>

Monocytes results have been rechecked and verified.
Platelet clumps are present. Platelet clumping is a common in-vitro phenomenon and prevents accurate automated or manual platelet

ISIS reference values are for LOXODONTA AFRICANA
Printed on: 25.Nov.2008

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

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<i>LOXODONTA AFRICANA</i> (no subsp)	Sex: Female	Acc. #: 1670
African elephant	Age: 30Y Est.	Birth: 17.Sep.1978
Name: LOIS		

=====

Hematology >>

Comments >>

counting. The platelet estimate is the best indicator of the adequacy of platelet numbers. Any reported platelet count indicates only the minimum platelet number.

Blood smear reviewed by technologist.

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

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African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Collection Information >>

Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3843 Kg on 16.Nov.2005
Manual restraint used.

Date of Collection: 23.Jul.2008
Time of Collection:
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: 24.Jul.2008
Time of Analysis: 5:04
Analysis by:
Automated analysis.

Tests and Results >>

GLUCOSE	76	MG/DL
BLOOD UREA NITROGEN	8	MG/DL
CREATININE	1.5	MG/DL
BUN/creatinine ratio	5.33	
CALCIUM	10.7	MG/DL
PHOSPHORUS	4.3	MG/DL
calcium/phosphorus ratio	2.49	
SODIUM	128	MEQ/L
POTASSIUM	4.9	MEQ/L
sodium/potassium ratio	26.1	
CHLORIDE	89	MEQ/L
CHOLESTEROL	60	MG/DL
TOTAL PROTEIN (COLORIMETRY)	7.9	GM/DL
ALBUMIN (COLORIMETRY)	3.2	GM/DL
GLOBULIN (COLORIMETRY)	> 4.7	GM/DL
albumin/globulin ratio	0.681	
ASPARTATE AMINOTRANSFERASE	< 13	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
DIRECT BILIRUBIN	0.1	MG/DL
ALKALINE PHOSPHATASE	< 50	IU/L
LACTATE DEHYDROGENASE	< 335	IU/L
CREATINE PHOSPHOKINASE	163	IU/L
ALBUMIN GLOBULIN RATIO	0.7	GM/DL
BUN/CREATININE RATIO	5	MG/DL
GAMMA GLUTAMYLTRANSFERASE	8	IU/L
SODIUM/POTASSIUM RATIO	26	RATIO

Comments >>

Essentially WNL. WKS

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Collection Information >>

Health Status: Normal

Date of Collection: 23.Jul.2008

Time of Collection: 10:00.0

Collected by:

Sample Collection Site: from Floor

Weight: 3843 Kg on 16.Nov.2005

Analysis Information >>

Sample type: Urine

Storage: Fresh

Sample Quality: No quality problems.

Laboratory: IN HOUSE

Date of Analysis: 23.Jul.2008

Time of Analysis:

Analysis by: ANL

Manual analysis.

Tests and Results >>

APPEARANCE	CLOUDY	
COLOR	PALEYW	
PH	8.5	
SPECIFIC GRAVITY	1.027	
URINE BACTERIA	FEW	
URINE BILIRUBIN	NEG	
URINE BLOOD	NEG	
URINE CASTS	0	
URINE CRYSTALS	+	
URINE EPITHELIAL CELLS	0	
URINE GLUCOSE	NEG	MG/DL
URINE KETONE	NEG	
URINE NITRITE	NEG	
URINE PROTEIN	NEG	
URINE RBC/HPF	0	
URINE UROBILINOGEN	NORMAL	
URINE WBC/HPF	0	

Comments >>

Crystals: TNTC Ca oxalate and Ca Carbonate

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Clinical Note:

25.Jul.2008

<<<Microbiology>>>

Sample A

Laboratory:

Date Received: 07/25/2008
Date Reported: 08/02/2008

- LABCORP
- NVSL
- UMC
- ANTECH

Sample Source: Fecal Swab

Submission type:

- aerobic bacteriology
- anaerobic bacteriology
- comprehensive stool culture
- mycology
- enteric pathogen screen
- mycobacterial

Organism:	Growth:	heavy	moderate	light
1. E. coli		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Escherichia hermannii		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: The sample was negative, by culture, for Clostridium perfringens, Salmonella (primary enrichment) Campylobacter and Yersinia enterocolitica.

The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with use of selective media.

*****S = SUSCEPTIBLE; I = INTERMEDIATE; R = RESISTANT

Sensitivity: 1 | 2 | 3 | 4 | 5 | 6 |

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Clinical Note:

25.Jul.2008

Amikacin:	s	s							
Amoxi/Clav:	s	s							
Ampicillin:	s	r							
Cefazolin:	s	s							
Ceftiofur:	s	s							
Chloramphenicol:	s	s							
Erythromycin:	r	r							
Gentamicin:	s	s							
Imipenem:	s	s							
Oxacil + 2% NaCl:	r	r							
Penicillin:	r	r							
Rifampin:	r	r							
Tetracycline:	s	s							
Ticar/Clav Acid:	s	s							
Ticarcillin:	s	r							
Trimeth/Sulfa:	s	s							

Comments: WNL. WKS. (ANL)

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Clinical Note:

25.Jul.2008

Michigan State Results
Encounter #00636928
Received: 7/25/08
Reported: 7/30/08

Nutrition:
Vitamin E, Serum: 0.84ug/mL

Comments: WNL. WKS.

Minerals:
Cobalt: 0.71 ng/mL
Copper: 0.94 ug/mL
Iron: 94 ug/dL
Manganese: 129.0 ng/mL
Molybdenum: 17.0 ng/mL
Zinc: 0.80 ug/mL
Selenium, Serum: 105 ng/mL

Comments: Likely all normal. WKS. (ERT)

Clinical Note:

30.Jul.2008

Animal Health Diagnostic Center Results
Accession #99232-08
Received: 7/30/08
Reported: 9/3/08

Virology Results

St. Louis Encephalitis (SLE) SN
Specimen: serum
Result: <10

West Nile Virus SN, Full Titerh
Specimen: serum
Result: 80

WNL per WKS. (ERT)

Clinical Pathology Records Report - ISIS/In-House Reference Values
KANSAS CITY ZOOLOGICAL PARK

Scientific name: *LOXODONTA AFRICANA*
Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	10.50 ± 2.648		4.500	22.10	(1544)
RBC	*10 ⁶ /UL	3.15 ± 0.40		2.05	4.80	(1480)
HGB	GM/DL	13.7 ± 1.6		7.0	26.1	(1522)
HCT	%	39.5 ± 4.6		27.0	56.0	(1984)
MCH	MG/DL	43.6 ± 3.0		34.8	66.8	(1454)
MCHC	uug	34.7 ± 2.0		18.4	57.9	(1501)
MCV	fL	125.8 ± 8.1		91.1	190.0	(1466)
SEGS	*10 ³ /UL	3.146 ± 1.695		0.000	11.80	(1224)
BANDS	*10 ³ /UL	0.843 ± 0.799		0.000	6.530	(605)
LYMPHOCYTES	*10 ³ /UL	4.913 ± 2.532		0.022	17.40	(1236)
MONOCYTES	*10 ³ /UL	1.513 ± 1.651		0.000	9.480	(1175)
EOSINOPHILS	*10 ³ /UL	0.225 ± 0.273		0.000	2.898	(885)
BASOPHILS	*10 ³ /UL	0.049 ± 0.081		0.000	0.525	(464)
NRBC	/100 WBC	0 ± 1		0	3	(92)
PLATE. CNT.	*10 ³ /UL	417 ± 245		74	1380	(215)
RETICS	%	0.0 ± 0.0		0.0	0.0	(7)
GLUCOSE	MG/DL	84 ± 15		38	174	(1437)
BUN	MG/DL	10 ± 3		0	22	(1458)
CREAT.	MG/DL	1.5 ± 0.5		0.0	11.0	(1405)
URIC ACID	MG/DL	0.2 ± 0.4		0.0	5.1	(466)
CA	MG/DL	10.9 ± 0.6		8.1	15.3	(1434)
PHOS	MG/DL	4.9 ± 0.8		2.8	8.2	(1291)
NA	MEQ/L	129 ± 4		107	182	(1353)
K	MEQ/L	4.8 ± 0.5		3.3	7.6	(1368)
CL	MEQ/L	88 ± 4		67	129	(1323)
IRON	MCG/DL	79 ± 42		8	174	(54)
MG	MG/DL	1.97 ± 0.75		0.65	4.20	(98)
HCO3	MMOL/L	25.1 ± 3.6		13.0	31.0	(44)
CHOL	MG/DL	68 ± 17		0	234	(1290)
TRIG	MG/DL	64 ± 31		0	179	(1124)
T. PROT. (C)	GM/DL	7.7 ± 0.6		5.8	10.5	(1261)
T. PROT. (R)	GM/DL	8.0 ± 0.4		7.4	8.6	(8)
ALBUMIN (C)	GM/DL	3.6 ± 0.4		2.4	5.2	(1145)
GLOBULIN (C)	GM/DL	4.1 ± 0.5		2.6	6.4	(1135)
AST (SGOT)	IU/L	24 ± 10		6	93	(1398)
ALT (SGPT)	IU/L	7 ± 6		0	40	(547)
T. BILI.	MG/DL	0.2 ± 0.1		0.0	1.0	(1187)
D. BILI.	MG/DL	0.1 ± 0.1		0.0	0.3	(154)
I. BILI.	MG/DL	0.1 ± 0.1		0.0	0.9	(152)
AMYLASE	U/L	3075 ± 1552		0	7918	(241)
ALK. PHOS.	IU/L	128 ± 61		32	441	(1404)
LDH	IU/L	988 ± 568		157	4306	(1099)

Clinical Pathology Records Report - ISIS/In-House Reference Values
KANSAS CITY ZOOLOGICAL PARK

=====
Scientific name: *LOXODONTA AFRICANA*
Common Name: African elephant
=====

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
CPK	IU/L	256 ±	196	18	1884	(247)
OSMOLARITY	MOSMOL/L	259 ±	4	246	272	(689)
ALPHA GLOB.	MG/DL	0.7 ±	0.0	0.7	0.7	(1)
ALPHA-1 GLOB	MG/DL	0.7 ±	0.2	0.2	0.8	(8)
ALPHA-2 GLOB	MG/DL	1.0 ±	0.3	0.8	1.6	(8)
BETA GLOB.	MG/DL	1.2 ±	0.8	0.6	1.7	(2)
Body Temperature:		39.0 ±	0.0	39.0	39.0	(1)
CO2	MMOL/L	27.0 ±	3.1	12.0	61.4	(840)
ESR	MM/HR	27 ±	0	27	27	(1)
FIBRINOGEN	MG/DL	238 ±	139	0	600	(70)
GGT	IU/L	12 ±	5	0	37	(389)
LIPASE	U/L	7 ±	7	0	45	(66)
PROGESTERONE	NG/DL	144.8 ±	216.4	0.060	1005	(266)
TESTOSTERONE	NG/ML	1.010 ±	1.117	0.220	1.800	(2)
TOTAL T4	MCG/DL	8.2 ±	1.3	6.9	9.5	(3)
T3 (RIA)	NG/ML	209.0 ±	0.0	209.0	209.0	(1)
ALBUMIN (E)	GM/DL	4.4 ±	0.3	4.1	4.9	(7)
GAMMA GLOB	GM/DL	1.6 ±	0.4	0.7	1.9	(7)

Kansas City Zoo
 Swope Park
 Kansas City, MO 64132
 Tel: 816-513-5700
 Fax: 816-513-4667

Client # 97779
 Chart # 1670

Accession No. CHBC26646043	Doctor SURDMEYER	Owner AD ELEPHANT	Pet Name LOIS	Received 07/23/2008
Species Equine	Breed	Sex F	Pet Age 29Y	Reported 07/24/2008 05:04 AM

Test Requested	Results	Reference Range	Units
BASIC LARGE ANIMAL SCREEN			
AST (SGOT)	13 (LOW)	180-570	IU/L
Total Bilirubin	0.2	0.1-2.5	mg/dL
Direct Bilirubin	0.1	0.0-0.5	mg/dL
Alkaline Phosphatase	50	50-300	IU/L
GGT	8	2-30	IU/L
Total Protein	7.9	5.6-8.0	g/dL
Albumin	3.2	2.2-3.9	g/dL
Globulin	4.7	2.6-5.6	g/dL
A/G Ratio	0.7	0.5-2.4	
Cholesterol	60 (LOW)	70-150	mg/dL
BUN	8 (LOW)	10-25	mg/dL
Creatinine	1.5	1.2-2.0	mg/dL
BUN/Creatinine Ratio	5	5-21	
Phosphorus	4.3	2.0-5.6	mg/dL
Calcium	10.7	10.0-13.7	mg/dL
Glucose	76	70-120	mg/dL
Sodium	128 (LOW)	130-146	mEq/L
Potassium	4.9	3-5	mEq/L
Na/K Ratio	26	24-58	
Chloride	89 (LOW)	95-110	mEq/L
CPK	163	20-500	IU/L
LDH	335	150-450	IU/L
COMPLETE BLOOD COUNT			
WBC	8.6	5.5-12.5	10 ³ /μL
RBC	2.8 (LOW)	6.5-10.5	10 ⁶ /μL
HGB	12.3	11.0-19.0	g/dL
HCT	36	35-52	%
MCV		34-58	fL
127			
MCH	43.9 (HIGH)	12.3-19.7	pg
MCHC	35	31-37	g/dL
Comment	3+ ROULEAUX PRESENT		
Differential			
	Absolute	%	
Neutrophils	4042	47	/μL
Lymphocytes	1462 (LOW)	17	/μL

Essentially normal
 S.

Test Requested	Results		Reference Range	Units
Monocytes	3010 (HIGH)	35	0-800	/ μ L
Eosinophils	86	1	0-925	/ μ L
Basophils	0	0	0-170	/ μ L
Platelet Estimate	Increased			
Platelet Count	845 (HIGH)		100-400	10^3 / μ L

Results have been rechecked and verified.

Platelet clumps are present. Platelet clumping is a common in-vitro phenomenon and prevents accurate automated or manual platelet counting. The platelet estimate is the best indicator of the adequacy of platelet numbers. Any reported platelet count indicates only the minimum platelet number.

Blood smear reviewed by technologist.

FIBRINOGEN (SEMI-QUANTITATIVE)

Fibrinogen, Semi-Quantitative 333 100-400 mg/dl

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Owner: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Accession Number: 0816492

Reference Number:

Case Coordinator: William Fales MS, Ph.D

Received: 07/25/2008 Finalized: 08/02/2008

Sampled:

Veterinarian: DR. WM KIRK SUEDEMEYER

Client: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER

To: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Final Report

BACTERIOLOGY RESULTS

ENTERIC SCREEN

SPECIES	Misc
BREED	Elephant
ANIMAL ID	1670 Lois
SPECIMEN #	Fecal Swab
ORGANISM ID	E. COLI
ORGANISM ID	ESCHERICHIA HERMANII
COMMENTS	The sample was negative, by culture, for Clostridium perfringens, Salmonella (primary enrichment) Campylobacter and Yersinia enterocolitica. The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

ANTIMICROB SUSCEPT/EQUINE

1	ANIMAL ID	1670 Lois
	SPECIMEN #	Fecal swab
	ORGANISM ID	E. COLI
	COMMENTS	CONCENTRATIONS IN UG/ML
2	ANIMAL ID	1670 Lois
	SPECIMEN #	Fecal
	ORGANISM ID	ESCHERICHIA HERMANII
	COMMENTS	CONCENTRATIONS IN UG/ML

WML
5

UNIVERSITY OF MISSOURI
VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 0816492

BACTERIOLOGY RESULTS

Antibiotic Susceptibility Pattern

	E. COLI - 1	ESCHERICHIA HERMANII - 2
AMIKACIN	S <=4.0000(4 - 32)	S <=4.0000(4 - 32)
AMOXI/CLAV	S <=4.0000(4/2 - 32/16)	S <=4.0000(4/2 - 32/16)
AMPICILLIN	S 2.0000(0.25 - 16)	R 8.0000(0.25 - 16)
CEFAZOLIN	S <=8.0000(8 - 16)	S <=8.0000(8 - 16)
CEFTIOFUR	S <=0.2500(0.25 - 4)	S <=0.2500(0.25 - 4)
CHLORAMPHENICOL	S 8.0000(4 - 16)	S 8.0000(4 - 16)
ERYTHROMYCIN	R >4.0000(0.5 - 4)	R >4.0000(0.5 - 4)
GENTAMICIN	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
IMIPENEM	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
OXACIL + 2% NACL	R >4.0000(0.25 - 4)	R >4.0000(0.25 - 4)
PENICILLIN	R >8.0000(0.06 - 8)	R >8.0000(0.06 - 8)
RIFAMPIN	R >2.0000(1 - 2)	R >2.0000(1 - 2)
TETRACYCLINE	S <=2.0000(2 - 8)	S <=2.0000(2 - 8)
TICAR/CLAV ACID	S <=8.0000(8/2 - 64/2)	S <=8.0000(8/2 - 64/2)
TICARCILLIN	S <=8.0000(8 - 64)	R >64.0000(8 - 64)
TRIMETH/SULFA	S <=0.5000(0.5/9.5 - 2/38)	S <=0.5000(0.5/9.5 - 2/38)

This is an "in vitro" test that may not reflect clinical outcome.

THIS TIME DATED REPORT SUPERSEDES ALL PREVIOUS REPORTS ON THIS VMDL ACCESSION.

REPORT OF LABORATORY EXAMINATION

Client: Kansas City Zoo (254998) Owner: Kansas City, Zoo
 6700 Zoo Drive
 Attn: Dr. W. Kirk Suedmeyer
 Kansas City, MO 64132 USA
 Rcvd Date: 7/25/2008 11:45:00 AM Animal: LOIS MRN: 1670
 Admitted By: Suedmeyer, Dr. Species: Other Mammal Breed: Elephant
 Ordered By: N/A Age: 29 years Gender: Female
 Encounter: 00636928 Tag/Reg ID: Other ID:
 CR#: GL

N u t r i t i o n

Collected Date/Time (If Provided)	07/25/2008 11:45:00	Ref Range	Units
Procedure			
Vitamin E, Serum *	0.84		ug/mL
Vit E, Serum Interpretation	See Below		

WMS

07/25/2008 11:45:00 Vit E, Serum Interpretation

We've measured serum vitamin E in several hundred elephants of unknown nutritional background. The median concentration is about 1 ug/ml with a range from the 25th to 75th percentile of 0.75 to 1.3 ug/ml.

7/25/2008 11:45:00 AM Vitamin E, Serum:

Serum vitamin E concentration is a good indicator for vitamin E status. The animal requirement for vitamin E is not absolute, but varies on such things as the fatty acid profile of the diet and oxidative stress placed on the animal. Therefore, it is impossible to state what deficient, or adequate, vitamin E nutriture is for all situations.

M i n e r a l s

Collected Date/Time (If Provided)	07/25/2008 11:45:00	Ref Range	Units
Specimen	Serum		
Cobalt	0.71		ng/mL
Copper	0.94		ug/mL
Iron	94		ug/dL
Manganese	129.0		ng/mL
Molybdenum	17.0		ng/mL
Zinc	0.80		ug/mL
Selenium, Serum *	105		ng/mL

Looks all good

L = Low Result; H = High Result; @ = Critical Result; ^ = Corrected Result; * = Interpretive Data; # = Result Footnote

M i n e r a l s

Collected Date/Time (If Provided)	07/25/2008 11:45:00		
Procedure		Ref Range	Units
Trace Nutrients in Serum Interpretation	See Below		

07/25/2008 11:45:00 Trace Nutrients in Serum Interpretation

We don t have reference values for elephants for this serum mineral profile. For comparison, in adult horses adequate concentrations of serum copper range between 0.9 and 1.4 ug/mL, iron between 130 and 200 ug/dL, selenium between 120 and 180 ng/mL, and zinc between 0.6 and 1.7 ug/mL. Adequate in this case means there is no reason to expect a clinical response to increased dietary intake of those minerals. Animals are at risk of deficiency diseases if the serum concentration of copper is less than 0.75 ug/mL, iron less than 90 ug/dL, selenium less than 80 ng/mL, and zinc less than 0.45 ug/mL. Values between the deficiency concentrations and the adequate concentrations are marginal.

We have only recently been able to assay cobalt, manganese, and molybdenum concentrations in serum. We are working to develop better interpretations. For now I believe cobalt concentrations greater than 0.25 ng/mL and manganese concentrations between 0.5 and 2.0 ng/mL are adequate. Molybdenum is an essential nutrient, but we are usually more concerned about excess than deficiency. Typical serum concentrations in healthy horses range between 12 and 30 ng/mL.

T.H. Herdt DVM MS
Diplomate, American College of Veterinary Nutrition

7/25/2008 11:45:00 AM Selenium, Serum:

A small change has been made in the serum selenium reference ranges. This is due to application of a new technique for determining serum selenium. The new technique is known as ICP-MS and is the most sophisticated means of selenium analysis available. It combines the advantages of superior accuracy and excellent precision with high throughput and small sample size. A major advantage of this new instrument is in speed of analysis. We expect that you will see significant improvements in turn-around times on our selenium assays. We are pleased to offer this upgrade in our selenium testing services.

L = Low Result; H = High Result; @ = Critical Result; ^ = Corrected Result; * = Interpretive Data; # = Result Footnote

Medical History Report - Summary for Individual Specimen
KANSAS CITY ZOOLOGICAL PARK

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

.....2007....

9.May Clinical note recorded. (WKS)
10.May Clinical note recorded. (WKS)
11.May Clinical note recorded. (ERB)
21.May Clinical note recorded. (AML)
Clinical note recorded. (GLT)

22.May Clinical note recorded.
25.May Clinical note recorded.
26.May Blood sample:
WBC:9.70 *10⁹

ology results.
DL;

Lois

#pages: 44

27.May Clinical note recorded.
29.May Clinical note recorded.

1.Jun Clinical note recorded.
4.Jun Clinical note recorded.

7.Jul Clinical note recorded.
24.Jul Clinical note recorded.

1.Aug Urine sample
Blood sample
WBC:6.90 *10⁹

ogy/Chemistry/Serology results.
8 MG/DL;
1) Fecal sample.

Parasitology examination
NO PARASITES SEEN

Clinical note recorded. (ES)
6.Aug Clinical note recorded. (ERB)
15.Aug Clinical note recorded. (ERT)
31.Aug Clinical note recorded. (ES)

15.Sep Clinical note recorded. (WKS)
28.Sep Clinical note recorded. (ERT)

17.Oct Clinical note recorded. (DJS)
21.Oct Clinical note recorded. (ANL)

28.Nov Clinical note recorded. (GLT)
29.Nov Clinical note recorded. (GLT)

17.Dec Clinical note recorded. (KJO)
18.Dec Clinical note recorded. (ERT)
Clinical note recorded. (WKS)
19.Dec Clinical note recorded. (ERT)
Clinical note recorded. (WKS)
20.Dec Clinical note recorded. (ERT)

Medical History Report - Summary for Individual Specimen
KANSAS CITY ZOOLOGICAL PARK

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=====
LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 1670
African elephant                       Age: 30Y Est.        Birth: 17.Sep.1978
Name: LOIS
=====

```

.....2007...

20.Dec Clinical note recorded. (KJO)

.....2008...

15.Jan Clinical note recorded. (KJO)

17.Jan Clinical note recorded. (KJO)

18.Jan Clinical note recorded. (WKS)

22.Jan Clinical note recorded. (WKS)

23.Jan Clinical note recorded. (WKS)

24.Jan Clinical note recorded. (WKS)

6.May Clinical note recorded. (CSS)

8.May Clinical note recorded. (GLT)

Clinical note recorded. (KS)

12.May Clinical note recorded. (GLT)

15.May Clinical note recorded. (CSS)

Clinical note recorded. (GLT)

22.Jun Clinical note recorded. (CSS)

26.Jun Parasitology examination: (ROUTINE EXAM) Fecal sample.
MITE OVA/NO PARASITES SEEN

=====

LOXODONTA AFRICANA (no subsp)

African elephant

Name: LOIS

Sex: Female

Age: 30Y Est.

Acc. #: 1670

Birth: 17.Sep.1978

=====

Clinical Note:

9.May.2007

Supervisor radioed in pm and stated animal did not come up for hay-appears bloated on rt side and walking a little gingerly. Visual exam-inside stall-a little loose stool. Attitude is ok and moderate bloating on rt side noted. Auscultated some intestinal motility on rt side but limited due to size and height of animal. Palpated stifle-no warmth noted and still very solid patella? noted laterally. Observed climbing bars of stall. Raising left front, rt front and rt rear legs briefly and held trunk for several seconds. Supervisor does not know if loose stool occurred first or bloat. Disp 3g mineral oil-to give 2-3 gallons po (would not take directly), no grain but can place oil on better quality hay-took readily. Was eating produce well. Disp flunixin meglumine, 1500mg each-to give 2 tubes orally, as conspecific may have been injuring her (116 was in a "bad" mood today). Sample of stool for salmonella culture/PCR. No malodor to stool. (WKS)

Clinical Note:

10.May.2007

This am supervisor stated animal looks normal with normal stools. Can feed grain this am and treat as normal if acting normal-appears to be. (WKS)

=====
LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978
=====

Clinical Note:

11.May.2007

Texas Vet med and UMC microbiology
Texas Veterinary Medical Diagnostic laboratory system
Accession #C071310256
Received: 5/11/07
Report mailed 5/17/07

Specimen: Feces
Salmonellosis (genus) PCR: negative

WNL per WKS.

UMC microbiology
Accession #0711634
Received: 5/11/07
Reported: 5/21/07

Aerobic culture
Specimen: feces

Organism: No significant growth

Comments: The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

WNL per WKS. (ERB)

Clinical Note:

21.May.2007

Recheck for chronic intermittent stifle stiffness. Ambulation of right hind leg was stiff. upon palpation no heat was noted on stifle or footpad but firmness was present at stifle. Dispensed TMS/SMZ 960mg Tabs #500: Give 81 tab PO SID. Dispensed Banamine 1500mg/tubeL give 1.5 tube Po once for lameness. At 415pm recheck noted she was using stifle and leg more and seemed more comfortable. (AML)

Clinical Note:

21.May.2007

Dispensed TMS/SMZ 960mg tabs #500: Give 81 tab PO SID. Dispensed Banamine 1500mg/tube: Give 1.5 tube PO once for lameness. (GLT)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

=====

Clinical Note: 22.May.2007
Keeper reports she was walking better today. taking meds well. (AML)

Clinical Note: 25.May.2007
Visual exam on exhibit-moving ok but still not 100%. At 4:15, staff stated she refused am medications. Dispensed flunixin 1500mg 2 tubes-refused to take. Otherwise doing well, eating and stools normal. (WKS)

Clinical Note: 26.May.2007
Disp ibuprofen, 800mg, 30tabs po bid #500. To monitor response..Supervisor stated she was moving much better today. Did take am meds but refused pm meds. No new ventral edema noted. (WKS)

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

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=====
LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 1670
African elephant                         Age: 30Y Est.        Birth: 17.Sep.1978
Name: LOIS
=====

```

```

Collection Information >>
Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Active
Weight: 3843 Kg on 16.Nov.2005
Manual restraint used.

Date of Collection: 26.May.2007
Time of Collection: :
Collected by: SM
Sample Collection Site: EAR VEIN

```

```

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

Laboratory: ANTECH
Date of Analysis: 27.May.2007
Time of Analysis: 5:49
Analysis by:
Automated analysis.

```

```

Tests and Results >>

```

WHITE BLOOD CELL COUNT	9.7	*10 ³ /UL
RED BLOOD CELL COUNT	3.0	*10 ⁶ /UL
HEMOGLOBIN	13.1	GM/DL
HEMATOCRIT	< 31	%
MCV	<< 103	fL
MCH	43.7	uug
MCHC	>> 42.3	gm/dL
ESTIMATED PLATELET COUNT	ADEQU	
PLATELET COUNT	285	*10 ³ /UL
FIBRINOGEN	> 392	MG/DL
MEAN CORPUSCULAR HEMOGLOBIN	43.5	UUG
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION	42	%
MEAN CORPUSCULAR VOLUME	103	U(3)

```

Comments >>
RBC morphology normal
WBC are too degenerated to enable a differential to be performed.

```

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Collection Information >>

Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Active
Weight: 3843 Kg on 16.Nov.2005
Manual restraint used.

Date of Collection: 26.May.2007
Time of Collection: :
Collected by: SM
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: 27.May.2007
Time of Analysis: 5:49
Analysis by:
Automated analysis.

Tests and Results >>

GLUCOSE	83	MG/DL
BLOOD UREA NITROGEN	< 6	MG/DL
CREATININE	1.3	MG/DL
BUN/creatinine ratio	4.62	
CALCIUM	10.8	MG/DL
PHOSPHORUS	4.5	MG/DL
calcium/phosphorus ratio	2.40	
SODIUM	126	MEQ/L
POTASSIUM	< 4.2	MEQ/L
sodium/potassium ratio	30.0	
CHLORIDE	87	MEQ/L
CHOLESTEROL	53	MG/DL
TOTAL PROTEIN (COLORIMETRY)	8.1	GM/DL
ALBUMIN (COLORIMETRY)	3.4	GM/DL
GLOBULIN (COLORIMETRY)	> 4.7	GM/DL
albumin/globulin ratio	0.723	
ASPARTATE AMINOTRANSFERASE	14	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
ALKALINE PHOSPHATASE	< 60	IU/L
LACTATE DEHYDROGENASE	< 404	IU/L
CREATINE PHOSPHOKINASE	220	IU/L
ALBUMIN GLOBULIN RATIO	0.7	GM/DL
BUN/CREATININE RATIO	5	MG/DL
GAMMA GLUTAMYLTRANSFERASE	10	IU/L
SODIUM/POTASSIUM RATIO	30	RATIO

Comments >>

Values are essentially normal. Degenerated WBC either delay in assessment, or toxemia. WKS.

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

=====

Clinical Note:

27.May.2007

Dispensed TMS/SMZ tabs #500, give 81 tablets PO SID. Keepers stated this afternoon that they did not have any for this morning and didn't know if they were continuing the antibiotics. They did not radio this morning. (ANL)

Clinical Note:

29.May.2007

Dispensed Ibuprofen 800mg, #500; give 30 tablets PO BID. (MS)

Clinical Note:

1.Jun.2007

Stopped antibiotics and Ibuprofen-supervisor stated moving leg much better. (AML)

Clinical Note:

4.Jun.2007

Dispensed Novalsan cream; use gauze to apply moderate amount to underside of tail without touching incision twice daily (MS)

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Clinical Note:

7.Jul.2007

<<<Microbiology>>>

Sample Accession #:0715276

Laboratory:

Date Received: 6/28/07
Date Reported: 7/7/07

[] ANTECH
[] NVSL
[X] UMC
[] OTHER

Submission type:

- aerobic bacteriology
- anaerobic bacteriology
- comprehensive stool culture
- mycology
- enteric pathogen screen
- mycobacteria isolation
- other:

Sample source: Fecal

Organism:

- 1.
- 2.
- 3.

Comments: No significant growth. The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

WNL per WKS. (ERB)

Clinical Note:

24.Jul.2007

Keepers reported that she was moving slow yesterday and did not eat all of her grain. They report that she is acting completely normal today and that she ate all her food. (ES)

=====

LOXODONTA AFRICANA (no subsp)

Sex: Female

Acc. #: 1670

African elephant

Age: 30Y Est.

Birth: 17.Sep.1978

Name: LOIS

=====

Clinical Note:

1.Aug.2007

Annual exam. Ophtho exam - crosshatching of lens OU, appears like an irregularity in the lens. Arcus senilis noted OU. Pigment noted on the medial canthus side of the iris OS. Ears - right ear has loss of pigment on the back side. Left ear has pigment loss on the distal ventral medial aspect. Oral - unable to visualize lower molars. Abrasion on medial palate next to left upper molar. Mass on right stifle - very firm, bone-like on palpation. Potentially the patella off to the side. No heat noted. Feet - right front pad has shallow divits, but nothing deep or active. The left front pad has a shallow opening in the center of the pad, but is not swollen or painful. Both rear feet are normal. The right rear foot has a valgus deviation. Both rear legs are straight medially. Mammary glands are small and symmetrical. (ES)

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

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=====
LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 1670
African elephant                         Age: 30Y Est.         Birth: 17.Sep.1978
Name: LOIS
=====

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Collection Information >>

Health Status: Unknown

Date of Collection: 1.Aug.2007

Time of Collection: :

Collected by:

Sample Collection Site: from Floor

Weight: 3843 Kg on 16.Nov.2005

Analysis Information >>

Sample type: Urine

Storage: Refrigerated (<48 hours)

Sample Quality: No quality problems.

Laboratory: IN HOUSE

Date of Analysis: 1.Aug.2007

Time of Analysis:

Analysis by: ES

Manual analysis.

Tests and Results >>

APPEARANCE	CLEAR	
COLOR	LT YW	
PH	8.5	
SPECIFIC GRAVITY	1.030	
URINE BACTERIA	NEG	
URINE BILIRUBIN	NEG	
URINE BLOOD	NEG	
URINE CASTS	NEG	
URINE CRYSTALS	+++	
URINE EPITHELIAL CELLS	NEG	
URINE GLUCOSE	NEG	MG/DL
URINE KETONE	NEG	
URINE NITRITE	NEG	
URINE PROTEIN	NEG	
URINE RBC/HPF	NEG	
URINE UROBILINOGEN	NEG	
URINE WBC/HPF	NEG	

Comments >>

Crystals: Ca carbonate, amorphous phosphate, ammonium crystals

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Active
Weight: 3843 Kg on 16.Nov.2005
Manual restraint used.

Date of Collection: 1.Aug.2007
Time of Collection: 9:00.0
Collected by: SM
Sample Collection Site: EAR

Hematology >>

Analysis Information >>

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

Laboratory: ANTECH
Date of Analysis: 2.Aug.2007
Time of Analysis: 6:24
Analysis by:
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	<	6.9	*10 ³ /UL
RED BLOOD CELL COUNT		3.3	*10 ⁶ /UL
HEMOGLOBIN		14.6	GM/DL
HEMATOCRIT		41	%
MCV		124	fL
MCH		44.2	uug
MCHC		35.6	gm/dL
SEGMENTED NEUTROPHILS		33 (2.277)	% (*10 ³ /UL)
LYMPHOCYTES		36 (2.484)	% (*10 ³ /UL)
MONOCYTES		30 (2.070)	% (*10 ³ /UL)
EOSINOPHILS		1 (0.069)	% (*10 ³ /UL)
BASOPHILS		0	% (*10 ³ /UL)
ESTIMATED PLATELET COUNT	INC		
PLATELET COUNT		183	*10 ³ /UL
ABSOLUTE BASOPHILS		0	/UL
ABSOLUTE EOSINOPHILS		69	\UL
ABSOLUTE LYMPHOCYTES		2484	/UL
ABSOLUTE MONOCYTES		2070	/UL
ABSOLUTE SEGS		2277	/UL
FIBRINOGEN		<100	MG/DL
MEAN CORPUSCULAR HEMOGLOBIN		43.8	UUG
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION		36	%
MEAN CORPUSCULAR VOLUME		124	U(3)

Comments >>

Degeneration of WBCs - differential questionable
RBC morphology normal
Platelet clumps are present
Blood smear reviewed by technologist.

Clinical Pathology Records - Specimen Report
KANSAS CITY ZOOLOGICAL PARK

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Active
Weight: 3843 Kg on 16.Nov.2005
Manual restraint used.

Date of Collection: 1.Aug.2007
Time of Collection: 9:00.0
Collected by: SM
Sample Collection Site: EAR

Chemistry >>

Analysis Information >>

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

Laboratory: ANTECH
Date of Analysis: 2.Aug.2007
Time of Analysis: 6:24
Analysis by:
Automated analysis.

Tests and Results >>

GLUCOSE >>	116	MG/DL
BLOOD UREA NITROGEN	8	MG/DL
CREATININE	1.5	MG/DL
BUN/creatinine ratio	5.33	
CALCIUM	10.7	MG/DL
PHOSPHORUS <	4.0	MG/DL
calcium/phosphorus ratio	2.68	
SODIUM	126	MEQ/L
POTASSIUM	4.5	MEQ/L
sodium/potassium ratio	28.0	
CHLORIDE	89	MEQ/L
CHOLESTEROL	61	MG/DL
TOTAL PROTEIN (COLORIMETRY)	7.9	GM/DL
ALBUMIN (COLORIMETRY)	3.4	GM/DL
GLOBULIN (COLORIMETRY)	4.5	GM/DL
albumin/globulin ratio	0.756	
ASPARTATE AMINOTRANSFERASE <	11	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
ALKALINE PHOSPHATASE <	47	IU/L
LACTATE DEHYDROGENASE <	301	IU/L
CREATINE PHOSPHOKINASE	121	IU/L
ALBUMIN GLOBULIN RATIO	0.8	GM/DL
BUN/CREATININE RATIO	5	MG/DL
GAMMA GLUTAMYLTRANSFERASE	10	IU/L
SODIUM/POTASSIUM RATIO	28	RATIO

Comments >>

Increased Ca:P ratio but essentially normal bloodwork. WKS.

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female Acc. #: 1670
Age: 30Y Est. Birth: 17.Sep.1978

=====

Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: ROUTINE EXAM

Sample id.: 2007-0566
Date collected: 1.Aug.2007
Collected by: SM

Collected from:

From an individual specimen.

Enclosure: ELEPHANT

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 3.Aug.2007
by: ES

Tests & Results >>

DIRECT MICROSCOPIC EXAMINATION NO PARASITES SEEN
FLOATATION - ZINC SULFATE NO PARASITES SEEN

=====

LOXODONTA AFRICANA (no subsp)
 African elephant
 Name: LOIS

Sex: Female
 Age: 30Y Est.
 Birth: 17.Sep.1978

Acc. #: 1670

=====

Clinical Note:

6.Aug.2007

<<< Microbiology >>>

Date Received: 8/6/07
 Date Reported: 8/9/07

Sample Accession #:0717761
 Laboratory:
 LABCORP
 NVSL
 UMC

ANTECH

Sample Source: Right ear swab, left ear swab

Submission type:

- aerobic bacteriology
- anaerobic bacteriology
- comprehensive stool culture
- mycology
- enteric pathogen screen
- mycobacterial

Organism:	Growth:	heavy	moderate	light
Right ear swab				
1. Enterobacter cloacae		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right ear swab				
2. Aeromonas caviae		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right ear swab				
3. Enterobacter spp.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right ear swab				
4. Staphylococcus epidermidis		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left ear swab				
5. Serratia odorifera		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left ear swab				
6. E. coli		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***** S = SUSCEPTIBLE; I = INTERMEDIATE; R = RESISTANT

Sensitivity:		1	2	3	4	5	6
	Amikacin:	s	s	s	s	s	s
	Amoxi/Clav:	r	s	r	s	s	s

LOXODONTA AFRICANA (no subsp)
 African elephant
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Sex: Female
 Age: 30Y Est.

Acc. #: 1670
 Birth: 17.Sep.1978

Clinical Note:

6.Aug.2007

Ampicillin:	r	r	r	s	s	s
Cefazolin:	r	r	r	s	s	s
Cefoxitin:	r	s	r	s	s	s
Cefpodoxime:	s	s	s	s	s	s
Ceftiofur:	s	s	s	s	s	s
Cephalothin:	r	r	r	s	r	s
Chloramphenicol:	i	s	s	s	s	s
Clindamycin:	r	r	r	s	r	r
Enrofloxacin:	s	s	s	s	s	s
Erythromycin:	r	r	r	s	r	r
Gentamicin:	s	s	s	s	s	s
Imipenem:	s	s	s	s	s	s
Marbofloxacin:	s	s	s	s	s	s
Orbifloxacin:	s	s	s	s	s	s
Oxacil + 2% NaCl:	r	r	r	s	r	r
Penicillin:	r	r	r	s	r	r
Rifampin:	r	i	r	s	r	r
Tetracycline:	i	s	s	s	s	s
Ticar/Clav Acid:	s	s	s	s	s	s
Ticarcillin:	r	i	r	s	s	s
Trimeth/Sulfa:	r	s	s	s	s	s

Organism:

Growth: heavy moderate light

Left ear swab			
7. Leminorella spp.	[X]	[]	[]
Left ear swab			
8. Enterococcus spp.	[X]	[]	[]
Left ear swab			
9. Staphylococcus epidermidis	[X]	[]	[]
Right ear swab			
10. Streptococcus spp., alpha hemolytic	[X]	[]	[]

Comments: Aerobic right ear swab and left ear swab: Growth of the isolates was heavy and mixed on direct culture. The direct smear was negative for yeast.

Anaerobic right ear swab: Clostridium spp.
 Anaerobic left ear swab: No significant growth.

*****S = SUSCEPTIBLE; I = INTERMEDIATE; R = RESISTANT

Sensitivity: 7 | 8 | 9 | 10 | | |

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Clinical Note:

6.Aug.2007

Amikacin:	s	s	s	s		
Amoxi/Clav:	s	s	s	s		
Ampicillin:	s	s	s	s		
Cefazolin:	s	s	s	s		
Cefoxitin:	s	s	s	s		
Cefpodoxime:	s	s	s	s		
Ceftiofur:	s	s	s	s		
Cephalothin:	s	s	s	s		
Chloramphenicol:	s	s	s	s		
Clindamycin:	r	s	s	s		
Enrofloxacin:	s	s	s	s		
Erythromycin:	r	s	s	s		
Gentamicin:	s	s	s	s		
Imipenem:	s	s	s	s		
Marbofloxacin:	s	s	s	s		
Orbifloxacin:	s	s	s	s		
Oxacil + 2% NaCl:	r	s	s	s		
Penicillin:	r	s	s	s		
Rifampin:	r	s	s	s		
Tetracycline:	s	s	s	r		
Ticar/Clav Acid:	s	s	s	s		
Ticarcillin:	s	s	s	s		
Trimeth/Sulfa:	s	s	s			

Comments: All likely normal flora, entero, E. coli likely contaminant from trunk touching. WKS.
(ERB)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

=====

Clinical Note:

15.Aug.2007

UMC bacteriology results
Accession #0718477
Received: 8/15/07
Reported: 8/25/07

Aerobic culture
Specimen: Produce

Organism ID: no significant growth

Comments: 8/25/07. The sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

WNL per WKS. (ERT)

Clinical Note:

31.Aug.2007

Keeper supervisor reports 3-4 pea-sized, well circumscribed, smooth, raised masses approx 1-2cm in on the vaginal mucosa. Acting normally. Keepers to monitor and if they do not go away, will put in the restraint to examine. Keepers also to try to collect urine to check for infection. Keeper supervisor collected vulvar discharge. Has appearance of urine. Will run U/A tomorrow. (ES)

Clinical Note:

15.Sep.2007

PE for bilateral ocular epiphora-not present upon exam-had noted during windy days-likely secondary to wind irritation-have observed before. (WKS)

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Clinical Note:

28.Sep.2007

<<<Microbiology>>>

Sample Accession #:0721587

Laboratory:

Date Received: 9/28/07
Date Reported: 11/26/07

[] ANTECH
[] NVSL
[X] UMC
[] OTHER

Submission type:

- aerobic bacteriology
- anaerobic bacteriology
- comprehensive stool culture
- mycology
- enteric pathogen screen
- mycobacteria isolation
- other:

Sample source: Fecal

Organism:

- 1.
- 2.
- 3.

Comments: No significant growth. 10/9/07 The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

WNL. WKS. (ERT)

Clinical Note:

17.Oct.2007

Keepers reported that Lois had swelling ather tail base this AM. Upon observation the swelling had decreased after defecation by about half. There was still swelling at the base of the tail with an asymmetry of the right side. Her attitude and appetite are normal. Upon palpation of the swelling, it was noted to feel more lilke skin not mucosa.
CTM. (DJS)

=====
LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.
Acc. #: 1670
Birth: 17.Sep.1978
=====

Clinical Note: 21.Oct.2007
Swelling around rectum on right side still exists and does not appear to have decreased over the past couple days per keeper. (ANL)

Clinical Note: 28.Nov.2007
Vaccination: Keeper hosed off right triceps, sprayed area with Nolvasan and dried skin. Administered 1ml of Tetanus toxoid Fort Dodge #1630105A exp 10/6/08 IM. Veterinarian witnessed injection. (GLT)

Clinical Note: 29.Nov.2007
Visual recheck: No adverse vaccine reactions (soreness, lethargy, etc.) have been observed by keeper staff. (GLT)

Clinical Note: 17.Dec.2007
Visual exam. Keepers reported ventral edema. Continue to monitor. (KJO)

Clinical Note: 18.Dec.2007
National Veterinary Services Laboratory Results
Accession: 532521
Sampled: 12/18/07
Received: 12/21/07
Reported: 2/21/08

Mycobacteria Isolation
Diagnosis: no isolation made
Specimen: trunk wash.

WNL per WKS. (ERT)

Clinical Note: 18.Dec.2007
Obtained minimum 20cc trunk wash exudate after instilling 60cc sterile saline in trunk to evaluate TB status (annual test). Did well overall. Samples to be obtained on three different days; each elephant sampled 3 times. To freeze and send when testing complete to NVSL. (WKS)

=====
LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.
Acc. #: 1670
Birth: 17.Sep.1978
=====

Clinical Note: 19.Dec.2007

National Veterinary Services Laboratory Results
Accession: 532521
Sampled: 12/19/07
Received: 12/21/07
Reported: 2/21/08

Mycobacteria isolation
Diagnosis: no isolation made
Specimen submitted: trunk wash

WNL per WKS. (ERT)

Clinical Note: 19.Dec.2007

Trunk washes for annual TB testing as performed yesterday. M07074
ingested first bag for sampling yesterday, but had not passed it
today. Did very well today though. Samples frozen. (WKS)

Clinical Note: 20.Dec.2007

National Veterinary Services Laboratory Results
Accession: 532521
Sampled: 12/20/07
Received: 12/21/07
Reported: 2/21/08

Mycobacterial Isolation
Diagnosis: no isolation made
Specimen submitted: trunk wash

WNL per WKS. (ERT)

Clinical Note: 20.Dec.2007

Trunk wash for annual TB testing. (KJO)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

=====

Clinical Note: 15.Jan.2008
Atropine response test in left eye. Topically administered 1% Atropine sulfate solution in left eye at 11:31am. Dilation of pupil reported by keepers at 2:09pm. (KJO)

Clinical Note: 17.Jan.2008
Left eye still slightly dilated this pm. (KJO)

Clinical Note: 18.Jan.2008
This am-pupil normal size-took picture. Pupil responded to light-consider normal and effects of atropine have worn off. To complete opposite eye next week. (WKS)

Clinical Note: 22.Jan.2008
Applied .03cc 1% atropine sulfate OD for mydriasis study. To check every 30min today, then daily for effects. Did well. Obtained pictures 3:45-4:00-Mydriasis noted OD-obtained pictures. No other ophthalmic observations by staff-picked up food w/o missing/etc. (WKS)

Clinical Note: 23.Jan.2008
Mydriasis still present-obtained pictures O.D. (WKS)

Clinical Note: 24.Jan.2008
Mydriasis still present-obtained pictures. (WKS)

Clinical Note: 6.May.2008
Dispensed 19g butterfly cath for elephant blood draws. (CSS)

Clinical Note: 8.May.2008
Found on exhibit with twine in fecal bolus was also a blue cotton lanyard in the fecal bolus similar to those used for training whistles although no whistle was found. (GLT)

LOXODONTA AFRICANA (no subsp)
African elephant
Name: LOIS

Sex: Female
Age: 30Y Est.

Acc. #: 1670
Birth: 17.Sep.1978

Clinical Note: 8.May.2008
Keeper found a piece of twine in the feces of one animal on exhibit.
(KS)

Clinical Note: 12.May.2008
Keeper communication: Small crack/chip noted on distal tip of left tusk. Animal would not come over for visual exam. Keepers to alert AHC if crack/chip becomes larger. Animal is acting normal with normal appetite. (GLT)

Clinical Note: 15.May.2008
Dispensed 1 bottle Hooflex. Apply as needed to nails when performing foot work. Dispensed 1 flat tiger top tubes and 1 sleeve gauze for blood draws. (CSS)

Clinical Note: 15.May.2008
Communication with keeper: Twine found in feces on exhibit. Unknown which elephant passed the fecal bolus containing the foreign body. (GLT)

Clinical Note: 22.Jun.2008
Dispensed 1 jar Hooflex. Apply as needed when performing foot work. (CSS)

Submission Data >>
Type: Fecal sample
Purpose: ROUTINE EXAM

Sample id.: 2008-0510
Date collected: 26.Jun.2008
Collected by: PYT

Collected from:
From an individual specimen.

Enclosure: STALL 3

Examination Data >>
Storage: refrigerated
Consistency: soft
Gross appearance: Typical

Date examined: 26.Jun.2008

by: ANL

Tests & Results >>
DIRECT MICROSCOPIC EXAMINATION MITE OVA
FLOATATION - ZINC SULFATE NO PARASITES SEEN

1+

Clinical Pathology Records Report - ISIS/In-House Reference Values
 KANSAS CITY ZOOLOGICAL PARK

Scientific name: *LOXODONTA AFRICANA*
 Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	10.50 ± 2.648		4.500	22.10	(1544)
RBC	*10 ⁶ /UL	3.15 ± 0.40		2.05	4.80	(1480)
HGB	GM/DL	13.7 ± 1.6		7.0	26.1	(1522)
HCT	%	39.5 ± 4.6		27.0	56.0	(1984)
MCH	MG/DL	43.6 ± 3.0		34.8	66.8	(1454)
MCHC	uug	34.7 ± 2.0		18.4	57.9	(1501)
MCV	fL	125.8 ± 8.1		91.1	190.0	(1466)
SEGS	*10 ³ /UL	3.146 ± 1.695		0.000	11.80	(1224)
BANDS	*10 ³ /UL	0.843 ± 0.799		0.000	6.530	(605)
LYMPHOCYTES	*10 ³ /UL	4.913 ± 2.532		0.022	17.40	(1236)
MONOCYTES	*10 ³ /UL	1.513 ± 1.651		0.000	9.480	(1175)
EOSINOPHILS	*10 ³ /UL	0.225 ± 0.273		0.000	2.898	(885)
BASOPHILS	*10 ³ /UL	0.049 ± 0.081		0.000	0.525	(464)
NRBC	/100 WBC	0 ± 1		0	3	(92)
PLATE. CNT.	*10 ³ /UL	417 ± 245		74	1380	(215)
RETICS	%	0.0 ± 0.0		0.0	0.0	(7)
GLUCOSE	MG/DL	84 ± 15		38	174	(1437)
BUN	MG/DL	10 ± 3		0	22	(1458)
CREAT.	MG/DL	1.5 ± 0.5		0.0	11.0	(1405)
URIC ACID	MG/DL	0.2 ± 0.4		0.0	5.1	(466)
CA	MG/DL	10.9 ± 0.6		8.1	15.3	(1434)
PHOS	MG/DL	4.9 ± 0.8		2.8	8.2	(1291)
NA	MEQ/L	129 ± 4		107	182	(1353)
K	MEQ/L	4.8 ± 0.5		3.3	7.6	(1368)
CL	MEQ/L	88 ± 4		67	129	(1323)
IRON	MCG/DL	79 ± 42		8	174	(54)
MG	MG/DL	1.97 ± 0.75		0.65	4.20	(98)
HCO3	MMOL/L	25.1 ± 3.6		13.0	31.0	(44)
CHOL	MG/DL	68 ± 17		0	234	(1290)
TRIG	MG/DL	64 ± 31		0	179	(1124)
T. PROT. (C)	GM/DL	7.7 ± 0.6		5.8	10.5	(1261)
T. PROT. (R)	GM/DL	8.0 ± 0.4		7.4	8.6	(8)
ALBUMIN (C)	GM/DL	3.6 ± 0.4		2.4	5.2	(1145)
GLOBULIN (C)	GM/DL	4.1 ± 0.5		2.6	6.4	(1135)
AST (SGOT)	IU/L	24 ± 10		6	93	(1398)
ALT (SGPT)	IU/L	7 ± 6		0	40	(547)
T. BILI.	MG/DL	0.2 ± 0.1		0.0	1.0	(1187)
D. BILI	MG/DL	0.1 ± 0.1		0.0	0.3	(154)
I. BILI.	MG/DL	0.1 ± 0.1		0.0	0.9	(152)
AMYLASE	U/L	3075 ± 1552		0	7918	(241)
ALK. PHOS.	IU/L	128 ± 61		32	441	(1404)
LDH	IU/L	988 ± 568		157	4306	(1099)

Clinical Pathology Records Report - ISIS/In-House Reference Values
KANSAS CITY ZOOLOGICAL PARK

Scientific name: *LOXODONTA AFRICANA*

Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
CPK	IU/L	256 ±	196	18	1884	(247)
OSMOLARITY	MOSMOL/L	259 ±	4	246	272	(689)
ALPHA GLOB.	MG/DL	0.7 ±	0.0	0.7	0.7	(1)
ALPHA-1 GLOB	MG/DL	0.7 ±	0.2	0.2	0.8	(8)
ALPHA-2 GLOB	MG/DL	1.0 ±	0.3	0.8	1.6	(8)
BETA GLOB.	MG/DL	1.2 ±	0.8	0.6	1.7	(2)
Body Temperature:		39.0 ±	0.0	39.0	39.0	(1)
CO2	MMOL/L	27.0 ±	3.1	12.0	61.4	(840)
ESR	MM/HR	27 ±	0	27	27	(1)
FIBRINOGEN	MG/DL	238 ±	139	0	600	(70)
GGT	IU/L	12 ±	5	0	37	(389)
LIPASE	U/L	7 ±	7	0	45	(66)
PROGESTERONE	NG/DL	144.8 ±	216.4	0.060	1005	(266)
TESTOSTERONE	NG/ML	1.010 ±	1.117	0.220	1.800	(2)
TOTAL T4	MCG/DL	8.2 ±	1.3	6.9	9.5	(3)
T3 (RIA)	NG/ML	209.0 ±	0.0	209.0	209.0	(1)
ALBUMIN (E)	GM/DL	4.4 ±	0.3	4.1	4.9	(7)
GAMMA GLOB	GM/DL	1.6 ±	0.4	0.7	1.9	(7)



Texas Veterinary Medical Diagnostic Laboratory System



Final Report

P.O. Drawer 3040, College Station, TX 77841-3040
Phone: (979)845-3414 Fax: (979)845-1794 <http://tvmdlweb.tamu.edu/>

(816)513-4669

Owner's Name:
African Elephant - Lois

Veterinarian/Submitter: Account ID#: 22643
Animal Health Center
Kansas City Zoological Park
Attention: Dr. Kirk Suedmeyer
6700 Zoo Drive
Kansas City, MO 64114

Date specimens received: 5/11/07

Preliminary reports:

Phone reports:

Final report: Mail 5/17/07

Species: Exotic **Age:** 28.80 Years **Animal ID:** Lois
Breed: Elephant **Weight:** 3843 Kilograms **Sex:** Female

1670

Tests Requested: Salmonella PCR

Specimens Submitted: feces /mb

Clinical History: 5/10/07. Lois is having loose stool. There is a history of Salmonella in the collection.

Clinical Diagnosis:

Previous Cases:

Treatment:

Conclusion/Interpretation of Lab Findings:

Laboratory results as listed.

WAL
B

LABORATORY TEST STATUS:**Ordered Current Status**

Salmonellosis (genus) PCR (M)

5/11/07

Completed 5/17/07

Molecular Diagnostics**Salmonellosis (genus) PCR**

Completed: 5/17/07

Animal/Specimen ID	Specimen	Result
Lois	Feces	Negative

Veterinary Bulletin:

Auto-email of TVMDL case reports: TVMDL can auto-email laboratory reports directly to TVMDL account holders with email reporting. Reports are sent in Adobe Acrobat (.pdf) file format. The benefits are two-fold: 1) You get your results within minutes after they are available. 2) You save \$1.00/case on fax charges.

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<http://www.adobe.com/products/acrobat/readstep2.html>

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Kansas City Zoo
 Swope Park
 Kansas City, MO 64132
 Tel: 816-513-5700
 Fax: 816-513-4667

Client # 97779
 Chart # 1670

Accession No. CHBC15521391	Doctor NOT STATED	Owner NOT STATED	Pet Name LOIS	Received 05/27/2007
Species Other	Breed	Sex F	Pet Age 29Y	Reported 05/27/2007 05:49 AM

Test Requested	Results	Reference Range	Units
BASIC EQUINE SCREEN			
AST (SGOT)	14		IU/L
Total Bilirubin	0.2		mg/dL
Alkaline Phosphatase	60		IU/L
GGT	10		IU/L
Total Protein	8.1		g/dL
Albumin	3.4		g/dL
Globulin	4.7		g/dL
A/G Ratio	0.7		
Cholesterol	53		mg/dL
BUN	6		mg/dL
Creatinine	1.3		mg/dL
BUN/Creatinine Ratio	5		
Phosphorus	4.5		mg/dL
Calcium	10.8		mg/dL
Glucose	83		mg/dL
Sodium	126		mEq/L
Potassium	4.2		mEq/L
Na/K Ratio	30		
Chloride	87		mEq/L
CPK	220		IU/L
LDH	404		IU/L
COMPLETE BLOOD COUNT			
WBC	9.7		10 ³ /μL
RBC	3.0		10 ⁶ /μL
HGB	13.1		g/dL
HCT	31		%
MCV			fL
MCV = 103			
MCH	43.5		pg
MCHC	42		%
Comment			
RBC MORPHOLCGY	NORMAL		
Platelet Estimate	Adequate		
Platelet Count	285		10 ³ /μL
Comment			
WBC ARE TOO DEGENERATED TO ENABLE A DIFFERENTIAL TO BE PERFORMED.			

*Values are essentially
 normal. Degenerated WBC
 either due to capillary
 or proteinuria*

Accession No
CHBC15521391

Doctor
NOT STATED

Owner
NOT STATED

Pet Name
LOIS

Test Requested	Results	Reference Range	Units
----------------	---------	-----------------	-------

Blood smear reviewed by technologist.

FIBRINOGEN (SEMI-QUANTITATIVE)

Fibrinogen, Semi-Quantitative	392		mg/dl
-------------------------------	-----	--	-------

VET MED DIAGNOSTIC LAB
P.O. BOX 6023COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411Owner: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132Accession Number: 0715276
Reference Number: 1670 ELEPHANT
Case Coordinator: William Fales MS, Ph.D
Received: 06/28/2007 Finalized: 07/07/2007To: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132Sampled:
Veterinarian: DR. WM KIRK SUEDEMEYER
Client: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER

Final Report

BACTERIOLOGY RESULTS

AEROBIC CULTURE

SPECIES	Misc
BREED	Elephant
ANIMAL ID	1670
SPECIMEN #	Fecal salmonella screen
ORGANISM ID	NO SIGNIFICANT GROWTH
COMMENTS	7.7.07 The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

THIS TIME DATED REPORT SUPERSEDES ALL PREVIOUS REPORTS ON THIS VMDL ACCESSION.



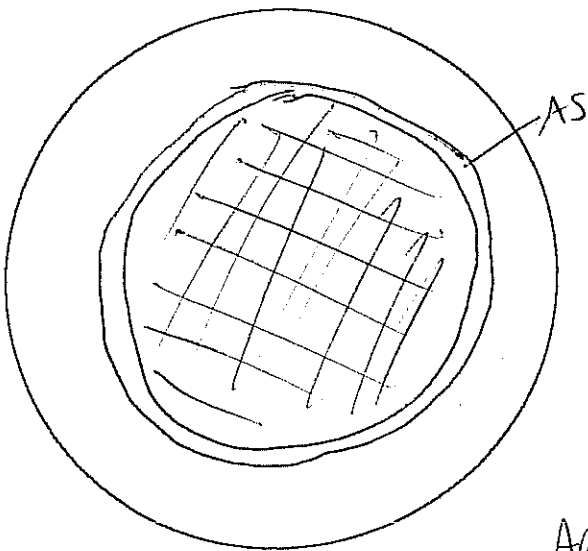
Kansas City Zoo
Ophthalmic Exam

Date 8-1-07

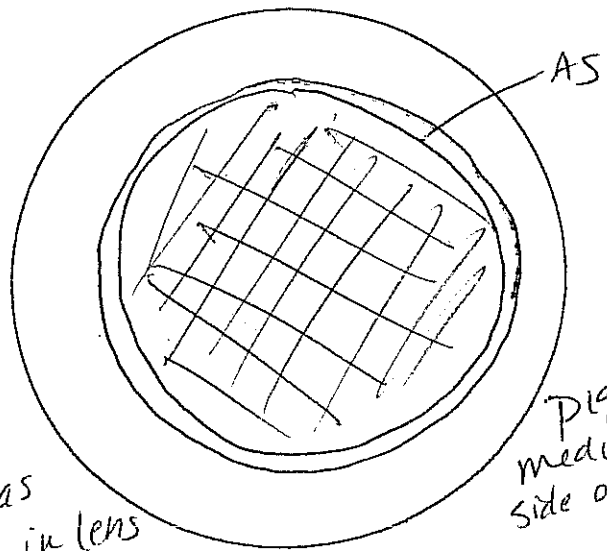
Species African Elephant

ISIS # 1670

House Name LOIS



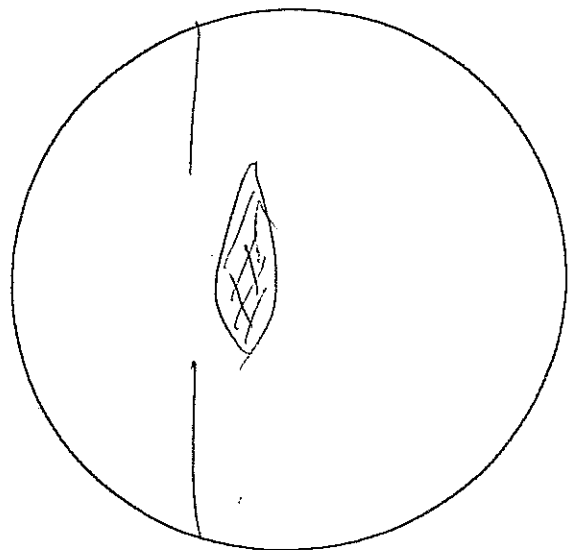
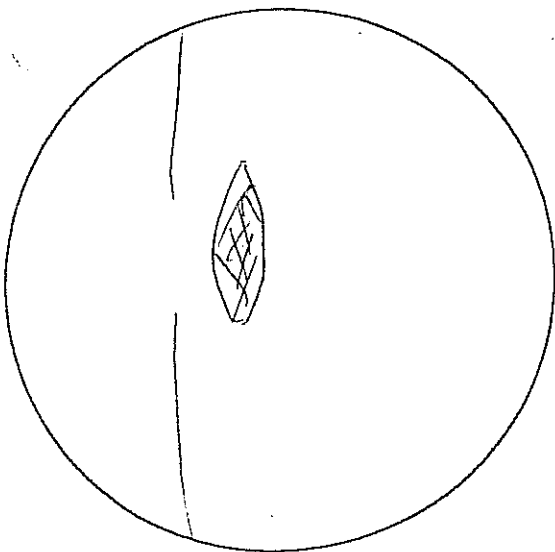
OD



OS

*Appears as
irregularity in lens*

*Pigment on
medial canth
side of iris*



VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Owner: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Accession Number: 0717761
Reference Number: 1670
Case Coordinator: William Fates MS, Ph.D
Received: 08/06/2007 Finalized: 08/09/2007

To: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Sampled:
Veterinarian: DR. WM KIRK SUEDEMEYER
Client: KANSAS CITY ZOO, ATTN: DR. SUEC

Final Report

BACTERIOLOGY RESULTS

AEROBIC CULTURE

1	SPECIES	Misc
	BREED	Elephant
	ANIMAL ID	1670
	SPECIMEN #	Right Ear swab
	ORGANISM ID	ENTEROBACTER CLOACAE
	ORGANISM ID	AEROMONAS CAVIAE
	ORGANISM ID	ENTEROBACTER SPP
	ORGANISM ID	STREPTOCOCCUS SPP, ALPHA HEMOLYTIC
	COMMENTS	Growth of the isolates was heavy and mixed on direct culture. The direct smear was negative for yeast.

2	SPECIES	Misc
	BREED	Elephant
	ANIMAL ID	1670
	SPECIMEN #	Left ear swab
	ORGANISM ID	SERRATIA ODORIFERA
	ORGANISM ID	E. COLI
	ORGANISM ID	LEMINORELLA SPP
	ORGANISM ID	ENTEROCOCCUS SPP
	ORGANISM ID	STAPHYLOCOCCUS EPIDERMIDIS
	COMMENTS	Growth of the isolates was heavy and mixed on direct culture. The direct smear was negative for yeast.

ANAEROBIC CULTURE

1	SPECIES	Misc
	BREED	Elephant
	ANIMAL ID	1670

*All likely mixed flora enter
E coli likely contaminant
from trunk touch*

UNIVERSITY OF MISSOURI
VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 0717761

BACTERIOLOGY RESULTS

1	SPECIMEN #	Right Ear swab
	ORGANISM ID	CLOSTRIDIUM SPP
2	SPECIES	Misc
	BREED	Elephant
	ANIMAL ID	1670
	SPECIMEN #	Left Ear swab
	ORGANISM ID	NO SIGNIFICANT GROWTH

SMALL ANIMAL SUSCEPT

1	ANIMAL ID	1670
	SPECIMEN #	Right ear swab
	ORGANISM ID	ENTEROBACTER CLOACAE
	COMMENTS	CONCENTRATIONS IN UG/ML
2	ANIMAL ID	1670
	SPECIMEN #	Right ear swab
	ORGANISM ID	AEROMONAS CAVIAE
	COMMENTS	CONCENTRATIONS IN UG/ML
3	ANIMAL ID	1670
	SPECIMEN #	Right ear swab
	ORGANISM ID	ENTEROBACTER SPP
	COMMENTS	CONCENTRATIONS IN UG/ML
4	ANIMAL ID	1670
	SPECIMEN #	Right ear swab
	ORGANISM ID	STAPHYLOCOCCUS EPIDERMIDIS
	COMMENTS	CONCENTRATIONS IN UG/ML
5	ANIMAL ID	1670
	SPECIMEN #	Left ear swab
	ORGANISM ID	SERRATIA ODORIFERA
	COMMENTS	CONCENTRATIONS IN UG/ML
6	ANIMAL ID	1670
	SPECIMEN #	Left ear swab
	ORGANISM ID	E. COLI
	COMMENTS	CONCENTRATIONS IN UG/ML
7	ANIMAL ID	1670
	SPECIMEN #	Left ear swab
	ORGANISM ID	LEMINORELLA SPP
	COMMENTS	CONCENTRATIONS IN UG/ML
8	ANIMAL ID	1670
	SPECIMEN #	Left ear swab

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 0717761

BACTERIOLOGY RESULTS

8	ORGANISM ID	ENTEROCOCCUS SPP
	COMMENTS	CONCENTRATIONS IN UG/ML
9	ANIMAL ID	1670
	SPECIMEN #	Left ear swab
	ORGANISM ID	STAPHYLOCOCCUS EPIDERMIDIS
	COMMENTS	CONCENTRATIONS IN UG/ML
10	ANIMAL ID	1670
	SPECIMEN #	Right Ear
	ORGANISM ID	STREPTOCOCCUS SPP, ALPHA HEMOLYTIC

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 0717751

BACTERIOLOGY RESULTS

Antibiotic Susceptibility Pattern

	AEROMONAS CAVIAE - 2	E. COLI - 6
AMIKACIN	S <=4.0000(4 - 32)	S <=4.0000(4 - 32)
AMOXI/CLAV	S 8.0000(4/2 - 32/16)	S <=4.0000(4/2 - 32/16)
AMPICILLIN	R >16.0000(0.25 - 16)	S 1.0000(0.25 - 16)
CEFAZOLIN	R >16.0000(2 - 16)	S <=2.0000(2 - 16)
CEFOXITIN	S 4.0000(2 - 16)	S <=2.0000(2 - 16)
CEFDIOXIME	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFTIOFUR	S 2.0000(0.25 - 4)	S <=0.2500(0.25 - 4)
CEPHALOTHIN	R >16.0000(2 - 16)	S 4.0000(2 - 16)
CHLORAMPHENICOL	S <=4.0000(4 - 16)	S <=4.0000(4 - 16)
CLINDAMYCIN	R >2.0000(0.25 - 2)	R >2.0000(0.25 - 2)
ENROFLOXACIN	S <=0.5000(0.5 - 4)	S <=0.5000(0.5 - 4)
ERYTHROMYCIN	R >4.0000(0.5 - 4)	R >4.0000(0.5 - 4)
GENTAMICIN	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
IMIPENEM	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
MARBOFLOXACIN	S <=0.2500(0.25 - 2)	S <=0.2500(0.25 - 2)
ORBIFLOXACIN	S <=1.0000(1 - 4)	S <=1.0000(1 - 4)
OXACIL + 2% NAACL	R >4.0000(2 - 4)	R >4.0000(2 - 4)
PENICILLIN	R >8.0000(0.05 - 8)	R >8.0000(0.05 - 8)
RIFAMPIN	I 2.0000(1 - 2)	R >2.0000(1 - 2)
TETRACYCLINE	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
TICAR/CLAV ACID	S <=8.0000(8 - 64)	S <=8.0000(8 - 64)
TICARCILLIN	I 32.0000(8 - 64)	S <=8.0000(8 - 64)
TRIMETH/SULFA	S <=0.5000(0.5/9.5 - 2/38)	S <=0.5000(0.5/9.5 - 2/38)

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 0717761

BACTERIOLOGY RESULTS

	ENTEROBACTER CLOACAE - 1	ENTEROBACTER SPP - 3
AMIKACIN	S <=4.0000(4 - 32)	S <=4.0000(4 - 32)
AMOXI/CLAV	R 8.0000(4/2 - 32/16)	R 32.0000(4/2 - 32/16)
AMPICILLIN	R >16.0000(0.25 - 16)	R >16.0000(0.25 - 16)
CEFAZOLIN	R >16.0000(2 - 16)	R >16.0000(2 - 16)
CEFOXITIN	R 8.0000(2 - 16)	R >16.0000(2 - 16)
CEFPODOXIME	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFTIOFUR	S 2.0000(0.25 - 4)	S 0.5000(0.25 - 4)
CEPHALOTHIN	R >16.0000(2 - 16)	R >16.0000(2 - 16)
CHLORAMPHENICOL	I 16.0000(4 - 16)	S <=4.0000(4 - 16)
CLINDAMYCIN	R >2.0000(0.25 - 2)	R >2.0000(0.25 - 2)
ENROFLOXACIN	S <=0.5000(0.5 - 4)	S <=0.5000(0.5 - 4)
ERYTHROMYCIN	R >4.0000(0.5 - 4)	R >4.0000(0.5 - 4)
GENTAMICIN	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
IMIPENEM	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
MARBOFLOXACIN	S <=0.2500(0.25 - 2)	S <=0.2500(0.25 - 2)
ORBIFLOXACIN	S <=1.0000(1 - 4)	S <=1.0000(1 - 4)
OXACIL + 2% NACL	R >4.0000(2 - 4)	R >4.0000(2 - 4)
PENICILLIN	R >8.0000(0.05 - 8)	R >8.0000(0.05 - 8)
RIFAMPIN	R >2.0000(1 - 2)	R >2.0000(1 - 2)
TETRACYCLINE	I 8.0000(1 - 8)	S 2.0000(1 - 8)
TICAR/CLAV ACID	S 16.0000(8 - 64)	S <=6.0000(8 - 64)
TICARCILLIN	R >64.0000(8 - 64)	R <=8.0000(8 - 64)
TRIMETH/SULFA	R >2.0000(0.5/9.5 - 2/38)	S <=0.5000(0.5/9.5 - 2/38)

VET MED DIAGNOSTIC LAB
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BACTERIOLOGY RESULTS

	ENTEROCOCCUS SPP - 8	LEMINORELLA SPP - 7
AMIKACIN	S 16.0000(4 - 32)	S <=4.0000(4 - 32)
AMOXICLAV	S <=4.0000(4/2 - 32/16)	S <=4.0000(4/2 - 32/16)
AMPICILLIN	S <=0.2500(0.25 - 16)	S 1.0000(0.25 - 16)
CEFAZOLIN	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFOXITIN	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFPodoxime	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFTIOFUR	S <=0.2500(0.25 - 4)	S <=0.2500(0.25 - 4)
CEPHALOTHIN	S <=2.0000(2 - 16)	S 4.0000(2 - 16)
CHLORAMPHENICOL	S <=4.0000(4 - 16)	S <=4.0000(4 - 16)
CLINDAMYCIN	S <=0.2500(0.25 - 2)	R >2.0000(0.25 - 2)
ENROFLOXACIN	S <=0.5000(0.5 - 4)	S <=0.5000(0.5 - 4)
ERYTHROMYCIN	S <=0.5000(0.5 - 4)	R >4.0000(0.5 - 4)
GENTAMICIN	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
MIPENEM	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
MARBOFLOXACIN	S 0.5000(0.25 - 2)	S <=0.2500(0.25 - 2)
ORBIFLOXACIN	S <=1.0000(1 - 4)	S <=1.0000(1 - 4)
OXACIL - 2% NACL	S <=2.0000(2 - 4)	R >4.0000(2 - 4)
PENICILLIN	S <=0.0600(0.06 - 6)	R 8.0000(0.06 - 8)
RIFAMPIN	S <=1.0000(1 - 2)	R >2.0000(1 - 2)
TETRACYCLINE	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
TICAR/CLAV ACID	S <=8.0000(8 - 64)	S <=6.0000(8 - 64)
TICARCILLIN	S <=8.0000(8 - 64)	S <=6.0000(8 - 64)
TRIMETH/SULFA	S <=0.5000(0.5/9 5 - 2/38)	S <=0.5000(0.5/9 5 - 2/38)

VET MED DIAGNOSTIC LAB
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Final Report

Accession Number: 0717761

BACTERIOLOGY RESULTS

	SERRATIA ODORIFERA - 5	STAPHYLOCOCCUS EPIDERMIDIS - 4
AMIKACIN	S <=4.0000(4 - 32)	S <=4.0000(4 - 32)
AMOXICLAV	S <=4.0000(4/2 - 32/16)	S <=4.0000(4/2 - 32/16)
AMPICILLIN	S 4.0000(0.25 - 16)	S <=0.2500(0.25 - 16)
CEFAZOLIN	S 4.0000(2 - 16)	S <=2.0000(2 - 16)
CEFOXITIN	S 4.0000(2 - 16)	S <=2.0000(2 - 16)
CEFTIOXIME	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFTIOFUR	S 1.0000(0.25 - 4)	S 0.5000(0.25 - 4)
CEPHALOTHIN	R >16.0000(2 - 16)	S <=2.0000(2 - 16)
CHLORAMPHENICOL	S <=4.0000(4 - 16)	S <=4.0000(4 - 16)
CLINDAMYCIN	R >2.0000(0.25 - 2)	S <=0.2500(0.25 - 2)
ENROFLOXACIN	S <=0.5000(0.5 - 4)	S <=0.5000(0.5 - 4)
ERYTHROMYCIN	R >4.0000(0.5 - 4)	S <=0.5000(0.5 - 4)
GENTAMICIN	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
IMIPENEM	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
MARBOFLOXACIN	S <=0.2500(0.25 - 2)	S <=0.2500(0.25 - 2)
ORBIFLOXACIN	S <=1.0000(1 - 4)	S <=1.0000(1 - 4)
OXACIL - 2% NACL	R >4.0000(2 - 4)	S <=2.0000(2 - 4)
PENICILLIN	R >8.0000(0.06 - 8)	S <=0.0600(0.06 - 8)
RIFAMPIN	R >2.0000(1 - 2)	S <=1.0000(1 - 2)
TETRACYCLINE	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
TICAR/CLAV ACID	S <=8.0000(8 - 64)	S <=8.0000(8 - 64)
TICARCILLIN	S <=8.0000(8 - 64)	S <=8.0000(8 - 64)
TRIMETH/SULFA	S <=0.5000(0.5/9.5 - 2/38)	S <=0.5000(0.5/9.5 - 2/38)

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 07-7761

BACTERIOLOGY RESULTS

	STAPHYLOCOCCUS EPIDERMIDIS - 9	STREPTOCOCCUS SPP, ALPHA HEM - 10
AMIKACIN	S <=4.0000(4 - 32)	S 16.0000(4 - 32)
AMOXI/CLAV	S <=4.0000(4/2 - 32/16)	S <=4.0000(4/2 - 32/16)
AMPICILLIN	S <=0.2500(0.25 - 16)	S <=0.2500(0.25 - 16)
CEFAZOLIN	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFOXITIN	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFPODOXIME	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CEFTIOFUR	S 0.5000(0.25 - 4)	S <=0.2500(0.25 - 4)
CEPHALOTHIN	S <=2.0000(2 - 16)	S <=2.0000(2 - 16)
CHLORAMPHENICOL	S <=4.0000(4 - 16)	S <=4.0000(4 - 16)
CLINDAMYCIN	S <=0.2500(0.25 - 2)	S <=0.2500(0.25 - 2)
ENROFLOXACIN	S <=0.5000(0.5 - 4)	S <=0.5000(0.5 - 4)
ERYTHROMYCIN	S <=0.5000(0.5 - 4)	S <=0.5000(0.5 - 4)
GENTAMICIN	S <=1.0000(1 - 8)	S 2.0000(1 - 8)
IMIPENEM	S <=1.0000(1 - 8)	S <=1.0000(1 - 8)
MARBOFLOXACIN	S <=0.2500(0.25 - 2)	S 0.5000(0.25 - 2)
ORBIFLOXACIN	S <=1.0000(1 - 4)	S <=1.0000(1 - 4)
OXACIL - 2% NACL	S <=2.0000(2 - 4)	S <=2.0000(2 - 4)
PENICILLIN	S <=0.0600(0.06 - 8)	S <=0.0600(0.06 - 8)
RIFAMPIN	S <=1.0000(1 - 2)	S <=1.0000(1 - 2)
TETRACYCLINE	S <=1.0000(1 - 8)	R >8.0000(1 - 8)
TICAR/CLAV ACID	S <=8.0000(8 - 64)	S <=8.0000(8 - 64)
TICARCILLIN	S <=8.0000(8 - 64)	S <=8.0000(8 - 64)
TRIMETH/SULFA	S <=0.5000(0.5/9.5 - 2/38)	S <=0.5000(0.5/9.5 - 2/38)

This is an "in vitro" test that may not reflect clinical outcome.

THIS TIME DATED REPORT SUPERSEDES ALL PREVIOUS REPORTS ON THIS VMDL ACCESSION.

URINALYSIS REPORT
KANSAS CITY ZOO

Animal: Lois

ISIS #: 1670

Date Collected: 8/1/07

Date Analyzed: 8/1/07

Sample Collection: sterile
free catch
cage floor
cystocentesis

Sample Storage: room
refrigerated
frozen

Analysis by ES

Color: light yellow

Appearance: clear

Specific Gravity: 1.030

Nitrite: Neg

Urobilinogen: Neg

Protein: Neg

pH: 8.5

Blood: Neg

Ketone: Neg

Bilirubin: Neg

Glucose: Neg

RBC/hpf: Neg

WBC/hpf: Neg

Bacteria: Neg

Casts: Neg

Crystals: Ca Carbonate, Amorphous phosphate
Ammonium crystals

Epithelial cells: Neg

Comments:

Parasitology Submission and Examination Worksheet

SUBMISSION DATA: (complete the top part of this form)

Species/Common Name(s): LOIS

African Elephant

Accession Number(s): 11670

Date collected: 01/08/07
d d m m y y

Collected by: _____

From enclosure: _____

Type of sample submitted:

- A. Fecal sample
- B. Rectal swab
- C. Skin scraping
- D. Ear swab/wash
- Other: _____

Reason/Purpose for submission:

- 1. Routine exam
- 2. Follow-up/Recheck exam
- 3. Diagnostic exam
- 4. Pre-shipment exam
- 5. Quarantine exam (number not specified)
- 6. Quarantine exam #1
- 7. Quarantine exam #2
- 8. Quarantine exam #3
- Other reason _____

Gross appearance:

- 1. Typical
- 2. Atypical

**** FOR LABORATORY USE ONLY (below this line) ****

Date of Examination: 03/15/08
d d m m y y

Examined by: 1. KMP
 2. WKS
 Other: ES

Sample storage conditions:

- 1. Room/ambient temperature
- 2. Refrigerated
- 8. Other conditions - specify in Comments
- 9. Not specified

Sample consistency:

- 1. Liquid/watery
- 2. Soft
- 3. Formed
- 4. Hard/dry
- 5. Not specified

Unusual gross findings in stool:

- 1. Fresh blood
- 2. Excessive mucus
- 3. Melena or tarry
- 4. Foamy - excess gas
- 5. Adult/larval parasite
- 6. None

Was there a problem with the sample or the examination that requires that the sample submission be repeated?

Yes No

Comments: _____

Test codes:

- 1. Direct Microscopic Exam
- 2. Floatation - Zinc sulfate
- 3. Baermann Sedimentation
- 4. Centrifugation
- 5. Gross Microscopic Exam
- 6. Gram Stain
- 7. Other: _____

Test	Results	Quantity
Direct	NPS	
Floatation	NPS	
Gram Stain	Yeast	
	Gram + rods	
	Gram + cocci	
	Gram - rods	
	Gram - cocci	

Comments: _____

**The Kansas City Zoo
Parasitology Submission and Examination Worksheet**

SUBMISSION DATA: (complete the top part of this form)

Species/Common Name(s): Loxodonta africana
African elephant LOIS

Accession Number(s): 1670

Date collected: 26/06/08
 d d m m y y

Collected by: PJT

From enclosure: Steel 3

Type of sample submitted:

- A. Fecal sample
- B. Rectal swab
- C. Skin scraping
- D. Ear swab/wash
- Other: _____

Reason/Purpose for submission:

- 1. Routine exam
- 2. Follow-up/Recheck exam
- 3. Diagnostic exam
- 4. Pre-shipment exam
- 5. Quarantine exam (number not specified)
- 6. Quarantine exam #1
- 7. Quarantine exam #2
- 8. Quarantine exam #3
- Other reason _____

Gross appearance:

- 1. Typical
- 2. Atypical

**** FOR LABORATORY USE ONLY (below this line) ****

Date of Examination: 26/06/08
 d d m m y y

Examined by: 1. KMP
 2. WKS
 3. Other: AM

Sample storage conditions:

- 1. Room/ambient temperature
- 2. Refrigerated
- 8. Other conditions - specify in Comments
- 9. Not specified

Sample consistency:

- 1. Liquid/watery
- 2. Soft
- 3. Formed
- 4. Hard/dry
- 5. Not specified

Unusual gross findings in stool:

- 1. Fresh blood
- 2. Excessive mucus
- 3. Melena or tarry
- 4. Foamy - excess gas
- 5. Adult/larval parasite
- 6. None

Was there a problem with the sample or the examination that requires that the sample submission be repeated?

Yes No

Comments: _____

Test codes:

- 1. Direct Microscopic Exam
- 2. Floatation - Zinc sulfate
- 3. Baermann Sedimentation
- 4. Centrifugation
- 5. Gross Microscopic Exam
- 6. Gram Stain
- 7. Other: _____

Test	Results	Quantity
Direct	<u>Mite egg</u>	<u>+</u>
Floatation	<u>NPS</u>	
Gram Stain	<u>Yeast</u>	
	<u>Gram + rods</u>	
	<u>Gram + cocci</u>	
	<u>Gram - rods</u>	
	<u>Gram - cocci</u>	

Comments: _____

VET MED DIAGNOSTIC LAB
P.O. BOX 5023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Owner: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Accession Number: 0721587
Reference Number: 1670
Case Coordinator: William Fales MS, Ph.D
Received: 09/28/2007 **Finalized:** 11/26/2007
Sampled:

To: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Veterinarian: DR. WM KIRK SUEDEMEYER
Client: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER

Final Report

BACTERIOLOGY RESULTS

AEROBIC CULTURE

SPECIES	Misc
BREED	Elephant
ANIMAL ID	1670
SPECIMEN #	Fecal
ORGANISM ID	NO SIGNIFICANT GROWTH
COMMENTS	10.9.07 The fecal sample was negative. by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media.

THIS TIME DATED REPORT SUPERSEDES ALL PREVIOUS REPORTS ON THIS VMDL ACCESSION.

WML
S

EJC

National Veterinary Services Laboratories
1800 Dayton Road Ames, Iowa 50010
Phone (515) 663-7366 Fax (515) 663-7397
Tuberculosis Laboratory Test Report Page 1 of 1
FEDERAL RELAY SERVICE (Voice/TTY/ASCII Spanish)
1-800-877-8339

***** This is a confidential report for official use only. *****
Accession: 532521 Date Received: 12/21/2007

Establishment No.: MOSVED
SUEBMEYER, DR. WM. KIRK
KANSAS CITY ZOO
6700 ZOO DRIVE
KANSAS CITY, MO 64132
Fax: 8165134667

Referral Number:
Owner: KC ZOO
City: KANSAS CITY
State: MO

Preservation:

Retain Tag:

Species: Elephant

NVSL ID	Case #	Sample ID	Animal ID
1807297	082046	12/18/07	1670-LOIS-AFRICAN
			Mycobacteria Isolation
			Diagnosis: No Isolation Made
			Specimen Submitted
			TRUNK WASH
1807298	082047	12/19/07	1670-LOIS-AFRICAN
			Mycobacteria Isolation
			Diagnosis: No Isolation Made
			Specimen Submitted
			TRUNK WASH
1807299	082048	12/20/07	1670-LOIS-AFRICAN
			Mycobacteria Isolation
			Diagnosis: No Isolation Made
			Specimen Submitted
			TRUNK WASH

DISTRIBUTION:
Submitter
2/20/2008

Approved by: Christine Quance
National Veterinary Services Laboratories

WVH
5

Kansas City Zoo
 Swope Park
 Kansas City, MO 64132
 Tel: 816-513-5700
 Fax: 816-513-4667

Client # 97779
 Chart # 1669

Accession No. CH2C26492223	Doctor SUEDMEYER	Owner AF ELEPHANT	Pet Name LEA	Received 07/18/2008
Species Elephant	Breed	Sex F	Pet Age	Reported 07/18/2008 04:58 AM

Test Requested	Results	Reference Range	Units
BASIC LARGE ANIMAL SCREEN			
AST (SGOT)	14 (LOW)	70-130	IU/L
Total Bilirubin	0.2	0.1-0.3	mg/dL
Direct Bilirubin	0.0	0.0-0.1	mg/dL
Alkaline Phosphatase	75	60-150	IU/L
GGT	11		IU/L
Total Protein	8.3	8.0-9.2	g/dL
Albumin	3.1	2.3-3.5	g/dL
Globulin	5.2		g/dL
A/G Ratio	0.6		
Cholesterol	106 (HIGH)	41-61	mg/dL
BUN	5	1-12	mg/dL
Creatinine	1.3	1.3-1.8	mg/dL
BUN/Creatinine Ratio	4		
Phosphorus	4.1	3.6-4.8	mg/dL
Calcium	10.0	10.0-11.0	mg/dL
Glucose	96	78-200	mg/dL
Sodium	130	129-136	mEq/L
Potassium	4.2	4.2-5.5	mEq/L
Na/K Ratio	31		
Chloride	89	85-99	mEq/L
CPK	273		IU/L
LDH	454 (HIGH)	170-420	IU/L
COMPLETE BLOOD COUNT			
WBC	10.1	8.0-15.0	10 ³ /μL
RBC	2.9	2.0-4.0	10 ⁶ /μL
HGB	13.8 (HIGH)	10-13	g/dL
HCT	38	34-44	%
MCV	129	130-170	fL
MCH	47.1	42.0-52.0	pg
MCHC	36	32-36	g/dL
Comment			
RBC MORPHOLOGY	NORMAL		
Differential			
Neutrophils	Absolute 3838	% 38	/μL
Lymphocytes	Absolute 5353	% 53	/μL

*Cholesterol values of
 at low @ 106 rise
 but not
 possibly
 same*

Test Requested	Results	Reference Range	Units
Monocytes	808	8	/ μ L
Eosinophils	101	1	/ μ L
Basophils	0	0	/ μ L
Platelet Estimate	Adequate		
Platelet Count	349		10^3 / μ L

Blood smear reviewed by technologist.

FIBRINOGEN (SEMI-QUANTITATIVE)

Fibrinogen, Semi-Quantitative 476 mg/dl

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Owner: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Accession Number: 0816490

Reference Number:

Case Coordinator: William Fales MS, Ph.D

Received: 07/25/2008 Finalized: 08/02/2008

Sampled:

Veterinarian: DR. WM KIRK SUEDEMEYER

Client: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER

To: KANSAS CITY ZOO, ATTN: DR. SUEDEMEYER
6800 ZOO DR
KANSAS CITY, MO 64132

Final Report

BACTERIOLOGY RESULTS

ENTERIC SCREEN

SPECIES	Misc
BREED	Elephant
ANIMAL ID	1669 Lea
SPECIMEN #	Fecal Swab
ORGANISM ID	ACINETOBACTER CALCOACETICUS LWOFFI
ORGANISM ID	MICROCOCCUS SPP
COMMENTS	The growth of the isolates was heavy on direct culture. The fecal sample was negative, by culture, for Salmonella using primary and secondary enrichment in conjunction with the use of selective media. The sample was negative, by culture, for Campylobacter, Yersinia enterocolitica and Clostridium perfringens.

ANTIMICROB SUSCEPT/EQUINE

1	ANIMAL ID	1669 Lea
	SPECIMEN #	Fecal swab
	ORGANISM ID	MICROCOCCUS SPP
	COMMENTS	CONCENTRATIONS IN UG/ML
2	ANIMAL ID	1669 Lea
	SPECIMEN #	Fecal swab
	ORGANISM ID	ACINETOBACTER CALCOACETICUS LWOFFI
	COMMENTS	CONCENTRATIONS IN UG/ML

*Will - fresh
microbes make
Sig
S*

VET MED DIAGNOSTIC LAB
P.O. BOX 6023

COLUMBIA, MO 65205
Phone #: 573-882-6811 Fax #: 573-882-1411

Final Report

Accession Number: 0816490

BACTERIOLOGY RESULTS

Antibiotic Susceptibility Pattern

	ACINETOBACTER CALCOACETICUS - 2	MICROCOCCUS SPP - 1
AMIKACIN	S ≤4.0000(4 - 32)	S ≤4.0000(4 - 32)
AMOXI/CLAV	S ≤4.0000(4/2 - 32/16)	S ≤4.0000(4/2 - 32/16)
AMPICILLIN	S 1.0000(0.25 - 16)	I 1.0000(0.25 - 16)
CEFAZOLIN	R >16.0000(8 - 16)	R >16.0000(8 - 16)
CEFTIOFUR	S 1.0000(0.25 - 4)	S 1.0000(0.25 - 4)
CHLORAMPHENICOL	S ≤4.0000(4 - 16)	S ≤4.0000(4 - 16)
ERYTHROMYCIN	I 4.0000(0.5 - 4)	R >4.0000(0.5 - 4)
GENTAMICIN	S ≤1.0000(1 - 8)	S ≤1.0000(1 - 8)
IMIPENEM	S ≤1.0000(1 - 6)	S ≤1.0000(1 - 8)
OXACIL - 2% NACL	R >4.0000(0.25 - 4)	R >4.0000(0.25 - 4)
PENICILLIN	R 4.0000(0.06 - 8)	R 4.0000(0.05 - 8)
RIFAMPIN	S ≤1.0000(1 - 2)	S ≤1.0000(1 - 2)
TETRACYCLINE	S ≤2.0000(2 - 8)	S ≤2.0000(2 - 8)
TICAR/CLAV ACID	S ≤8.0000(8/2 - 64/2)	S ≤8.0000(8/2 - 64/2)
TICARCILLIN	S ≤8.0000(8 - 64)	S ≤8.0000(8 - 64)
TRIMETH/SULFA	S ≤0.5000(0.5/9.5 - 2/38)	S ≤0.5000(0.5/9.5 - 2/38)

This is an "in vitro" test that may not reflect clinical outcome.

THIS TIME DATED REPORT SUPERSEDES ALL PREVIOUS REPORTS ON THIS VMDL ACCESSION.