

Behavioral Profile

Rafiki

- **Scientific name**... *Loxodonta africana*
- **Common name**... African elephant
- **House name**... Rafiki, in Swahili means "friend"
- **Local I.D. #**... 1611
- **Stud Book #**... 210
- **Acquisition date**... 13 October 2003
- **Sex**... Female
- **Birth date**... ~1981
- **Height**... 8'
- **Weight**... TBD
- **Wild caught location**... Zimbabwe
- **Transaction history**... Imported from Zimbabwe in 1984 by International Animal Exchange, then transferred to the Dallas Zoo, that year. Then she was loaned to the Toledo Zoo in 1986. Toledo took ownership in 1994. Rafiki came to the North Carolina Zoo in 2003. At Dallas and Toledo Rafiki was managed in "free contact", but just prior to leaving Toledo was transitioning to "protected contact".
- **Description of current management system**... Rafiki is managed in "protected contact".
- **Physical description**... Rafiki is of moderate height and weight for her age range. She has only one tusk that is visible, that being on the right side. There may be a tusk in the left socket but it does not come through enough to view, even with her trunk up and her mouth open. Rafiki also has a bent left ear. It sticks out a little and hangs at a slightly downward angle. However, she has full use of that ear.
- **Medical profile**... Rafiki has no known medical problems either current or past.
- **Reproductive profile**... On 23 October, 2000, while at the Toledo Zoo, she was reproductively assessed and surgically, artificially inseminated. She carried the fetus to term. On 27 July 2002, either shortly before or perhaps during the birth process, the calf died. While at the North Carolina Zoo, Rafiki has not had an assessment performed nor has the TAG recommended one. She has been exposed to an adult male but he has come to be termed a "potential non-breeder". Rafiki has blood drawn once every week for analysis and is cycling normally.
- **Psychological profile**... Rafiki has a relatively stable personality. As mentioned earlier, while in Toledo, Rafiki's calf died but her exhibit mate's lived. This caused friction between the two with the other elephant being overly protective of her calf, bullying Rafiki around. It was thought that Rafiki then started to displace this aggression towards certain keepers. As Toledo uses "free contact" to manage their elephants, it was decided to move Rafiki to another facility. Since coming to the North Carolina Zoo, she has not shown any aggression towards any of the keepers or the other female elephant. When Rafiki was put in with Little Diamond, within 30 seconds it was obvious that Rafiki was going to be the "Boss". She also gets along very well with the bull, C'Sar. When Rafiki first came to North Carolina Zoo, she had a habit of exaggerated swaying when anxious or left alone for extended periods. Over

the course of the last two years, being introduced to our two elephants and our three-acre exhibit, a large majority of her swaying has been eliminated. Still, if Rafiki and Little Diamond are separated for extended periods, Rafiki will hit the bars and start to sway, again, a manifestation of her anxiety. Rafiki accepts new people and new situations warily, but depending on the circumstances, adjusts relatively quickly. Besides the swaying, Rafiki's only other "fault" is that sometimes she will "zone out" during a training session or when being asked for a behavior. We haven't made a correlation between the "zone outs" and her estrus cycle yet. It could also be a mechanism for coping with stress. Rafiki is a good elephant to work around. She is not sneaky or devious, but with all other elephants, the keeper must be aware of her triggers and her presence at all times.

- **Training profile**...As of this writing, Rafiki has been in "protective contact" for 15 months. She has adjusted very well. She allows blood draws from both ears, TB testing, foot trims, she readily goes into the ERD and allows the strapping of her feet to the winches. Rafiki's training has progressed to the point where it has been handed off to a second keeper to allow more flexibility for a greater number of people to work around her and with her. Please see **Rafiki Behavior List**.

Updated January 2005 – J. Small

Medical History Report - Summary for Individual Specimen
NORTH CAROLINA ZOOLOGICAL PARK

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)           Accession #: 1611
Common Name: African elephant                           Female
Name: RAFIKI                                           Birth: 17.Dec.1981 (Estimated)
=====

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.....2007....

- 1.Mar Blood sample: (10:10.0) Hematology/Chemistry/Serology results.
WBC:5.27 *10³/UL; HCT: 37.0%; BUN:11 MG/DL;
- 6.Mar Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 13.Mar Purpose/Problem: Prophylactic vaccine
Vaccination: TETANUS TOXOID 1ml IM SID
Clinical note recorded. (RX)
- 27.Mar Clinical note recorded. (JH)
- 5.Apr Blood sample: (EDTA) (9:00.0) Hematology/Chemistry/Serology results.
WBC:10.01 *10³/UL; HCT: 33.0%; BUN:10 MG/DL;
- 15.Apr Clinical note recorded. (CUL)
- 25.Apr Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 10.May Blood sample: (EDTA) (9:00.0) Hematology/Chemistry/Serology results.
WBC:7.59 *10³/UL; HCT: 36.0%; BUN:11 MG/DL;
- 5.Jul Blood sample: (9:00.0) Hematology/Chemistry/Serology results.
WBC:11.74 *10³/UL; HCT: 34.6%; BUN:6 MG/DL;
- 11.Jul Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 2.Aug Blood sample: (EDTA) (8:45.0) Hematology/Chemistry/Serology results.
WBC:9.80 *10³/UL; HCT: 35.5%; BUN:7 MG/DL;
- 28.Aug Parasitology examination: (DIAGNOSTIC EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 4.Sep Clinical note recorded. (CUL)
- 6.Sep Blood sample: (EDTA) (8:25.0) Hematology/Chemistry/Serology results.
HCT: 37.0%; BUN:5 MG/DL;
- 4.Oct Blood sample: (EDTA) (8:45.0) Hematology/Chemistry/Serology results.
WBC:9.72 *10³/UL; HCT: 35.0%; BUN:5 MG/DL;
- 19.Oct Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 1.Nov Blood sample: (EDTA) (8:20.0) Hematology/Chemistry/Serology results.
WBC:7.15 *10³/UL; HCT: 34.5%; BUN:12 MG/DL;
Hemolysis
- 6.Dec Blood sample: (Heparin) (9:15.0) Hematology/Chemistry/Serology result
WBC:11.44 *10³/UL; HCT: 36.0%; BUN:10 MG/DL;

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Medical History Report - Summary for Individual Specimen
NORTH CAROLINA ZOOLOGICAL PARK

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Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)

.....2008....

- 4.Jan Blood sample: (EDTA) (9:50.0) Hematology/Chemistry/Serology results.
WBC:11.22 *10³/UL; HCT: 39.6%; BUN:7 MG/DL;
- 7.Feb Blood sample: (EDTA) (8:45.0) Hematology/Chemistry/Serology results.
WBC:9.28 *10³/UL; HCT: 37.1%; BUN:10 MG/DL;
- 3.Apr Blood sample: (EDTA) (9:15.0) Hematology/Chemistry/Serology results.
WBC:10.56 *10³/UL; HCT: 37.0%; BUN:10 MG/DL;
Hemolysis
- 17.Apr Blood sample: (12:47.0) Chemistry results.
BUN:9 MG/DL;
- 1.May Blood sample: (Heparin) (9:00.0) Hematology/Chemistry/Serology result
HCT: 38.0%; BUN:11 MG/DL;
- 5.Jun Blood sample: (EDTA) (9:50.0) Hematology/Chemistry/Serology results.
WBC:10.08 *10³/UL; HCT: 34.0%; BUN:11 MG/DL;
Hemolysis
- 17.Jun Blood sample: (EDTA) (10:30.0) Hematology/Chemistry/Serology results.
WBC:9.96 *10³/UL; HCT: 33.0%; BUN:8 MG/DL;
Parasitology examination: (DIAGNOSTIC EXAMINATION) Fecal sample.
NO PARASITES SEEN
Clinical note recorded. (SKC)
- 22.Jun Clinical note recorded. (CUL)
- 26.Jun Blood sample: (EDTA) (11:10.0) Hematology/Chemistry/Serology results.
BUN:8 MG/DL;
- 3.Jul Blood sample: (EDTA) (9:55.0) Hematology/Chemistry/Serology results.
WBC:11.56 *10³/UL; HCT: 36.0%; BUN:5 MG/DL;
- 8.Aug Blood sample: (EDTA) (8:50.0) Hematology/Chemistry/Serology results.
HCT: 46.0%; BUN:11 MG/DL;
Clinical note recorded. (RSD)
- 13.Aug Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
NO PARASITES SEEN

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

=====
Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 25Y Est.
=====

Collection Information >> Date of Collection: 1.Mar.2007
Health Status: Normal Time of Collection: 10:10.0
Fasting Time: < 8 hours Collected by: JP
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Hematology >> Laboratory: NC ZOO
Analysis Information >> Date of Analysis: 1.Mar.2007
Anticoagulant: Time of Analysis:
Storage: Fresh Analysis by:
Sample Quality: No quality problems. Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	<<	5.27		*10 ³ /UL
HEMATOCRIT		37		%
SEGMENTED NEUTROPHILS		28	(1.476)	% (*10 ³ /UL)
LYMPHOCYTES	<	19	(1.001)	% (*10 ³ /UL)
MONOCYTES	>	52	(2.740)	% (*10 ³ /UL)
EOSINOPHILS		1	(0.053)	% (*10 ³ /UL)
FIBRINOGEN		200		MG/DL

E 1611.TXT

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 25Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 1.Mar.2007
Time of Collection: 10:10.0
Collected by: JP

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 1.Mar.2007
Time of Analysis: 14:11
Analysis by:
Automated analysis.

Tests and Results >>

GLUCOSE	81	MG/DL
BLOOD UREA NITROGEN	11	MG/DL
CREATININE	1.4	MG/DL
BUN/creatinine ratio	7.86	
CALCIUM	10.6	MG/DL
SODIUM >	135	MEQ/L
POTASSIUM	5.0	MEQ/L
sodium/potassium ratio	27.0	
CHLORIDE >	94	MEQ/L
TOTAL PROTEIN (COLORIMETRY) <	7.1	GM/DL
TOTAL PROTEIN (REFRACTOMETER) <<	6.6	GM/DL
ALBUMIN (COLORIMETRY)	3.3	GM/DL
GLOBULIN (COLORIMETRY)	3.8	GM/DL
albumin/globulin ratio	0.868	
ASPARTATE AMINOTRANSFERASE	25	IU/L
TOTAL BILIRUBIN >	0.4	MG/DL
ALKALINE PHOSPHATASE	84	IU/L
LACTATE DEHYDROGENASE	791	IU/L
CREATINE PHOSPHOKINASE	142	IU/L
GAMMA GLUTAMYLTRANSFERASE	10	IU/L

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Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)

Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: ROUTINE EXAMINATION

Sample id.: 2007-0159
Date collected: 6.Mar.2007
Time collected: 8:00
Collected by: JGP

Collected from:

Group of specimens housed together.

Enclosure: E/R

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 6.Mar.2007
at: 14:30
by: DGH

Tests & Results >>

FLOATATION - NA NITRATE NO PARASITES SEEN

Clinical Note:

RX: TETANUS TOXOID 1 ml IM SID for 1 day. (174B) (RX)

13.Mar.2007

Purpose: Prophylactic vaccine

Prescription Data >>

Drug: TETANUS TOXOID 1 ml IM SID
Formulation: injectable
Prescribed by: RX (13.Mar.2007)

Starting date: 13.Mar.2007
Bottle/Lot #: 174B
Filled by: GAW (13.Mar.2007)
Treatment weight: 3541 kg

Comments >>

Dispensing Note: Dispense one dose. Each dose: 1 ml.

Daily Treatment Notes >>

Date	Time	Success	By	Comments
19.Mar.2007	16:00	100%	BL	na

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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)

Clinical Note:

27.Mar.2007

Leptosporosis, received 3/23, reported 3/27/07 (Antech):

L. Pomona	Neg	</=1:50	
L. Icterohaemorrhagia	Neg	</=1:50	
L. Canicola	Neg	</=1:50	
L. Grippotyphosa	Neg	</=1:50	
L. Hardjo	Neg	</=1:50	
L. autumnalis	Neg	</=1:50	
L. bratislava	Neg	</=1:50	(JH)

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NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 25Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 5.Apr.2007
Time of Collection: 9:00.0
Collected by: RM
Sample Collection Site: EAR VEIN

Hematology >>
Analysis Information >>
Anticoagulant: EDTA
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 5.Apr.2007
Time of Analysis: 10:22
Analysis by: CAP
Manual analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	10.01		*10 ³ /UL
HEMATOCRIT	< 33		%
SEGMENTED NEUTROPHILS	21.78	(2.180)	% (*10 ³ /UL)
NEUTROPHILIC BANDS	1.98	(0.198)	% (*10 ³ /UL)
LYMPHOCYTES	44.56	(4.460)	% (*10 ³ /UL)
MONOCYTES	> 29.70	(2.973)	% (*10 ³ /UL)
EOSINOPHILS	1.98	(0.198)	% (*10 ³ /UL)
BASOPHILS	0.00		% (*10 ³ /UL)
AZUROPHILS	0.00		% (*10 ³ /UL)
FIBRINOGEN >>	800		MG/DL

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)      Accession #: 1611
Common Name: African elephant                      Female
Name: RAFIKI                                       Birth: 17.Dec.1981 (Estimated)
                                                    Age: 25Y Est.
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Clinical Note: 15.Apr.2007

NC State Lab of Public Health, Mycobacteriology (AFB) Final Report:

Specimen 2007-002305, trunk wash, collected 2/9/07, received 3/7/07.

No acid fast bacilli found on smear.

No growth of mycobacteria.

Specimen 2007-002306, trunk wash, collected 3/5/07, received 3/7/07.

No acid fast bacilli found on smear.

Contaminated.

Specimen 2007-002307, trunk wash, collected 3/3/07, received 3/7/07.

No acid fast bacilli found on smear.

Contaminated. (CUL)

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

Sample id.: 2007-0242
Date collected: 25.Apr.2007
Time collected: 8:15
Collected by: JWS

Collected from:
Group of specimens housed together.

Enclosure: E/R

Examination Data >>
Storage: refrigerated
Consistency: formed
Gross appearance: Typical
<<< Sample resubmission requested >>>

Date examined: 26.Apr.2007
at: 10:25
by: GAW

Tests & Results >>

FLOATATION - NA NITRATE
E 1611.TXT
NO PARASITES SEEN

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 25Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 10.May.2007
Time of Collection: 9:00.0
Collected by: RM
Sample Collection Site: EAR VEIN

Hematology >>
Analysis Information >>
Anticoagulant: EDTA
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 10.May.2007
Time of Analysis: 11:30
Analysis by: JFC
Manual analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	<	7.59		*10 ³ /UL
HEMATOCRIT	<	36		%
SEGMENTED NEUTROPHILS		37	(2.808)	% (*10 ³ /UL)
LYMPHOCYTES	<	15	(1.139)	% (*10 ³ /UL)
MONOCYTES	>	46	(3.491)	% (*10 ³ /UL)
EOSINOPHILS		2	(0.152)	% (*10 ³ /UL)
FIBRINOGEN	<<	0		MG/DL

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 25Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 10.May.2007
Time of Collection: 9:00.0
Collected by: RM
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 10.May.2007
Time of Analysis: 11:47
Analysis by: JFC
Automated analysis.

Tests and Results >>

GLUCOSE	>	105	MG/DL
BLOOD UREA NITROGEN		11	MG/DL
CREATININE		1.5	MG/DL
BUN/creatinine ratio		7.33	
CALCIUM		10.7	MG/DL
SODIUM		129	MEQ/L
POTASSIUM		4.7	MEQ/L
sodium/potassium ratio		27.4	
CHLORIDE	>	92	MEQ/L
TOTAL PROTEIN (COLORIMETRY)		7.3	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<	7.2	GM/DL
ALBUMIN (COLORIMETRY)	<	3.2	GM/DL
GLOBULIN (COLORIMETRY)		4.1	GM/DL
albumin/globulin ratio		0.780	
ALANINE AMINOTRANSFERASE	>	14	IU/L
TOTAL BILIRUBIN		0.2	MG/DL
ALKALINE PHOSPHATASE		81	IU/L
LACTATE DEHYDROGENASE		748	IU/L
CREATINE PHOSPHOKINASE		122	IU/L
GAMMA GLUTAMYLTRANSFERASE		9	IU/L

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 NORTH CAROLINA ZOOLOGICAL PARK

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)      Accession #: 1611
Common Name: African elephant                      Female
Name: RAFIKI                                       Birth: 17.Dec.1981 (Estimated)
                                                    Age: 26Y Est.
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Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 5.Jul.2007
 Time of Collection: 9:00.0
 Collected by: M H
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant:
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 5.Jul.2007
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	11.74		*10 ³ /UL
RED BLOOD CELL COUNT	3.05		*10 ⁶ /UL
HEMOGLOBIN	< 12.3		GM/DL
HEMATOCRIT	< 34.6		%
MCV	< 113		fL
MCH	< 40.3		ug
MCHC	35.5		gm/dL
SEGMENTED NEUTROPHILS	37	(4.344)	% (*10 ³ /UL)
NEUTROPHILIC BANDS	< 0		% (*10 ³ /UL)
LYMPHOCYTES	23	(2.700)	% (*10 ³ /UL)
MONOCYTES	>> 40	(4.696)	% (*10 ³ /UL)
EOSINOPHILS	0		% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)
NUCLEATED RED BLOOD CELLS	0		/100 WBC
PLATELET COUNT	ADEQ		*10 ³ /UL
FIBRINOGEN	>> 800		MG/DL

Comments >>
 normal

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 5.Jul.2007
Time of Collection: 9:00.0
Collected by: M H
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 5.Jul.2007
Time of Analysis: 13:37
Analysis by:
Automated analysis.

Tests and Results >>

GLUCOSE	>	105	MG/DL
BLOOD UREA NITROGEN	<	6	MG/DL
CREATININE		1.6	MG/DL
BUN/creatinine ratio		3.75	
CALCIUM		11.2	MG/DL
SODIUM	>>	137	MEQ/L
POTASSIUM		4.7	MEQ/L
sodium/potassium ratio		29.1	
CHLORIDE	>	94	MEQ/L
TOTAL PROTEIN (COLORIMETRY)		7.5	GM/DL
TOTAL PROTEIN (REFRACTOMETER)		7.6	GM/DL
ALBUMIN (COLORIMETRY)		3.5	GM/DL
GLOBULIN (COLORIMETRY)		3.9	GM/DL
albumin/globulin ratio		0.897	
ASPARTATE AMINOTRANSFERASE		21	IU/L
TOTAL BILIRUBIN		<0.1	MG/DL
ALKALINE PHOSPHATASE		103	IU/L
LACTATE DEHYDROGENASE		843	IU/L
CREATINE PHOSPHOKINASE		130	IU/L

E 1611.TXT
GAMMA GLUTAMYLTRANSFERASE < 5

IU/L

Comments >>

Hemavet:
WBC 8.02
Ne 0.22%
Ly 59.51%
Mo 36.31%
Eo 3.87%
Ba 0.09%

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NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: RAFIKI

Accession #: 1611
Female
Birth: 17.Dec.1981 (Estimated)
Age: 26Y Est.

Chemistry >>

Comments >>

RBC 3.08
HB 12.4
Hct 37.6
Plt 127
MCV 122.0
MCH 40.3
MCHC 33.0
RDW 18.9
MPV 5.5
PDW 18.5

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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)

Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: ROUTINE EXAMINATION

Sample id.: 2007-0383
Date collected: 11.Jul.2007
Time collected: 7:30
Collected by: BL

Collected from:

Group of specimens housed together.

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Not specified

Date examined: 11.Jul.2007
at: 13:35
by: RMM

Tests & Results >>

FLOATATION - NA NITRATE

NO PARASITES SEEN

Printed on: 19.Aug.2008

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 2.Aug.2007
Time of Collection: 8:45.0
Collected by: JP
Sample Collection Site: EAR VEIN

Hematology >>
Analysis Information >>
Anticoagulant: EDTA
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 2.Aug.2007
Time of Analysis: 10:30
Analysis by: PAW
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	9.80		*10 ³ /UL
RED BLOOD CELL COUNT	3.20		*10 ⁶ /UL
HEMOGLOBIN	< 12.4		GM/DL
HEMATOCRIT	< 35.5		%
MCV	< 111		fL
MCH	< 38.8		uug
MCHC	34.9		gm/dL
SEGMENTED NEUTROPHILS	34	(3.332)	% (*10 ³ /UL)
LYMPHOCYTES	40	(3.920)	% (*10 ³ /UL)
MONOCYTES	25	(2.450)	% (*10 ³ /UL)
BASOPHILS	1	(0.098)	% (*10 ³ /UL)
FIBRINOGEN	400		MG/DL

E 1611.TXT		
TOTAL BILIRUBIN	<0.1	MG/DL
ALKALINE PHOSPHATASE	87	IU/L
LACTATE DEHYDROGENASE	1052	IU/L
CREATINE PHOSPHOKINASE	147	IU/L
GAMMA GLUTAMYLTRANSFERASE	10	IU/L

ISIS reference values are for LOXODONTA AFRICANA
 Printed on: 19.Aug.2008

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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)

Parasitology Examination:

Submission Data >>

Type: Fecal sample
 Purpose: DIAGNOSTIC EXAMINATION

Sample id.: 2007-0470
 Date collected: 28.Aug.2007
 Time collected: 7:45
 Collected by: BAL

Collected from:

From an individual specimen.

Enclosure: ELS3

Examination Data >>

Storage: refrigerated
 Consistency: soft
 Gross appearance: Atypical

Date examined: 28.Aug.2007
 at: 14:15
 by: GAW

Tests & Results >>

FLOATATION - NA NITRATE NO PARASITES SEEN

Clinical Note:

4.Sep.2007

Fecal culture, received 8/29, reported 9/2/07 (Antech):
 No Campylobacter, Yersinia, Salmonella, or Shigella isolated. (CUL)

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 6.Sep.2007
 Time of Collection: 8:25.0
 Collected by: JGP
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant: EDTA
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 6.Sep.2007
 Time of Analysis: 11:00
 Analysis by: JFC
 Manual analysis.

Tests and Results >>

	HEMATOCRIT	37	%
SEGMENTED	NEUTROPHILS >>	26	% (*10^3/UL)
	LYMPHOCYTES >>	24	% (*10^3/UL)
	MONOCYTES >>	48	% (*10^3/UL)
	EOSINOPHILS >>	2	% (*10^3/UL)
	FIBRINOGEN	300	MG/DL

Comments >>

RBC's normal, ~1-2 of the segs of 26 were approaching a band shape.

Hemavet:

WBC 7.18, Ne 0.41, Ly 62.21, Mo 33.01, Eo 4.27, Ba 0.10.
RBC 2.07, Hb 7.7, Hct 23.0, PLT 117, MCV 111.1, MCH 37.2, MCHC 33.5,

RDW 17.5, MPV 4.9, PDW 17.1.

E 1611.TXT

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 6.Sep.2007
 Time of Collection: 8:25.0
 Collected by: JGP
 Sample Collection Site: EAR VEIN

Chemistry >>
 Analysis Information >>
 Chemistry Sample: Serum
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 6.Sep.2007
 Time of Analysis: 11:12
 Analysis by: JFC
 Automated analysis.

Tests and Results >>

	GLUCOSE	95	MG/DL
	BLOOD UREA NITROGEN	< 5	MG/DL
	CREATININE	1.5	MG/DL
	BUN/creatinine ratio	3.33	
	CALCIUM	11.4	MG/DL
	SODIUM >>	137	MEQ/L
	POTASSIUM >	5.3	MEQ/L
	sodium/potassium ratio	25.8	
	CHLORIDE >>	96	MEQ/L
	TOTAL PROTEIN (COLORIMETRY)	7.4	GM/DL
	TOTAL PROTEIN (REFRACTOMETER)	< 7.2	GM/DL
	ALBUMIN (COLORIMETRY)	3.4	GM/DL

E 1611.TXT

GLOBULIN (COLORIMETRY)	4.0	GM/DL
albumin/globulin ratio	0.850	
ASPARTATE AMINOTRANSFERASE <<	6	IU/L
TOTAL BILIRUBIN	<0.1	MG/DL
ALKALINE PHOSPHATASE	94	IU/L
LACTATE DEHYDROGENASE	862	IU/L
CREATINE PHOSPHOKINASE	134	IU/L
GAMMA GLUTAMYLTRANSFERASE <	7	IU/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 4.Oct.2007
 Time of Collection: 8:45.0
 Collected by: BLL
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant: EDTA
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 4.Oct.2007
 Time of Analysis: 11:30
 Analysis by: PAW
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	9.72		*10 ³ /UL
HEMATOCRIT <	35		%
SEGMENTED NEUTROPHILS	26	(2.527)	% (*10 ³ /UL)
NEUTROPHILIC BANDS <	0		% (*10 ³ /UL)
LYMPHOCYTES <	20	(1.944)	% (*10 ³ /UL)
MONOCYTES >>	52	(5.054)	% (*10 ³ /UL)
EOSINOPHILS	2	(0.194)	% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)

Comments >>
 WBCs normal - except two really big monos - elephant size (PAW)

E 1611.TXT

Hemavet:

WBC 11.86, Ne 4.08, Ly 45.97, Mo 28.72, Eo 21.17, Ba 0.08.
RBC 3.23, Hb 12.3, Hct 36.2, Plt 159, MCV 112.2, MCH 38.1, MCHC 34.0,
RDW 17.2, MPV 4.9, PDW 16.1.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 4.Oct.2007
Time of Collection: 8:45.0
Collected by: BLL
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 4.Oct.2007
Time of Analysis: 11:50
Analysis by: PAW
Automated analysis.

Tests and Results >>

GLUCOSE	86	MG/DL
BLOOD UREA NITROGEN	< 5	MG/DL
CREATININE	1.5	MG/DL
BUN/creatinine ratio	3.33	
CALCIUM	10.7	MG/DL
SODIUM	>> 138	MEQ/L
POTASSIUM	5.0	MEQ/L
sodium/potassium ratio	27.6	
CHLORIDE	>> 95	MEQ/L
TOTAL PROTEIN (COLORIMETRY)	7.4	GM/DL

E 1611.TXT

TOTAL PROTEIN (REFRACTOMETER)	< 7.4	GM/DL
ALBUMIN (COLORIMETRY)	3.3	GM/DL
GLOBULIN (COLORIMETRY)	4.1	GM/DL
albumin/globulin ratio	0.805	
ASPARTATE AMINOTRANSFERASE	< 14	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
ALKALINE PHOSPHATASE	96	IU/L
LACTATE DEHYDROGENASE	771	IU/L
CREATINE PHOSPHOKINASE	127	IU/L
GAMMA GLUTAMYLTRANSFERASE	< 7	IU/L

ISIS reference values are for LOXODONTA AFRICANA
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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)

Parasitology Examination:

Submission Data >>

Type: Fecal sample
 Purpose: ROUTINE EXAMINATION

Sample id.: 2007-0537
 Date collected: 19.Oct.2007
 Time collected: 8:00
 Collected by: BAL

Collected from:

Group of specimens housed together.

Enclosure: ELS-1

Examination Data >>

Storage: refrigerated
 Consistency: formed
 Gross appearance: Typical

Date examined: 19.Oct.2007
 at: 15:45
 by: PAW

Tests & Results >>

FLOATATION - NA NITRATE NO PARASITES SEEN

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 1.Nov.2007
Time of Collection: 8:20.0
Collected by: JGP
Sample Collection Site: EAR VEIN

Hematology >>
Analysis Information >>
Anticoagulant: EDTA
Storage: Fresh
Sample Quality: hemolysis

Laboratory: NC ZOO
Date of Analysis: 1.Nov.2007
Time of Analysis: 11:45
Analysis by: GAW
Manual analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	<	7.15	*10 ³ /UL
RED BLOOD CELL COUNT		3.18	*10 ⁶ /UL
HEMOGLOBIN	<	11.7	GM/DL
HEMATOCRIT	<	34.5	%
MCV	<<	108	fL
MCH	<<	36.8	uug
MCHC		33.9	gm/dL
SEGMENTED NEUTROPHILS		24	(1.716) % (*10 ³ /UL)

E 1611.TXT			
LYMPHOCYTES	<	20	(1.430) % (*10 ³ /UL)
MONOCYTES	>	55	(3.933) % (*10 ³ /UL)
EOSINOPHILS		1	(0.072) % (*10 ³ /UL)
NUCLEATED RED BLOOD CELLS	>>	110.8	/100 WBC
ESTIMATED PLATELET COUNT		36.8	
PLATELET COUNT	<	33.2	*10 ³ /UL
FIBRINOGEN		300	MG/DL

Comments >>

Hemavet:

WBC 8.12, Ne 3.20, Ly 54.46, Mo 27.44, Eo 14.82, Ba 0.08.
RBC 3.18, HB 11.7, HCT 35.2, PLT 172, MCV 110.8, MCH 36.8, MCHC 33.2,
RDW 17.2, MPV 5.2, PDW 16.7.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 1.Nov.2007
Time of Collection: 8:20.0
Collected by: JGP
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: hemolysis

Laboratory: NC ZOO
Date of Analysis: 1.Nov.2007
Time of Analysis: 10:53
Analysis by: GAW
Automated analysis.

Tests and Results >>

GLUCOSE	86	MG/DL
BLOOD UREA NITROGEN	12	MG/DL
CREATININE	< 1.1	MG/DL
BUN/creatinine ratio	10.9	
CALCIUM	11.1	MG/DL
SODIUM	>> 137	MEQ/L
POTASSIUM	> 5.3	MEQ/L

E 1611.TXT

sodium/potassium ratio	25.8	
CHLORIDE >>	97	MEQ/L
TOTAL PROTEIN (COLORIMETRY)	7.4	GM/DL
TOTAL PROTEIN (REFRACTOMETER) <<	6.8	GM/DL
ALBUMIN (COLORIMETRY) <	3.2	GM/DL
GLOBULIN (COLORIMETRY)	4.2	GM/DL
albumin/globulin ratio	0.762	
ASPARTATE AMINOTRANSFERASE	21	IU/L
TOTAL BILIRUBIN >	0.4	MG/DL
ALKALINE PHOSPHATASE	80	IU/L
LACTATE DEHYDROGENASE	1484	IU/L
CREATINE PHOSPHOKINASE	306	IU/L
GAMMA GLUTAMYLTRANSFERASE <	7	IU/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 6.Dec.2007
 Time of Collection: 9:15.0
 Collected by: JMS
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant: Heparin
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 6.Dec.2007
 Time of Analysis: 12:30
 Analysis by: CAP
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	11.44	*10 ³ /UL
RED BLOOD CELL COUNT	3.06	*10 ⁶ /UL
HEMOGLOBIN <	11.8	GM/DL
HEMATOCRIT <	36	%
MCV	118	fL
MCH <	38.6	uug

E 1611.TXT			
MCHC	32.8		gm/dL
SEGMENTED NEUTROPHILS	21	(2.402)	% (*10 ³ /UL)
NEUTROPHILIC BANDS	2	(0.229)	% (*10 ³ /UL)
LYMPHOCYTES	39	(4.462)	% (*10 ³ /UL)
MONOCYTES >>	38	(4.347)	% (*10 ³ /UL)
EOSINOPHILS	0		% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)

Comments >>
RBC's okay

WBC 11.44, Ne 0.03, Ly 62.92, Mo 33.20, Eo 3.85, Ba 0.00.
RBC 3.06, HB 11.8, HCT 34.9, PLT 165, MCV 114.1, MCH 38.6, MCHC 33.8,
RDW 17.6, MPV 4.8, PDW 15.6.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 6.Dec.2007
Time of Collection: 9:15.0
Collected by: JMS
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 6.Dec.2007
Time of Analysis: 14:26
Analysis by: CAP
Automated analysis.

Tests and Results >>

GLUCOSE	84	MG/DL
BLOOD UREA NITROGEN	10	MG/DL
CREATININE	1.2	MG/DL
BUN/creatinine ratio	8.33	
CALCIUM	10.9	MG/DL

```

E 1611.TXT
SODIUM > 133 MEQ/L
POTASSIUM 5.0 MEQ/L
sodium/potassium ratio 26.6
CHLORIDE > 94 MEQ/L
TOTAL PROTEIN (COLORIMETRY) < 7.1 GM/DL
TOTAL PROTEIN (REFRACTOMETER) ADEQ GM/DL
ALBUMIN (COLORIMETRY) < 3.2 GM/DL
GLOBULIN (COLORIMETRY) 3.9 GM/DL
albumin/globulin ratio 0.821
ASPARTATE AMINOTRANSFERASE 19 IU/L
TOTAL BILIRUBIN 0.3 MG/DL
ALKALINE PHOSPHATASE 89 IU/L
LACTATE DEHYDROGENASE 1027 IU/L
CREATINE PHOSPHOKINASE 190 IU/L
FIBRINOGEN 200 MG/DL
GAMMA GLUTAMYLTRANSFERASE 8 IU/L

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ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)      Accession #: 1611
Common Name: African elephant                      Female
Name: RAFIKI                                       Birth: 17.Dec.1981 (Estimated)
                                                    Age: 26Y Est.
=====

```

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 4.Jan.2008
 Time of Collection: 9:50.0
 Collected by: RM
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant: EDTA
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 4.Jan.2008
 Time of Analysis: 11:00
 Analysis by: JFC
 Automated analysis.

Tests and Results >>

```

WHITE BLOOD CELL COUNT 11.22 *10^3/UL
RED BLOOD CELL COUNT 3.30 *10^6/UL
HEMOGLOBIN < 11.4 GM/DL
HEMATOCRIT 39.6 %

```

E 1611.TXT			
	MCV	120	fL
	MCH <<	34.5	uug
	MCHC <<	28.8	gm/dL
SEGMENTED	NEUTROPHILS	26	(2.917) % (*10 ³ /UL)
	LYMPHOCYTES	< 13	(1.459) % (*10 ³ /UL)
	MONOCYTES >>	59	(6.620) % (*10 ³ /UL)
	EOSINOPHILS	2	(0.224) % (*10 ³ /UL)
	PLATELET COUNT	< 212	*10 ³ /UL

ISIS reference values are for LOXODONTA AFRICANA
 Printed on: 19.Aug.2008

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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 4.Jan.2008
 Time of Collection: 9:50.0
 Collected by: RM
 Sample Collection Site: EAR VEIN

Chemistry >>
 Analysis Information >>
 Chemistry Sample: Serum
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 4.Jan.2008
 Time of Analysis: 11:21
 Analysis by: JFC
 Automated analysis.

Tests and Results >>

	GLUCOSE	> 102	MG/DL
BLOOD UREA	NITROGEN	< 7	MG/DL
	CREATININE	1.5	MG/DL

E 1611.TXT

BUN/creatinine ratio	4.67	
CALCIUM	11.5	MG/DL
SODIUM >	134	MEQ/L
POTASSIUM	4.3	MEQ/L
sodium/potassium ratio	31.2	
TOTAL PROTEIN (COLORIMETRY)	8.0	GM/DL
TOTAL PROTEIN (REFRACTOMETER) <	7.4	GM/DL
ALBUMIN (COLORIMETRY) <	3.0	GM/DL
GLOBULIN (COLORIMETRY) >	5.0	GM/DL
albumin/globulin ratio	0.600	
ASPARTATE AMINOTRANSFERASE >	36	IU/L
TOTAL BILIRUBIN	0.3	MG/DL
CREATINE PHOSPHOKINASE	268	IU/L
GAMMA GLUTAMYLTRANSFERASE	16	IU/L

ISIS reference values are for LOXODONTA AFRICANA
 Printed on: 19.Aug.2008

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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 7.Feb.2008
 Time of Collection: 8:45.0
 Collected by: GB
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant: EDTA
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 7.Feb.2008
 Time of Analysis: 11:35
 Analysis by: JFC
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	9.28	*10 ³ /UL
RED BLOOD CELL COUNT	3.08	*10 ⁶ /UL

E 1611.TXT			
HEMOGLOBIN	<	12.0	GM/DL
HEMATOCRIT		37.1	%
MCV		120	fL
MCH	<	39.0	ug
MCHC	<	32.3	gm/dL
SEGMENTED NEUTROPHILS		34	(3.155) % (*10 ³ /UL)
LYMPHOCYTES	<	16	(1.485) % (*10 ³ /UL)
MONOCYTES	>>	48	(4.454) % (*10 ³ /UL)
EOSINOPHILS		2	(0.186) % (*10 ³ /UL)
PLATELET COUNT	<	163	*10 ³ /UL
FIBRINOGEN	<<	0.100	MG/DL

Comments >>

Hemavet:

WBC 9.28, Ne 3.15%, Ly 43.48%, Mo 34.54%, Eo 18.74%, Ba 0.09%.
RBC 3.08, HB 12.0, HCT 37.1, PLT 163, MCV 120.4, MCH 39.0, MCHC 32.3,
RDW 18.6, MPV 4.6, PDW 1.51.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 7.Feb.2008
Time of Collection: 8:45.0
Collected by: GB
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 7.Feb.2008
Time of Analysis: 12:15
Analysis by: JFC
Automated analysis.

Tests and Results >>

GLUCOSE 80 MG/DL

E 1611.TXT

BLOOD UREA NITROGEN	10	MG/DL
CREATININE	1.4	MG/DL
BUN/creatinine ratio	7.14	
CALCIUM	10.7	MG/DL
SODIUM >	135	MEQ/L
POTASSIUM	5.0	MEQ/L
sodium/potassium ratio	27.0	
CHLORIDE >	93	MEQ/L
TOTAL PROTEIN (COLORIMETRY)	< 6.9	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<< 7.1	GM/DL
ALBUMIN (COLORIMETRY)	< 3.0	GM/DL
GLOBULIN (COLORIMETRY)	4.0	GM/DL
albumin/globulin ratio	0.750	
ASPARTATE AMINOTRANSFERASE	< 7	IU/L
TOTAL BILIRUBIN >	0.4	MG/DL
ALKALINE PHOSPHATASE	101	IU/L
LACTATE DEHYDROGENASE	671	IU/L
CREATINE PHOSPHOKINASE	114	IU/L
GAMMA GLUTAMYLTRANSFERASE	< 7	IU/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>	Date of Collection: 3.Apr.2008
Health Status: Normal	Time of Collection: 9:15.0
Fasting Time: < 8 hours	Collected by: GB
Activity: Active	Sample Collection Site: EAR VEIN
Weight: 3541 Kg on 8.Sep.2003	
Manual restraint used.	

Hematology >>	Laboratory: NC ZOO
Analysis Information >>	Date of Analysis: 3.Apr.2008
Anticoagulant: EDTA	Time of Analysis: 10:00
Storage: Fresh	Analysis by: DGH
Sample Quality: hemolysis	Automated analysis.

Tests and Results >>

E 1611.TXT

WHITE BLOOD CELL COUNT	10.56		*10 ³ /UL
RED BLOOD CELL COUNT	3.23		*10 ⁶ /UL
HEMOGLOBIN <	12.3		GM/DL
HEMATOCRIT	37		%
MCV <	115		fL
MCH <	38.1		ug
MCHC	33.2		gm/dL
SEGMENTED NEUTROPHILS	27	(2.851)	% (*10 ³ /UL)
LYMPHOCYTES	21	(2.218)	% (*10 ³ /UL)
MONOCYTES >>	47	(4.963)	% (*10 ³ /UL)
EOSINOPHILS	5	(0.528)	% (*10 ³ /UL)
PLATELET COUNT	227		*10 ³ /UL
FIBRINOGEN <	4.00		MG/DL

Comments >>

Hemavet:

WBC 10.56, Ne 3.84, Ly 44.50, Mo 34.32, Eo 17.28, Ba 0.05.
RBC 3.23, HB 12.3, HCT 39.6, PLT 227, MCV 122.5, MCH 38.1, MCHC 31.1,
RDW 18.5, MPV 4.8, PDW 15.3.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Active
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 3.Apr.2008
Time of Collection: 9:15.0
Collected by: GB
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: hemolysis

Laboratory: NC ZOO
Date of Analysis: 3.Apr.2008
Time of Analysis: 11:03
Analysis by: DGH
Automated analysis.

E 1611.TXT

Tests and Results >>

GLUCOSE	>	97	MG/DL
BLOOD UREA NITROGEN		10	MG/DL
CREATININE		1.3	MG/DL
BUN/creatinine ratio		7.69	
CALCIUM		11.5	MG/DL
SODIUM	>>	136	MEQ/L
POTASSIUM		4.7	MEQ/L
sodium/potassium ratio		28.9	
TOTAL PROTEIN (COLORIMETRY)		7.7	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<	7.3	GM/DL
ALBUMIN (COLORIMETRY)	<<	2.7	GM/DL
GLOBULIN (COLORIMETRY)	>	5.0	GM/DL
albumin/globulin ratio		0.540	
ASPARTATE AMINOTRANSFERASE	>	42	IU/L
TOTAL BILIRUBIN		0.3	MG/DL
CREATINE PHOSPHOKINASE		181	IU/L
GAMMA GLUTAMYLTRANSFERASE	>	19	IU/L
TOTAL CONTENT CO2		25	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 17.Apr.2008
Time of Collection: 12:47.0
Collected by:

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 17.Apr.2008
Time of Analysis: 12:47
Analysis by:
Automated analysis.

Tests and Results >>

	GLUCOSE	90	MG/DL
	BLOOD UREA NITROGEN	9	MG/DL
	CREATININE	1.4	MG/DL
	BUN/creatinine ratio	6.43	
	CALCIUM	10.9	MG/DL
	SODIUM	> 134	MEQ/L
	POTASSIUM	4.4	MEQ/L
	sodium/potassium ratio	30.5	
	TOTAL PROTEIN (COLORIMETRY)	7.8	GM/DL
	ALBUMIN (COLORIMETRY)	< 3.1	GM/DL
	GLOBULIN (COLORIMETRY)	> 4.7	GM/DL
	albumin/globulin ratio	0.660	
	ASPARTATE AMINOTRANSFERASE	22	IU/L
	TOTAL BILIRUBIN	0.3	MG/DL
	CREATINE PHOSPHOKINASE	236	IU/L
	GAMMA GLUTAMYLTRANSFERASE	16	IU/L
	TOTAL CONTENT CO2	29	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>

Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 1.May.2008
 Time of Collection: 9:00.0
 Collected by: R M
 Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>
 Anticoagulant: Heparin
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 1.May.2008
 Time of Analysis: 10:30
 Analysis by: PAW

Tests and Results >>

	HEMATOCRIT	38	%
SEGMENTED	NEUTROPHILS >>	30	% (*10 ³ /UL)
	LYMPHOCYTES >>	42	% (*10 ³ /UL)
	MONOCYTES >>	27	% (*10 ³ /UL)
	EOSINOPHILS >>	1	% (*10 ³ /UL)

Morphology Results >>

FIBRINOGEN 3.0

Comments >>

RBC's normal

Hemavet:

WBC 10.02, Ne 2.68, Ly 60.58, Mo 25.25, Eo 11.44, Ba 0.06.

RBC 3.28, HB 11.1, HCT 36.3, PLT 294, MCV 110.8, MCH 33.8, MCHC 30.6,

RDW 17.8, MPV 4.6, PDW 18.1.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>

Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3541 Kg on 8.Sep.2003
 Manual restraint used.

Date of Collection: 1.May.2008
 Time of Collection: 9:00.0
 Collected by: R M
 Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>
 Chemistry Sample: Serum
 Storage: Fresh

Laboratory: NC ZOO
 Date of Analysis: 1.May.2008
 Time of Analysis: 11:54

E 1611.TXT

Sample Quality: No quality problems.

Analysis by: PAW
Automated analysis.

Tests and Results >>

GLUCOSE	84	MG/DL
BLOOD UREA NITROGEN	11	MG/DL
CREATININE	1.4	MG/DL
BUN/creatinine ratio	7.86	
CALCIUM	10.8	MG/DL
SODIUM	> 135	MEQ/L
POTASSIUM	4.7	MEQ/L
sodium/potassium ratio	28.7	
TOTAL PROTEIN (COLORIMETRY)	8.0	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	< 7.2	GM/DL
ALBUMIN (COLORIMETRY)	< 3.2	GM/DL
GLOBULIN (COLORIMETRY)	> 4.8	GM/DL
albumin/globulin ratio	0.667	
ASPARTATE AMINOTRANSFERASE	26	IU/L
TOTAL BILIRUBIN	> 0.4	MG/DL
CREATINE PHOSPHOKINASE	218	IU/L
TOTAL CONTENT CO2	30	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 5.Jun.2008
Time of Collection: 9:50.0
Collected by: GB
Sample Collection Site: EAR VEIN

Hematology >>
Analysis Information >>
Anticoagulant: EDTA

Laboratory: NC ZOO
Date of Analysis: 5.Jun.2008

E 1611.TXT

Storage: Fresh
Sample Quality: hemolysis

Time of Analysis: 13:00
Analysis by: HKM
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	10.08		*10 ³ /UL
HEMATOCRIT <	34		%
SEGMENTED NEUTROPHILS	25	(2.520)	% (*10 ³ /UL)
NEUTROPHILIC BANDS <	0		% (*10 ³ /UL)
LYMPHOCYTES	22	(2.218)	% (*10 ³ /UL)
MONOCYTES >>	53	(5.342)	% (*10 ³ /UL)
EOSINOPHILS	0		% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)
PLATELET COUNT <	159		*10 ³ /UL
FIBRINOGEN <<	0.8		MG/DL

Comments >>

RBCs normal

Hemavet:

WBC 10.08, Ne 3.10, Ly47.28, Mo 30.77, Eo 18.70, Ba 0.15.
RBC 3.03, HB 12.0, HCT 34.3, PLT 159, MCV 113.3, MCH 39.6, MCHC 35.0,
RDW 17.8, MPV 4.5, PDW 16.8.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 5.Jun.2008
Time of Collection: 9:50.0
Collected by: GB
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Laboratory: NC ZOO

Chemistry Sample: Serum
Storage: Fresh
Sample Quality: hemolysis

E 1611.TXT

Date of Analysis: 5.Jun.2008
Time of Analysis: 13:47
Analysis by: HKM
Automated analysis.

Tests and Results >>

GLUCOSE >>	114	MG/DL
BLOOD UREA NITROGEN	11	MG/DL
CREATININE	1.4	MG/DL
BUN/creatinine ratio	7.86	
CALCIUM	11.1	MG/DL
SODIUM >	134	MEQ/L
POTASSIUM	5.1	MEQ/L
sodium/potassium ratio	26.3	
TOTAL PROTEIN (COLORIMETRY)	7.7	GM/DL
TOTAL PROTEIN (REFRACTOMETER) <<	7.0	GM/DL
ALBUMIN (COLORIMETRY)	3.3	GM/DL
GLOBULIN (COLORIMETRY)	4.4	GM/DL
albumin/globulin ratio	0.750	
ASPARTATE AMINOTRANSFERASE	23	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
CREATINE PHOSPHOKINASE	249	IU/L
GAMMA GLUTAMYLTRANSFERASE >	17	IU/L
TOTAL CONTENT CO2	29	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 26Y Est.

Clinical Note:

17.Jun.2008

Assessment of ventral edema

The animal has pronounced ventral edema over the entire length of the ventrum and the edema is more pronounced on the left side. Advised keepers to apply DMSO ointment to prepuce and ventrum. Keepers will begin feeding 6 bananas per day to supplement potassium.

CBC and Chemistry are unremarkable. Potassium is normal at 4.7.

E 1611.TXT

suggested Ddx for ventral edema include parasites, salmonellosis and trauma.

will continue to monitor, keepers will treat with DMSO topically and continue hydrotherapy BID

Enteric pathogen screen sent to antech. (SKC)

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 27Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Active
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 17.Jun.2008
Time of Collection: 10:30.0
Collected by: BL
Sample Collection Site: EAR VEIN

E 1611.TXT

Hematology >>

Analysis Information >>

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

Laboratory: NC ZOO
Date of Analysis: 17.Jun.2008
Time of Analysis: 12:00
Analysis by: HKM
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	9.96		*10 ³ /UL
RED BLOOD CELL COUNT	2.85		*10 ⁶ /UL
HEMOGLOBIN	<< 11.1		GM/DL
HEMATOCRIT	< 33		%
MCV	< 116		fL
MCH	< 38.9		uug
MCHC	33.6		gm/dL
SEGMENTED NEUTROPHILS	16	(1.594)	% (*10 ³ /UL)
NEUTROPHILIC BANDS	< 0		% (*10 ³ /UL)
LYMPHOCYTES	26	(2.590)	% (*10 ³ /UL)
MONOCYTES	>> 56	(5.578)	% (*10 ³ /UL)
EOSINOPHILS	2	(0.199)	% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)
PLATELET COUNT	< 177		*10 ³ /UL
FIBRINOGEN	<< 0.6		MG/DL

Comments >>

RBCs normal

Hemavet:

WBC 9.96, Ne 0.04, Ly 66.78, Mo 29.55, Eo 3.63, Ba 0.00.
RBC 2.85, HB 11.1, HCT 31.9, PLT 177, MCV 111.8, MCH 38.9, MCHC 34.8,
RDW 17.7, MPV 5.4, k PDW 16.8.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 27Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Active
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Date of Collection: 17.Jun.2008
Time of Collection: 10:30.0
Collected by: BL
Sample Collection Site: EAR VEIN

E 1611.TXT

Chemistry >>

Analysis Information >>

Chemistry Sample: Serum

Storage: Fresh

Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 17.Jun.2008
Time of Analysis: 11:55
Analysis by: HKM
Automated analysis.

Tests and Results >>

GLUCOSE	>	108	MG/DL
BLOOD UREA NITROGEN		8	MG/DL
CREATININE		1.5	MG/DL
BUN/creatinine ratio		5.33	
CALCIUM		10.7	MG/DL
SODIUM		132	MEQ/L
POTASSIUM		4.7	MEQ/L
sodium/potassium ratio		28.1	
TOTAL PROTEIN (COLORIMETRY)		7.6	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<<	7.0	GM/DL
ALBUMIN (COLORIMETRY)	<	3.1	GM/DL
GLOBULIN (COLORIMETRY)		4.5	GM/DL
albumin/globulin ratio		0.689	
ASPARTATE AMINOTRANSFERASE		19	IU/L
TOTAL BILIRUBIN		0.3	MG/DL
CREATINE PHOSPHOKINASE		208	IU/L
GAMMA GLUTAMYLTRANSFERASE		16	IU/L
TOTAL CONTENT CO2		28	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: RAFIKI

Accession #: 1611
Female
Birth: 17.Dec.1981 (Estimated)

Parasitology Examination:

Submission Data >>

Type: Fecal sample

Purpose: DIAGNOSTIC EXAMINATION

Sample id.: 2008-0331
Date collected: 17.Jun.2008
Time collected: 10:45
Collected by: BAL

Collected from:

Enclosure: EBST2

E 1611.TXT

From an individual specimen.

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 17.Jun.2008
at: 14:10
by: HSS

Tests & Results >>

DIRECT MICROSCOPIC EXAMINATION NO PARASITES SEEN
FLOATATION - NA NITRATE NO PARASITES SEEN

Comments >>

sent culture to Antech

Clinical Note:

22.Jun.2008

Fecal culture, rec 6/18, reported 6/22 (Antech):
No Campylobacter, Yersinia, Salmonella, or Shigella isolated. (CUL)

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp) Accession #: 1611
Common Name: African elephant Female
Name: RAFIKI Birth: 17.Dec.1981 (Estimated)
Age: 27Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm

Date of Collection: 26.Jun.2008
Time of Collection: 11:10.0
Collected by: B L
Sample Collection Site: EAR VEIN

Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Hematology >>

Analysis Information >>

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

Laboratory: NC ZOO
Date of Analysis: 26.Jun.2008
Time of Analysis: 13:30
Analysis by: PAW
Automated analysis.

Chemistry >>

Analysis Information >>

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

Laboratory: NC ZOO
Date of Analysis: 26.Jun.2008
Time of Analysis: 13:31
Analysis by: PAW
Automated analysis.

Tests and Results >>

GLUCOSE	96	MG/DL
BLOOD UREA NITROGEN	8	MG/DL
CREATININE	1.7	MG/DL
BUN/creatinine ratio	4.71	
CALCIUM	10.8	MG/DL
SODIUM >	135	MEQ/L
POTASSIUM	4.4	MEQ/L
sodium/potassium ratio	30.7	
TOTAL PROTEIN (COLORIMETRY)	7.8	GM/DL
ALBUMIN (COLORIMETRY) <	3.1	GM/DL
GLOBULIN (COLORIMETRY) >	4.7	GM/DL
albumin/globulin ratio	0.660	
ASPARTATE AMINOTRANSFERASE	19	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
CREATINE PHOSPHOKINASE	210	IU/L
TOTAL CONTENT CO2	30	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 27Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours

Date of Collection: 3.Jul.2008
Time of Collection: 9:55.0
Collected by: BL

E 1611.TXT

Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>

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

Laboratory: NC ZOO
Date of Analysis: 3.Jul.2008
Time of Analysis: 11:28
Analysis by: GAW
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	11.56		*10 ³ /UL
RED BLOOD CELL COUNT	3.11		*10 ⁶ /UL
HEMOGLOBIN	< 11.6		GM/DL
HEMATOCRIT	< 36		%
MCV	< 116		fL
MCH	<< 37.3		ug
MCHC	< 32.2		gm/dL
SEGMENTED NEUTROPHILS	30	(3.468)	% (*10 ³ /UL)
NEUTROPHILIC BANDS	< 0		% (*10 ³ /UL)
LYMPHOCYTES	27	(3.121)	% (*10 ³ /UL)
MONOCYTES	>> 42	(4.855)	% (*10 ³ /UL)
EOSINOPHILS	1	(0.116)	% (*10 ³ /UL)
PLATELET COUNT	233		*10 ³ /UL

Comments >>

RBC's normal

Hemavet:

WBC 11.56, NE 3.90, Ly 40.54, Mo 30.18, Eo 25.28, Ba 0.09.
RBC 3.11, HB 11.6, HCT 36.6, PLT 233, MCV 117.7, MCH 37.3, MCHC 31.7,
RDW 18.1, MPV 4.7, PDW 16.3.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 27Y Est.

Collection Information >>
Health Status: Normal

Date of Collection: 3.Jul.2008
Time of Collection: 9:55.0

E 1611.TXT

Fasting Time: < 8 hours
Activity: Calm
Weight: 3541 Kg on 8.Sep.2003
Manual restraint used.

Collected by: BL
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

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

Laboratory: NC ZOO
Date of Analysis: 3.Jul.2008
Time of Analysis: 11:40
Analysis by: GAW
Automated analysis.

Tests and Results >>

GLUCOSE	>	101	MG/DL
BLOOD UREA NITROGEN	<	5	MG/DL
CREATININE		1.7	MG/DL
BUN/creatinine ratio		2.94	
CALCIUM		11.3	MG/DL
PHOSPHORUS		5.3	MG/DL
calcium/phosphorus ratio		2.13	
SODIUM	>>	136	MEQ/L
POTASSIUM		4.6	MEQ/L
sodium/potassium ratio		29.6	
TOTAL PROTEIN (COLORIMETRY)		8.1	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<	7.4	GM/DL
ALBUMIN (COLORIMETRY)		3.3	GM/DL
GLOBULIN (COLORIMETRY)	>	4.7	GM/DL
albumin/globulin ratio		0.702	
ALANINE AMINOTRANSFERASE		6	IU/L
TOTAL BILIRUBIN		0.3	MG/DL
AMYLASE	<<	0	U/L
ALKALINE PHOSPHATASE		75	IU/L

ISIS reference values are for LOXODONTA AFRICANA
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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: RAFIKI

Accession #: 1611
Female
Birth: 17.Dec.1981 (Estimated)
Age: 27Y Est.

Clinical Note:

8.Aug.2008

Comment: Received blood for analysis today. The technicians report 3%

E 1611.TXT

bands of the differential otherwise no abnormalities detected on CBC and chemistry panel.

This elephant is clinically normal. We will perform a CBC on the next blood sample collected from her to recheck for the presence of bands.
(RSD)

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 27Y Est.

E 1611.TXT

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4136 Kg on 18.Jul.2008
Manual restraint used.

Date of Collection: 8.Aug.2008
Time of Collection: 8:50.0
Collected by: JWS
Sample Collection Site: EAR VEIN

Hematology >>
Analysis Information >>
Anticoagulant: EDTA
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 8.Aug.2008
Time of Analysis: 11:45
Analysis by: CAP
Automated analysis.

Tests and Results >>

HEMATOCRIT >	46	%
SEGMENTED NEUTROPHILS >>	29	% (*10 ³ /UL)
NEUTROPHILIC BANDS >>	3	% (*10 ³ /UL)
LYMPHOCYTES >>	24	% (*10 ³ /UL)
MONOCYTES >>	42	% (*10 ³ /UL)
EOSINOPHILS >>	2	% (*10 ³ /UL)
BASOPHILS	0	% (*10 ³ /UL)
FIBRINOGEN <<	0	MG/DL

Comments >>
RBC's okay

Hemavet:
WBC 10.12, Ne 0.85, Ly 58.82, Mo 27.16, Eo 13.07, Ba 0.10.
RBC 3.46, HB 12.8, HCT 40.7, PLT 263, MCV 117.6, MCH 37.0, MCHC 31.4,
RDW 18.1, MPV 5.2, PDW 15.2.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)
	Age: 27Y Est.

E 1611.TXT

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Weight: 4136 Kg on 18.Jul.2008
Manual restraint used.

Date of Collection: 8.Aug.2008
Time of Collection: 8:50.0
Collected by: JWS
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 8.Aug.2008
Time of Analysis: 11:20
Analysis by: CAP
Automated analysis.

Tests and Results >>

GLUCOSE	>	109	MG/DL
BLOOD UREA NITROGEN		11	MG/DL
CREATININE		1.8	MG/DL
BUN/creatinine ratio		6.11	
CALCIUM		11.2	MG/DL
SODIUM	>	135	MEQ/L
POTASSIUM		4.6	MEQ/L
sodium/potassium ratio		29.3	
TOTAL PROTEIN (COLORIMETRY)		8.0	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<<	7.0	GM/DL
ALBUMIN (COLORIMETRY)	<	3.2	GM/DL
GLOBULIN (COLORIMETRY)	>	4.8	GM/DL
albumin/globulin ratio		0.667	
ASPARTATE AMINOTRANSFERASE		25	IU/L
TOTAL BILIRUBIN		0.3	MG/DL
CREATINE PHOSPHOKINASE		184	IU/L
GAMMA GLUTAMYLTRANSFERASE		14	IU/L
TOTAL CONTENT CO2		29	MEQ/L

ISIS reference values are for LOXODONTA AFRICANA
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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1611
Common Name: African elephant	Female
Name: RAFIKI	Birth: 17.Dec.1981 (Estimated)

E 1611.TXT

Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: ROUTINE EXAMINATION

Sample id.: 2008-0433
Date collected: 13.Aug.2008
Time collected: 7:30

Collected from:

From an individual specimen.

Enclosure: ELPB

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 13.Aug.2008
at: 13:30
by: DGH

Tests & Results >>

FLOATATION - NA NITRATE

NO PARASITES SEEN

Submission Data >>

Type: Fecal sample
Purpose: ROUTINE EXAMINATION

Sample id.: 2008-0434
Date collected: 13.Aug.2008
Time collected: 7:30

Collected from:

Group of specimens housed together.

Enclosure: ELPB

Examination Data >>

Storage: room temperature
Consistency: Not specified
Gross appearance: Typical

Date examined: 13.Aug.2008
by: DGH

Tests & Results >>

FLOATATION - NA NITRATE

NO PARASITES SEEN

Printed on: 19.Aug.2008

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Clinical Pathology Records Report - ISIS/In-House Reference Values
NORTH CAROLINA ZOOLOGICAL PARK

Scientific name: LOXODONTA AFRICANA
Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	10.62	+ 2.491	5.000	21.00	(1081)
RBC	*10 ⁶ /UL	3.21	+ 0.37	2.10	4.80	(1047)
HGB	GM/DL	13.8	+ 1.3	9.0	18.6	(1071)
HCT	%	40.0	+ 3.8	29.5	54.0	(1107)
MCH	MG/DL	43.2	+ 2.7	36.4	65.6	(1031)
MCHC	uug	34.5	+ 1.8	28.3	46.4	(1057)
MCV	fL	125.4	+ 7.8	91.1	190.0	(1029)
SEGS	*10 ³ /UL	2.897	+ 1.690	0.000	11.40	(778)
BANDS	*10 ³ /UL	0.908	+ 0.748	0.000	3.960	(520)
LYMPHOCYTES	*10 ³ /UL	5.326	+ 3.263	0.022	64.40	(787)
MONOCYTES	*10 ³ /UL	1.164	+ 1.536	0.000	8.639	(742)
EOSINOPHILS	*10 ³ /UL	0.240	+ 0.301	0.000	2.898	(631)
BASOPHILS	*10 ³ /UL	0.041	+ 0.077	0.000	0.525	(424)
NRBC	/100 WBC	1	+ 1	0	3	(25)
PLATE. CNT.	*10 ³ /UL	498	+ 278	177	1380	(124)
RETICS	%	0.0	+ 0.0	0.0	0.0	(6)
GLUCOSE	MG/DL	83	+ 13	47	141	(1001)
BUN	MG/DL	11	+ 3	0	21	(1024)
CREAT.	MG/DL	1.5	+ 0.3	0.5	4.4	(962)
URIC ACID	MG/DL	0.3	+ 0.4	0.0	5.1	(356)
CA	MG/DL	11.0	+ 0.5	8.7	13.9	(1010)
PHOS	MG/DL	4.9	+ 0.8	3.0	8.2	(981)
NA	MEQ/L	129	+ 3	111	146	(995)
K	MEQ/L	4.7	+ 0.4	3.9	6.9	(1005)
CL	MEQ/L	88	+ 3	71	108	(984)
IRON	MCG/DL	79	+ 24	24	130	(29)
MG	MG/DL	2.33	+ 0.54	1.40	4.20	(44)
CHOL	MG/DL	67	+ 19	0	302	(947)
TRIG	MG/DL	68	+ 31	14	179	(876)
T.PROT. (C)	GM/DL	7.7	+ 0.5	5.8	9.6	(906)
T.PROT. (R)	GM/DL	8.0	+ 0.4	7.4	8.6	(8)
ALBUMIN (C)	GM/DL	3.6	+ 0.3	2.2	4.5	(841)
GLOBULIN (C)	GM/DL	4.1	+ 0.5	2.4	5.8	(832)
AST (SGOT)	IU/L	25	+ 9	7	80	(982)
ALT (SGPT)	IU/L	6	+ 6	0	30	(278)
T. BILI.	MG/DL	0.2	+ 0.1	0.0	1.0	(829)
D. BILI	MG/DL	0.0	+ 0.0	0.0	0.2	(90)
I. BILI.	MG/DL	0.1	+ 0.1	0.0	0.5	(89)
AMYLASE	U/L	3389	+ 1520	0	7918	(130)
ALK.PHOS.	IU/L	123	+ 55	47	364	(978)
LDH	IU/L	1043	+ 575	157	4306	(949)
CPK	IU/L	256	+ 198	44	1263	(105)

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Clinical Pathology Records Report - ISIS/In-House Reference Values
 NORTH CAROLINA ZOOLOGICAL PARK

Scientific name: LOXODONTA AFRICANA

Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
OSMOLARITY	MOSMOL/L	258 +	4	245	272	(652)
HCO3	MEQ/L	177.7 +	398.3	23.0	1081	(7)
Body Temperature:		39.0 +	0.0	39.0	39.0	(1)
CO2	MMOL/L	27.4 +	2.5	16.7	34.6	(731)
ESR	MM/HR	27 +	0	27	27	(1)
FIBRINOGEN	MG/DL	296 +	147	100	600	(14)
GGT	IU/L	12 +	4	0	27	(148)
LIPASE	U/L	7 +	6	0	20	(29)
PROGESTERONE	NG/DL	32.81 +	47.83	0.100	257.0	(44)
TESTOSTERONE	NG/ML	0.220 +	0.000	0.220	0.220	(1)
TOTAL T4	MCG/DL	14.5 +	7.1	9.5	19.5	(2)

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