

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

03/Mar/2025

Sample

Sample Detail

Collection Date/Time 03/Mar/2025 07:43
Sample Type Wash/Lavage Fluid
Anatomical Source/Tissue Elephant trunk
Collection Method Wash/lavage
Collected By Dimas Dominguez
Reason Disease Monitoring
Exclude from reference intervals No

Sample Quality

Color ~
Color Intensity ~

Initial Holding Conditions

Initial Holding Temp. Chilled/Refrigerated
Initial Holding Duration > 24 hours to <=48 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
03/Mar/2025	~/~	Available	NATELEHER/3/3

Notes

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested 03/Mar/2025
Requested By Carlos Sanchez
Laboratory NATELEHER
Analysis Start Date 07/Mar/2025
Analysis Equipment ~
Insufficient Sample No

Sample Quality

Color ~
Color Intensity ~
Clarity ~
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

EEHV1A (-), EEHV1B (+)
 TNF: 29.0
 Date tested: 03/06/2025
 E=VR

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
EEHV 1 /ml qPCR	10 vge/rxn	Not calculated	~	~	~	No
EEHV 4 qPCR	0 vge/rxn	Not calculated	~	~	~	No
EEHV 5 qPCR	0 vge/rxn	Not calculated	~	~	~	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037699)

Collection Date/Time	03/Mar/2025 07:43	Collection Method	Wash/lavage
Sample Type	Wash/Lavage Fluid	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Elephant trunk	Reason	Disease Monitoring
Additives/Preservatives	~	Exclude from reference intervals	No

10/Feb/2025

Clinical note

Date	Time	Note Author
10/Feb/2025	00:00	Carlos Sanchez
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

Proc: Elephant Foot Radiographs - Retrospective entry of radiographs performed on 10 Feb (note entered in March 3)

Hx: Approx 33-yo female elephant. PMP performed 22Jan2025- Old history included mod hypoproteinemia and mild to mod anemia of unknown reasons; lasted about 1 1/2 years; it's been normal for some time and those 2 probes were recently resolved.

Restraint: Elephant in ERD. Behavioral conditioning with food reward.

Diagnostics:

- Imaging procedure:** Technique described in Mumby et al 2013. Images were acquired with the use of a custom made stand and portable imaging system (metal frame with radiolucent, acrylic top surface - plate placed below top surface with approx. 3 in gap). The plate was adjusted between views in relation to the X-ray beam and elephant foot.
 - Hindfeet radiographs:** dorsal aspect resting on stand, best views obtained with nail of digit 3 contacting acrylic top surface of stand
 - Settings:** 90 Kvp, 0.30s
 - Right hindfoot:** Plantaroproximal-dorsodistal oblique view
 - Left hindfoot:** Plantaroproximal-dorsodistal view
 - Other notes: Tripod legs about 1/2 extended. Collimator positioned at an approx. 60 degree angle aiming to the plantar aspect of the feet with a distance of approx. 80 cm between the collimator and plate. Center of beam 10-15cm from bottom edge of foot. Views with emphasis on D4.
 - Forefeet radiographs:** sole resting on stand, best views obtained with sole parallel to surface of stand
 - Settings:** 90 Kvp, 0.25s
 - Right forefoot:** Dorsoproximal-palmarodistal oblique view
 - Left forefoot:** Dorsoproximal-palmarodistal oblique view
 - Other notes: Tripod legs about 1/2 extended. Collimator was positioned by CAB at approx. 60 degree angle aiming at the dorsal aspect of the feet with a distance of approx. 80 cm between the collimator and plate. Center of beam 10-15cm from bottom edge of foot.

A: Feet raddiographs - uneventful

No new concerns on preliminary review.

P: Submit images for radiologist review.

Continue with yearly radiograph screening.

Animal Care Staff Medical Summary

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

04/Feb/2025

Clinical note

Date	Time	Note Author
04/Feb/2025	00:00	Carlos Sanchez
Significant	Private	Active Problems

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

- No No
- AI - ascites
 - EARS (NOS) (historical data), Discharge
 - Entropion, Palpebra (not specified)
 - Exudative otitis
 - Phthisis bulbi, Eye
 - Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:
Hct/TP: 36%/ **7.2 g/dL** (manual)
WBC: 14,910 (ProCyte) Manual diff: 29% Het, 0% bands, 4% Lymphs, 67% Monos, 0% Eos, 0% Baso; Morp: Mod activated monos
Platelets Minimal clumping: 1,050,000
Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 84 mg/dl, BUN 9 mg/dl, Creat 1.0.mg/dl, Ca 9.7 g/dl, Phos 4.1 mg/dL, Mg 2.26 mg/dl, **Alb 2.9 g/dl**, Glob 3.7 g/dl; TP (Catalyst): **6.6 g/dl**. LDH 880 U/L.
Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI albeit low-normal(ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Low normal albumin when compared with ZIMS and normal when compared with RI in Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Apparent healthy female Bornean elephant with normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI. For several months now the bloodwork of this elephant has been normal.

P: In agreement with other veterinarians, the routine bloodwork on this elephant will be d/c as of today.
Keepers to report any abnormality that may prompt resuming routine blood sampling.

Animal Care Staff Medical Summary

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	04/Feb/2025 08:33
Sample Type	Plasma
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
04/Feb/2025	~/~	Available	PORTLAND/1/1

Notes

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Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	04/Feb/2025 08:33
Sample Type	Whole Blood
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
04/Feb/2025	~/~	Available	PORTLAND/25/25

Notes

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	04/Feb/2025 08:33
Sample Type	Serum
Anatomical Source/Tissue	Right saphenous vein
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
04/Feb/2025	~/~	Available	PORTLAND/21/21

Notes

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail	
Date Requested	04/Feb/2025
Requested By	Carlos Sanchez
Analysis Start Date & Time	04/Feb/2025 11:43
Analysis By	Jordan Butler
Analysis Equipment	Catalyst One
Insufficient Sample	No

Sample Quality	
Color	Pink
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments
E = RW No CK value today.

Test Requests & Test Results						
Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Glucose	84 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	9 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	9.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	No
Phos	4.1 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.7 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.26 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.6 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	2.9 g/dL	Not calculated	~	~	~	No
Globulin	3.7 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	19 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	86 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
LDH	880 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	131 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	8.8 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	High	No	No	No
Na:K ratio	15 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	Low	No	~	No
Chloride	94 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	269 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037609)

Collection Date/Time	04/Feb/2025 08:33	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	04/Feb/2025
Requested By	Carlos Sanchez
Analysis Start Date & Time	04/Feb/2025 11:17
Analysis By	Jordan Butler
Analysis Equipment	ProCyte Dx
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:

Clumping: minimal
Enlarged: 1+
Other: 0

Erythrocytes:

nRBC: 0
Anisocytosis: 2+
Polychormasia: 0
Hypochromasia: 0

Poikilocytosis:

Target cells: 1+
Schistocytes: 0
Keratocytes: 0
Spherocytes: 1+
Other: 0

Leukocytes:

Heterophils:

Band heterophils 0# seen: in 200 ct diff
Band precursor 0# seen: in 200 ct diff
Hypersegmentation: none
Toxicity: none

Lymphocytes:

Reactivity: none
Enlarged: none
Granular cytoplasm: none
Nucleoli: none

Monocytes:

Activation: moderate
Enlarged: few
Vacuolated: moderate
Excessively vacuolated: moderate

Notes: few heterophils with vacuoles

Entered by: RW

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Exclud. from RI	Clinical Finding	Reviewed
HCT	36 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Est. WBC count	14.91 *10 ³ cells/μL	Global sp RI: 0 - 19 8 [8] N=134 (21)	~	No	~	No
Heterophil % [m]	29 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	4 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	67 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	0 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	1,050,000		~	~	~	No
RBC [a]	2.80 *10 ⁶ cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	29.6 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.5 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	105.7 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.07 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	38.85 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.5 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.1 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	3.1 *10 ³ cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	Low	No	~	No
WBC	14.91 *10 ³ cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.32 *10 ³ cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	0.60 *10 ³ cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	9.99 *10 ³ cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037608)

Collection Date/Time	04/Feb/2025 08:33	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	04/Feb/2025
Requested By	Carlos Sanchez
Analysis Start Date & Time	04/Feb/2025 11:17
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = RW

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Total Protein (R)	7.2 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV25-037610)

Collection Date/Time	04/Feb/2025 08:33	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

28/Jan/2025

Clinical note

Date	Time	Note Author
28/Jan/2025	00:00	Tina Batek
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 40%/ **7.8 g/dL** (manual)

WBC: 14.47K (ProCyte) Manual diff: 34% Het, 0% bands, 5% Lymphs, 59% Monos, 2% Eos, 0% Baso; Morp: Few hyper- and hyposegmented heterophils; 1+ toxicity; few activated monos

Platelets Minimal clumping: 1,166,250

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 07 mg/dl, BUN 11 mg/dl, Creat 1.2 mg/dl, Ca 9.7 g/dl, Phos 3.5 mg/dL, Mg 2.32 mg/dl, **Alb 3.2 g/dl**, Glob 4.0 g/dl, TP (Catalyst) **7.2 g/dl**. LDH 754 U/L, AST 31 U/L, ALP 74 U/L

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI albeit low-normal(ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book. P is back within RI this week (last week appeared

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

elevated when compared with prior values).

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Apparently healthy female Bornean elephant with normal WBC counts; normal TP and Albumin (based on values from ZIMS and Mikota/Fowler book) using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI

P: Cont. with routine blood sample monitoring, monitoring all parameters as above
Discuss with vets whether continuing with weekly blood monitoring offers any value

Animal Care Staff Medical Summary

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	28/Jan/2025 08:20
Sample Type	Whole Blood
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
28/Jan/2025	~/~	Available	PORTLAND/25/25

Notes

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	28/Jan/2025 08:20
Sample Type	Serum
Anatomical Source/Tissue	Auricular vein(not specified)
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
28/Jan/2025	~/~	Available	PORTLAND/22/22

Notes

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	28/Jan/2025 08:20
Sample Type	Plasma
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
28/Jan/2025	~/~	Available	PORTLAND/1/1

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested 28/Jan/2025
Requested By Tina Batek
Analysis Start Date & Time 28/Jan/2025 09:40
Analysis By Heather Brittingham
Analysis Equipment IDEXX
Insufficient Sample No

Sample Quality

Color Straw
Color Intensity light
Clarity Clear
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

E = RW

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	107 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.2 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	11 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	9.17 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	3.5 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.7 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.32 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.2 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.2 g/dL	Not calculated	~	~	~	No
Globulin	4.0 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	31 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	74 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	2 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	131 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	754 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	134 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.1 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	26 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	90 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	268 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV25-037573)

Collection Date/Time	28/Jan/2025 08:20	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	28/Jan/2025
Requested By	Tina Batek
Analysis Start Date & Time	28/Jan/2025 09:18
Analysis By	Heather Brittingham
Analysis Equipment	IDEXX
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: minimal (avg 77.75/hpf)
Enlarged: 1+
Other:

Erythrocytes:
nRBC: 1 in 200 ct diff
Anisocytosis: 2+
Polychormasia: 0
Hypochromasia: 0

Poikilocytosis:
Target cells: 1+
Schistocytes: 0
Keratocytes: 0
Spherocytes: 0
Other: 0

Leukocytes:

Heterophils:
Band heterophils 0# seen: in 200 count diff
Band precursor 0# seen: in 200 count diff
Hypersegmentation: few
Toxicity: few (1+)

Lymphocytes:
Reactivity: none
Enlarged: none
Granular cytoplasm: none
Nucleoli: none

Monocytes:
Activation: few
Enlarged: none
Vacuolated: few
Excessively vacuolated: none

Notes:

Entered by: RW

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Exclud. from RI	Clinical Finding	Reviewed
HCT	40 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Est. WBC count	14.47 *10 ³ cells/μL	Global sp RI: 0 - 19 8 [8] N=134 (21)	~	No	~	No
Heterophil % [m]	34 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	5 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	59 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	2 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	1,166,250		~	~	~	No
RBC [a]	3.17 *10 ⁶ cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	34.1 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	13.5 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.6 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	42.59 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	No
MCHC [c]	39.59 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	No
RDW	13.5 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.3 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	8.2 *10 ³ cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	14.47 *10 ³ cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.92 *10 ³ cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	No
Band count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	No
Lymphocyte count [c]	0.72 *10 ³ cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	No
Monocyte count [c]	8.54 *10 ³ cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	No
Eosinophil count [c]	0.29 *10 ³ cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	No
Basophil count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037574)

Collection Date/Time	28/Jan/2025 08:20	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	28/Jan/2025
Requested By	Tina Batek
Analysis Start Date & Time	28/Jan/2025 09:20
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = RW

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Total Protein (R)	7.8 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV25-037574)

Collection Date/Time	28/Jan/2025 08:20	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

22/Jan/2025

Clinical note

Date	Time	Note Author
22/Jan/2025	00:00	Gail Huckins
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

PROCEDURE: Routine PMP exam

Hx: Elephant presented for routine preventive health exam. This elephant is being medically managed for chronic otitis. In Dec 2022, animal had ventral, perivulvar, and buccal edema along with chemosis with inflammatory changes on blood work. Etiology was not identified, but inflammatory changes resolved with IV antibiotics and edema slowly resolved over 3-4 weeks. Capsule endoscopy performed in March 2023 to evaluate GIT as cause of chronic mild hypoproteinemia and anemia, which showed potential chronic gastropathy. Started on omeprazole for several weeks and then switched to probiotics with some improvement in fecal quality. Ascites diagnosed on AUS in June 2023. OS pthisis since before arrival at OZ. Was diagnosed with OD optic neuropthy in Dec 2021; No issues navigating her environment or locating food. Nutritionist JDA assessed BCS of 4/9 in Dec 2024. Previously reported anemia and hypoproteinemia have resolved on recent blood work. Staff have no concerns regarding this animal's behavior, appetite, activity level, urination, and defecation.

O:
RESTRAINT: Behavioral restraint

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

EXAM:
 Weight: 2385 kg (16 Jan 2025)
 MM: pink, moist
 Gen: BAR, cooperative with keeper and vet staff
 EENT: Cornea and anterior chamber clear OD, lens WNL OD, fundic exam not performed due to miosis OD, phthisical globe OS unchanged; Ears: unable to view canals, but no external discharge present; Nares/Trunk: Clear with no malodor or discharge
 Oral cavity: No erosions, ulcerations, masses, petechiae noted
 Dental exam: No tush lesions; No lesions of maxillary molars - previous molars have almost completely shed out; unable to visualize mandibular molars
 Resp: Eupneic
 Integ: Skin: Good condition, no lesions, masses, or ectoparasites noted; Feet: Vertical Toe cracks on RF D3 & D4 with associated subungual lesion, LF D3 & D4, and LH D3. Focal thin plantar sole of right hind, along medial aspect; no other plantar/palmar lesions
 MSK: Well muscled; normal ROM of all joints during stretching and limb flexion for foot inspection
 GI: No bloating present
 UG: Full vulvar exam not performed, no discharge noted
 Rectal: Not performed
 Neuro: Appropriate mentation

A: OS phthisis (historic)
 Chronic otitis media - not addressed at this visit
 Otherwise clinically normal elephant

P: Continue PMP schedule. Foot radiographs and routine blood work schedule for later this month (CBC, Chem, CZE, SAA, Haptoglobin, Vitamin E)

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

21/Jan/2025

Clinical note

Date	Time	Note Author
21/Jan/2025	00:00	Carlos Sanchez
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:
 Hct/TP: 36%/ 7.2 g/dL (manual)
 WBC: 12,840 (ProCyte) Manual diff: 32% Het, 0% bands, 9% Lymphs, 58% Monos, 1% Eos, 0% Baso; Morp: Few hypersegmented heterophils; few reactive lymphs and few activated monos
 Platelets Minimal clumping: 738,000
 Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 120 mg/dl, BUN 9 mg/dl, Creat 1.0.mg/dl, Ca 9.5 g/dl, Phos 5.4 mg/dL, Mg 2.15 mg/dl, **Alb 3.2 g/dl**, Glob 3.9 g/dl; TP (Catalyst): **7.1 g/dl**. LDH 824 U/L.
 Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI albeit low-normal(ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book. P is back within RI this week (last week appeared elevated when compared with prior values).

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

A: Apparent healthy female Bornean elephant with normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI. P is back to normal suggesting last week was a spurious result. **It is worth noticing the bloodwork of this elephant has been normal for some time now.**

P: Cont. with routine blood sample monitoring, monitoring all parameters as above
Discuss with vets whether continuing with weekly blood monitoring offers any value

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	21/Jan/2025 08:20
Sample Type	Whole Blood
Anatomical Source/Tissue	Auricular vein(not specified)
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
21/Jan/2025	~/~	Available	PORTLAND/24/23

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	21/Jan/2025 08:20
Sample Type	Serum
Anatomical Source/Tissue	Auricular vein(not specified)
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
21/Jan/2025	~/~	Available	PORTLAND/22/22

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	21/Jan/2025 08:20
Sample Type	Plasma
Anatomical Source/Tissue	Auricular vein(not specified)
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
21/Jan/2025	~/~	Available	PORTLAND/1/1

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	21/Jan/2025
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Rachel Wells
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	120 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	High	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	9 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	9.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	5.4 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.5 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.15 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.1 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.2 g/dL	Not calculated	~	~	~	No
Globulin	3.9 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	26 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	65 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	149 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	824 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	128 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.2 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	25 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	88 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	258 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV25-037547)

Collection Date/Time	21/Jan/2025 08:20	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	21/Jan/2025
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Rachel Wells
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: minimal
Enlarged: 1+
Other: rare megaplatelet

Erythrocytes:
nRBC: 1 seen
Anisocytosis: 1+
Polychormasia: /
Hypochromasia: /

Poikilocytosis:
Target cells: 1+
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:
Band heterophils # seen: 0 in 200
Band precursor # seen: 0 in 200
Hypersegmentation: few
Toxicity: none

Lymphocytes:
Reactivity: few
Enlarged: few
Granular cytoplasm: few
Nucleoli: none

Monocytes:
Activation: few
Enlarged: few
Vacuolated: few
Excessively vacuolated: none

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	36 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	32 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	9 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	58 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	738,000		~	~	~	No
RBC [a]	2.77 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	few %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.6 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	105.4 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.88 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	~ g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.5 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.5 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.5 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	12.84 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.11 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.16 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	7.45 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.13 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037549)

Collection Date/Time	21/Jan/2025 08:20	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	21/Jan/2025
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Rachel Wells
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = HB

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Total Protein (R)	7.2 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV25-037545)

Collection Date/Time	21/Jan/2025 08:20	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

14/Jan/2025

Clinical note

Date	Time	Note Author
14/Jan/2025	00:00	Carlos Sanchez
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 37%/ 7.1 g/dL (manual)

WBC: 13,630 (ProCyte) Manual diff: 23% Het, 0% bands, 5% Lymphs, 71% Monos, 1% Eos, 0% Baso; Morp: Few hypersegmented heterophils; mod activated monos

Platelets Minimal clumping: 781,875

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 102 mg/dl, BUN 9 mg/dl, Creat 1.1.mg/dl, Ca 9.3 g/dl, Phos 7.3 mg/dL, Mg 2.06 mg/dl, Alb 3.0 g/dl, Glob 3.8 g/dl; TP (Catalyst): 6.9 g/dl. LDH 868 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI albeit low-normal(ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book. P appears elevated when compared with prior values; no evident hemolysis reported by lab-tech (JB) but very few causes for elevated P exist.

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Apparent healthy female Bornean elephant with normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI. P is elevated but appears to be a spurious result. It is worth noticing the bloodwork of this elephant has been normal for some time now.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	14/Jan/2025 08:15
Sample Type	Serum
Anatomical Source/Tissue	Auricular vein(not specified)
Collection Method	Phlebotomy
Collected By	Heather Brittingham
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
14/Jan/2025	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	14/Jan/2025 08:15
Sample Type	Whole Blood
Anatomical Source/Tissue	Auricular vein(not specified)
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Heather Brittingham
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Initial Holding Conditions

Initial Holding Temp. Chilled/Refrigerated
Initial Holding Duration <= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
14/Jan/2025	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time 14/Jan/2025 08:15
Sample Type Plasma
Anatomical Source/Tissue Auricular vein(not specified)
Additives/Preservatives EDTA
Collection Method Phlebotomy
Collected By Heather Brittingham
Reason Recheck/Follow-up
Exclude from reference intervals No

Sample Quality

Color Straw
Color Intensity light
Clarity Clear
Additional Characteristics ~
Degraded No

Pre-Sampling Conditions

Fasting Duration < 2 hours
Restraint Type Behavioral
Activity Moderate activity

Initial Holding Conditions

Initial Holding Temp. Chilled/Refrigerated
Initial Holding Duration <= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
14/Jan/2025	~/~	Available	PORTLAND/1/1

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested 14/Jan/2025
Requested By Josie Rose
Analysis Start Date & Time ~
Analysis By Jordan Butler
Analysis Equipment ~
Insufficient Sample No

Sample Quality

Color Straw
Color Intensity light
Clarity Clear
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Exclud. from RI	Clinical Finding	Reviewed
Glucose	102 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.1 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	9 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	8.18 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	7.3 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	High	No	No	No
Ca	9.3 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.06 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.9 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.0 g/dL	Not calculated	~	~	~	No
Globulin	3.8 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	33 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	70 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	2 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	217 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	868 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	124 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.3 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	23 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	85 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	249 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV25-037520)

Collection Date/Time	14/Jan/2025 08:15	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Heather Brittingham
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	14/Jan/2025
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments
E = HB

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Total Protein (R)	7.1 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV25-037519)

Collection Date/Time	14/Jan/2025 08:15	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Heather Brittingham
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	14/Jan/2025
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes/Comments

Cell morphology

Platelets:

Clumping: moderate
Enlarged: 1+
Other: /

Erythrocytes:

nRBC: 1 seen
Anisocytosis: /
Polychromasia: /
Hypochromasia: /

Poikilocytosis:

Target cells: /
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:

Band heterophils # seen: none
Band precursor # seen: none
Hypersegmentation: few
Toxicity: few 1+

Lymphocytes:

Reactivity: none
Enlarged:
Granular cytoplasm:
Nucleoli:

Monocytes:

Activation: none
Enlarged:
Vacuolated:
Excessively vacuolated:

Notes: few enlarged heterophils

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)

- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	37 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	23 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	5 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	71 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	781,875		~	~	~	No
RBC [a]	2.87 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	30.6 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.7 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	106.6 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	40.77 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	38.24 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.3 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.7 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	13.63 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	3.13 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	0.68 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	9.68 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.14 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037521)

Collection Date/Time	14/Jan/2025 08:15	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Heather Brittingham
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

07/Jan/2025

Clinical note

Date	Time	Note Author
07/Jan/2025	00:00	Josie Rose
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 32%/6.8 g/dL (manual)

WBC: 14.18k (procyte); Manual diff: 32% Het, 0.5% bands, 11% Lymphs, 55% Monos, 1.5% Eos, 0% Baso; Morph: few het hyper/hyposeg, few reactive lymphs, moderate activated monos

Platelets:957.499k, minimal clumping

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 76 mg/dl, BUN 10 mg/dl, Creat 1.0 mg/dl, Ca 9.8 g/dl, Phos 5.0 mg/dL, Mg 2.17 mg/dl, **Alb 3.0 g/dl**, Glob 3.6 g/dl; TP (Catalyst): **6.6 g/dl**. LDH 864 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Normal albumin when compared with ZIMS AND Fowler/Mikota book. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples).

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	07/Jan/2025 08:10
Sample Type	Plasma
Anatomical Source/Tissue	Auricular vein(not specified)
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
07/Jan/2025	~/~	Available	PORTLAND/1/1

Notes
~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	07/Jan/2025 08:10
Sample Type	Whole Blood
Anatomical Source/Tissue	Auricular vein(not specified)
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
07/Jan/2025	~/~	Available	PORTLAND/24/24

Notes
~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	07/Jan/2025 08:10
Sample Type	Serum
Anatomical Source/Tissue	Auricular vein(not specified)
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
07/Jan/2025	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	07/Jan/2025
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes/Comments

Cell morphology

Platelets:

Clumping: minimal
Enlarged: 0-1+
Other: /

Erythrocytes:

nRBC: none seen
Anisocytosis: 2+
Polychromasia: 1+
Hypochromasia: /

Poikilocytosis:

Target cells: /
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:

Band heterophils # seen: 1 in 200 count
Band precursor # seen: none
Hypersegmentation: few
Toxicity: none

Lymphocytes:

Reactivity: few
Enlarged: few
Granular cytoplasm: none
Nucleoli: none

Monocytes:

Activation: mod
Enlarged: mod
Vacuolated: mod
Excessively vacuolated: few

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)

- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	32 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	32 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0.5 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	11 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	55 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1.5 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	957499		~	~	~	No
RBC [a]	2.47 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	26.5 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	10.7 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.3 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	43.32 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	No
MCHC [c]	40.38 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	No
RDW	13.4 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.4 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	3.2 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	Low	No	~	No
WBC	14.18 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.54 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.07 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.56 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	7.80 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.21 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV25-037499)

Collection Date/Time	07/Jan/2025 08:10	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	07/Jan/2025
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	76 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	10 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	10.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	5.0 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.3 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.17 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.6 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.0 g/dL	Not calculated	~	~	~	No
Globulin	3.6 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	46 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	High	No	No	No
Alk. Phos.	70 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	2 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	116 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	864 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	126 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	4.5 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	28 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	88 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	251 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV25-037499)

Collection Date/Time	07/Jan/2025 08:10	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	07/Jan/2025
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments
E = HB

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Total Protein (R)	6.8 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV25-037498)

Collection Date/Time	07/Jan/2025 08:10	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

31/Dec/2024

Clinical note

Date	Time	Note Author
31/Dec/2024	00:00	Gail Huckins
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:
Hct/TP: 38%/7.9 g/dL (manual)
WBC: 13.3k (procyte); Manual diff: 25% Het, 0% bands, 10% Lymphs, 64% Monos, 1% Eos, 0% Baso; Morph: few het hyperseg, few reactive lymphs, few activated monos
Platelets: 703.5k, minimal clumping
Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 106 mg/dl, BUN 9 mg/dl, Creat 1.2 mg/dl, Ca 9.8 g/dl, Phos 4.0 mg/dL, Mg 2.17 mg/dl, Alb 3.3 g/dl, Glob 3.8 g/dl; TP (Catalyst): 7.1 g/dl. LDH 888 U/L.
Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Normal albumin when compared with ZIMS AND Fowler/Mikota book. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples).

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	31/Dec/2024 08:27
Sample Type	Whole Blood
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
31/Dec/2024	~/~	Available	PORTLAND/25/25

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	31/Dec/2024 08:27
Sample Type	Serum
Anatomical Source/Tissue	Right saphenous vein
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
31/Dec/2024	~/~	Available	PORTLAND/23/23

Notes

~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Calendar Items			
Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail		Sample Quality	
Date Requested	31/Dec/2024	Color	~
Requested By	Gail Huckins	Color Intensity	~
Analysis Start Date & Time	31/Dec/2024 11:30	Clarity	~
Analysis By	Rachel Wells	Consistency	~
Analysis Equipment	IDEXX	Additional Characteristics	~
Insufficient Sample	No	Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: minimal
Enlarged: 1+
Other:

Erythrocytes:
nRBC: 0
Anisocytosis: 2+
Polychormasia: 0 (Normochromic)
Hypochromasia: 0

Poikilocytosis:
Target cells: 1+
Schistocytes: 1+
Keratocytes: 0
Spherocytes: 0
Other: 0

Leukocytes:

Heterophils:
Band heterophils 0# seen: in 200 ct diff
Band precursor 0# seen: in 200 ct diff
Hypersegmentation: few
Toxicity: none

Lymphocytes:
Reactivity: few
Enlarged: few
Granular cytoplasm: none
Nucleoli: none

Monocytes:
Activation: few
Enlarged: few
Vacuolated: few
Excessively vacuolated:none

Notes:

Entered by: RW

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Exclud. from RI	Clinical Finding	Reviewed
HCT	38 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Est. WBC count	16.0 *10 ³ cells/μL	Global sp RI: 0 - 19 8 [8] N=134 (21)	~	No	~	No
Heterophil % [m]	25 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	10 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	64 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	703,500		~	~	~	No
RBC [a]	3.03 *10 ⁶ cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	32.4 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	12.5 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	106.9 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.25 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	38.58 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.2 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.3 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	8.2 *10 ³ cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	13.30 *10 ³ cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	3.33 *10 ³ cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.33 *10 ³ cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.51 *10 ³ cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.13 *10 ³ cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037483)

Collection Date/Time	31/Dec/2024 08:27	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	31/Dec/2024
Requested By	Gail Huckins
Analysis Start Date & Time	31/Dec/2024 11:30
Analysis By	Rachel Wells
Analysis Equipment	IDEXX
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = RW

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	106 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.2 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	9 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	7.50 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	4.0 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.8 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.17 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.1 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.3 g/dL	Not calculated	~	~	~	No
Globulin	3.8 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.9 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	33 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	74 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.2 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	177 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	888 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	128 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.7 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	22 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	91 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	258 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No
Total Protein (R)	7.9 g/dL	Global sp RI: 6.1 - 9.1 7.8 [7.9] N=211 (25)	~	No	No	No

Sample Detail (GSN: S-HBV24-037484)

Collection Date/Time	31/Dec/2024 08:27	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

24/Dec/2024

Clinical note

Date	Time	Note Author
24/Dec/2024	00:00	Tina Batek
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:
 Hct/TP: 35%/7.2 g/dL (manual)
 WBC: 13.96k (procyte); Manual diff: 33% Het, 0% bands, 8% Lymphs, 58% Monos, 1% Eos, 0% Baso; Morph: Moderate het hyperseg, few reactive lymphs, many activated monos
 Platelets: 765k, no clumping
 Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 104 mg/dl, BUN 7 mg/dl, Creat 0.9 mg/dl, Ca 9.3 g/dl, Phos 4.7 mg/dL, Mg 2.19 mg/dl, **Alb 3.1 g/dl**, Glob 3.8 g/dl; TP (Catalyst): **6.9 g/dl**. LDH 942 U/L.
 Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Normal albumin when compared with ZIMS AND Fowler/Mikota book. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples).

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.
 P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	24/Dec/2024 07:44
Sample Type	Serum
Anatomical Source/Tissue	Auricular vein(not specified)
Collection Method	Phlebotomy
Collected By	Rachel Wells
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
24/Dec/2024	~/~	Available	PORTLAND/22/19

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	24/Dec/2024 07:44
Sample Type	Whole Blood
Anatomical Source/Tissue	Auricular vein(not specified)
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Rachel Wells
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
24/Dec/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	24/Dec/2024
Requested By	Tina Batek
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes/Comments

Cell morphology

Platelets:

Clumping: no clumping
Enlarged: 1+
Other: /

Erythrocytes:

nRBC: none seen
Anisocytosis: 2+
Polychromasia: 1+
Hypochromasia: /

Poikilocytosis:

Target cells: /
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:

Band heterophils # seen: 0 in 200 count
Band precursor # seen: 0 in 200 count
Hypersegmentation: mod
Toxicity: none

Lymphocytes:

Reactivity: few
Enlarged: few
Granular cytoplasm: none
Nucleoli: none

Monocytes:

Activation: many
Enlarged: few
Vacuolated: many
Excessively vacuolated: few

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)

- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	35 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	33 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	8 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	58 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	765,000		~	~	~	No
RBC [a]	2.61 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	28 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	10.9 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.9 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.76 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	No
MCHC [c]	38.93 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	No
RDW	13.3 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.1 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	3.4 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	13.96 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.61 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.12 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.10 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.14 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037467)

Collection Date/Time	24/Dec/2024 07:44	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Rachel Wells
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	24/Dec/2024
Requested By	Tina Batek
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Exclud. from RI	Clinical Finding	Reviewed
Glucose	104 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	0.9 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	7 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	7.78 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	4.7 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.3 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.19 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.9 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.1 g/dL	Not calculated	~	~	~	No
Globulin	~	Insufficient data	~	No	~	~
A:G ratio	~ ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	~
AST	~ U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	~
Alk. Phos.	36 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	Low	No	No	No
GGT	69 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	High	No	No	No
Tot. Bili.	0 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	Low	No	No	No
Creatine Kinase	0.2 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	Low	No	No	No
LDH	942 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	125 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.1 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	25 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	86 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	249 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037466)

Collection Date/Time	24/Dec/2024 07:44	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Rachel Wells
Anatomical Source/Tissue	Auricular vein(not specified)	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Date	Time	Note Author
20/Dec/2024	00:00	Tina Batek
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

Procedure: Bilateral ear endoscopy

History: Rose is a 31-year-old female Asian elephant (*Elephas maximus*) with a clinical history of chronic bilateral otitis (since arrival in 1999); characterized by yellow-creamy discharge and malodor. Based on records, the left ear is reported to be more clinically affected (although keepers verbally report R>L). The ears are maintained with once weekly flushing with 30ml of EpiKlean® in each ear. Keepers report that the flushes are well-tolerated. Last endoscopic exam performed on 28Jun2024 and revealed mild discharge AD and mild discharge AS. The tympanic membranes appeared healthy.

Restraint: Elephant was tethered and positively reinforced with food rewards throughout the procedure.

Endoscopy: Good visualization of both ear canals using a Karl Storz® flexible pediatric bronchoscope (85 mm length, 5.2 mm width), an otoscope cone was placed in the auricular opening (external meatus) to facilitate placement of the endoscope into the ear canal. The otoscope cone was held in place during evaluation of each ear in order to minimize trauma to the surrounding soft tissues.

Left ear canal:

- **Mild to moderate** amount of white to yellow, creamy discharge along the canal, mild malodor
- Mucosal surface: Smooth, pink mucosa. Mild erythema just past the tip of the otoscope cone (iatrogenic due to cone/scope). Remainder of mucosa has no erythema or edema. Mild flaking.
- Tympanic membrane visualized - no bulging, erythema, or rupture was observed. Visualization was possible at about 25-30 cm from the external meatus.

Right ear canal:

- **Mild** amount of white to yellow, creamy discharge along the ear canal, at the entrance.
- Mucosal surface: Smooth, pink mucosa. No erythema, edema, or crusts noted.
- Tympanic membrane visualized - no bulging, erythema, or rupture was observed. Visualization was possible at about 25-30 cm from the external meatus.

Assessment: Chronic otitis externa (AU) - overall improved from previous presentations, but static from last recheck (adequate maintenance with once weekly EpiKlean® flushes)
 Plan: Continue once weekly EpiKlean flushes. Recheck ear endoscopy every 3 months. Based on previous discussion, consider topical product with EDTA (i.e. TrizEDTA)

CAB

Animal Care Staff Medical Summary

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

19/Dec/2024

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Basic Info

Date Written 17/Dec/2024
Start Date 19/Dec/2024 00:00
Prescribed By Carlos Sanchez
Prescribed For 1 animal
Reason For Treatment Other

Weight Info

Date 17/Dec/2024
Measurement Value 2,458 kg
Estimate Yes
Exclude From Reference Intervals Yes

Treatment Detail

Treatment Item/Drug Saline 0.9% Injection (Liquid > Solution)
Dose Amount 60 ml **Frequency** once **Form of Drug** Solution
Dosage Amount 0.024 ml/kg **Duration** 1doses
Administrated Dose Quantity 60 ml **Delivery Route** Injection
Loading Dose ~

Concentration Of Drug
~

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:
~

Staff Instructions
Clean each ear canal with 60 mls of saline the day before the endoscopic procedure. Allow elephant to lay down on each side after irrigation has occurred to allow drainage.

Prescription Notes/Comments
Clean each ear canal with 30 mls of saline the day before the endoscopic procedure. Allow elephant to lay down on each side after irrigation has occurred to allow drainage.

Calendar Items

Date	Title	Assigned To	Done
19/Dec/2024	Start Saline 0.9% Injection 60 ml once 1 doses Injection / Bornean elephant / 99270 / Chendrawasih / MIG12-29823882	Carlos Sanchez	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

17/Dec/2024

Clinical note

Date 17/Dec/2024 **Time** 00:00 **Note Author** Josie Rose
Significant No **Private** No **Active Problems**
 AI - ascites
 EARS (NOS) (historical data), Discharge
 Entropion, Palpebra (not specified)
 Exudative otitis
 Phthisis bulbi, Eye

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 33%/7.0 g/dL (manual)
 WBC: 15.5k (procyte); Manual diff: 32% Het, 0% bands, 12% Lymphs, 54% Monos, 2% Eos, 0% Baso; Morph: Moderate het toxicity, few reactive lymphs, moderate activated monos
 Platelets: 736.5k, minimal clumping
 Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 97 mg/dl, BUN 9 mg/dl, Creat 1.1 mg/dl, Ca 9.5 g/dl, Phos 4.2 mg/dL, Mg 2.16 mg/dl, **Alb 3.1 g/dl**, Glob 3.7 g/dl; TP (Catalyst): **6.8 g/dl**. LDH 772 U/L.
 Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

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Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	17/Dec/2024 08:15
Sample Type	Whole Blood
Anatomical Source/Tissue	Right ear
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
17/Dec/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	17/Dec/2024 08:15
Sample Type	Serum
Anatomical Source/Tissue	Right ear
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
17/Dec/2024	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	17/Dec/2024
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	97 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	9 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	9.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	4.2 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.5 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.16 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.8 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.1 g/dL	Not calculated	~	~	~	No
Globulin	3.7 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.9 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	27 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	67 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	214 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	772 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	124 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.8 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	High	No	No	No
Na:K ratio	21 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	Low	No	~	No
Chloride	87 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	249 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037439)

Collection Date/Time	17/Dec/2024 08:15	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right ear	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	17/Dec/2024
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Shara Seals
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: mod
Enlarged: 1+
Other: /

Erythrocytes:
nRBC: 1 seen
Anisocytosis: 1+
Polychormasia: 1+
Hypochromasia: 2+

Poikilocytosis:
Target cells: 1+
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:
Band heterophils # seen: 0
Band precursor # seen: 0
Hypersegmentation: mod
Toxicity: mod (1+ mod, 2+ few)

Lymphocytes:
Reactivity: few
Enlarged: few
Granular cytoplasm: few
Nucleoli: few

Monocytes:
Activation: mod
Enlarged: mod
Vacuolated: mod
Excessively vacuolated: few

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	33 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	32 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	12 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	54 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	2 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	736,500		~	~	~	No
RBC [a]	2.67 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	28.7 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.3 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.5 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	42.32 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	39.37 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.4 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	4.8 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	15.16 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.85 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.82 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.19 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.30 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037440)

Collection Date/Time	17/Dec/2024 08:15	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right ear	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

10/Dec/2024

Clinical note

Date	Time	Note	Author
10/Dec/2024	00:00		Gail Huckins
Significant	Private	Active Problems	
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media	

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 34%/6.8 g/dL (manual)

WBC: 14.07k (procyte); Manual diff: 28% Het, 0% bands, 8% Lymphs, 60% Monos, 4% Eos, 0% Baso; Morph: No het toxicity, few reactive lymphs, few activated monos

Platelets: 781.5k, minimal clumping

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 100 mg/dl, BUN 8 mg/dl, Creat 1.1 mg/dl, Ca 9.4 g/dl, Phos 4.3 mg/dL, Mg 1.97 mg/dl, Alb 3.1 g/dl, Glob 3.7 g/dl; TP (Catalyst): 6.8 g/dl. LDH 689 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	10/Dec/2024 08:30
Sample Type	Serum
Anatomical Source/Tissue	Left auricular vein
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
10/Dec/2024	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	10/Dec/2024 08:30
Sample Type	Whole Blood
Anatomical Source/Tissue	Left auricular vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
10/Dec/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail	
Date Requested	10/Dec/2024
Requested By	Gail Huckins
Analysis Start Date & Time	~
Analysis By	Rachel Wells
Analysis Equipment	~
Insufficient Sample	No

Sample Quality	
Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments
E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	100 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.1 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	8 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	7.27 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	4.3 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.4 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	1.97 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.8 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.1 g/dL	Not calculated	~	~	~	No
Globulin	3.7 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	23 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	70 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	157 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	689 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	125 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.2 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	24 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	86 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	250 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037426)

Collection Date/Time	10/Dec/2024 08:30	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Left auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	10/Dec/2024
Requested By	Gail Huckins
Analysis Start Date & Time	~
Analysis By	Rachel Wells
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: minimal
Enlarged: 1+
Other:

Erythrocytes:
nRBC: 0
Anisocytosis: 1+
Polychormasia: /
Hypochromasia: /

Poikilocytosis:
Target cells: 1+
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other:

Leukocytes:

Heterophils:
Band heterophils # seen: 0 in 200
Band precursor # seen: 0 in 200
Hypersegmentation: few
Toxicity: none

Lymphocytes:
Reactivity: few
Enlarged: few
Granular cytoplasm: few
Nucleoli: none

Monocytes:
Activation: few
Enlarged: few
Vacuolated: few
Excessively vacuolated: none

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	34 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	28 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	8 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	60 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	4 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	781,500		~	~	~	No
RBC [a]	2.63 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	28 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.3 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	106.5 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	42.97 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	40.36 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.4 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.5 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	14.07 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	3.94 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.13 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.44 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.56 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037425)

Collection Date/Time	10/Dec/2024 08:30	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Left auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

03/Dec/2024

Clinical note

Date	Time	Note	Author
03/Dec/2024	00:00		Carlos Sanchez
Significant	Private	Active Problems	
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media	

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:
 Hct/TP: 34%/ 7.0 g/dL (manual)
 WBC: 11,220 (estim) Manual diff: 26% Het, 0% bands, 4% Lymphs, 69% Monos, 1% Eos, 0% Baso; Morp: Mod activated monos
 Platelets Minimal clumping: 768,750
 Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 94 mg/dl, BUN 8 mg/dl, Creat 1.0.mg/dl, Ca 9.4 g/dl, Phos 4.1 mg/dL, Mg 2.13 mg/dl, **Alb 3.1 g/dl**, Glob 4.0 g/dl; TP (Catalyst): **7.0 g/dl**. LDH 744 U/L.
 Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Apparent healthy female Bornean elephant with normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

It is worth noticing the bloodwork of this elephant has been normal for some time now.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	03/Dec/2024 08:15
Sample Type	Plasma
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	~
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
03/Dec/2024	~/~	Available	PORTLAND/1/1

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	03/Dec/2024 08:15
Sample Type	Whole Blood
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
03/Dec/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	03/Dec/2024 08:15
Sample Type	Serum
Anatomical Source/Tissue	Right saphenous vein
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
03/Dec/2024	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	03/Dec/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E=JB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	94 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	8 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	8.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	4.1 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.4 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.13 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.0 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.1 g/dL	Not calculated	~	~	~	No
Globulin	4.0 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	27 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	89 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	178 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	744 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	127 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.5 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	23 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	88 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	255 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037381)

Collection Date/Time	03/Dec/2024 08:15	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	03/Dec/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments
E=JB

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
Total Protein (R)	7.0 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV24-037383)

Collection Date/Time	03/Dec/2024 08:15	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	03/Dec/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes/Comments

Cell morphology

Platelets:

Clumping: Minimal
Enlarged: 1+
Other: 1+

Erythrocytes:

nRBC: 0
Anisocytosis: 1+
Polychromasia: 1+
Hypochromasia: none

Poikilocytosis:

Target cells: 1+
Schistocytes: none
Keratocytes: none
Spherocytes: none
Other:

Leukocytes:

Heterophils:

Band heterophils # seen: none
Band precursor # seen: none
Hypersegmentation: MOD
Toxicity: none

Lymphocytes:

Reactivity: none
Enlarged:
Granular cytoplasm:
Nucleoli:

Monocytes:

Activation: MOD
Enlarged: MOD
Vacuolated: MOD
Excessively vacuolated: MOD

Notes: Some platelets lacked stain uptake/looked "ghost-like"

Entered by: JB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)

- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	34 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	26 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	4 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	69 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	768750		~	~	~	No
RBC [a]	2.85 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	31.3 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	12.5 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	109.8 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	43.86 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	39.94 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.8 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.3 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	7.1 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	11.22 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	2.92 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	0.45 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	Low	No	~	~
Monocyte count [c]	7.74 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.11 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037382)

Collection Date/Time	03/Dec/2024 08:15	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

26/Nov/2024

Clinical note

Date	Time	Note	Author
26/Nov/2024	00:00		Carlos Sanchez
Significant	Private	Active Problems	
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media	

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 36%/ 7.4 g/dL (manual)

WBC: 14,800 (estim) Manual diff: 29% Het, 0% bands, 14% Lymphs, 55% Monos, 2% Eos, 0% Baso; Morp: few toxic heterophils, few reactive lymphs, mod activated monos

Platelets Minimal clumping: 864,000

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 98 mg/dl, BUN 9 mg/dl, Creat 1.3.mg/dl, Ca 9.7 g/dl, Phos 5.3 mg/dL, Mg 2.15 mg/dl, Alb 3.2 g/dl, Glob 4.0 g/dl; TP (Catalyst): 7.2 g/dl. LDH 819 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Apparent healthy female Bornean elephant with normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	26/Nov/2024 07:57
Sample Type	Serum
Anatomical Source/Tissue	Left saphenous vein
Collection Method	Phlebotomy
Collected By	Jordan Butler
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
26/Nov/2024	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	26/Nov/2024 07:57
Sample Type	Whole Blood
Anatomical Source/Tissue	Left saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Jordan Butler
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
26/Nov/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested 26/Nov/2024
Requested By Carlos Sanchez
Analysis Start Date & Time ~
Analysis By Shara Seals
Analysis Equipment ~
Insufficient Sample No

Sample Quality

Color Straw
Color Intensity light
Clarity Clear
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	98 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.3 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	11 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	8.46 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	5.3 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.7 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.15 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.2 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.2 g/dL	Not calculated	~	~	~	No
Globulin	4.0 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	25 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	80 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	1 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	150 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	819 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	136 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.2 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	26 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	96 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	272 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037364)

Collection Date/Time	26/Nov/2024 07:57	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Jordan Butler
Anatomical Source/Tissue	Left saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	26/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Shara Seals
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: moderate
Enlarged: 1+
Other:

Erythrocytes:
nRBC: 1 seen
Anisocytosis: 2+
Polychormasia: 1+
Hypochromasia: 1+

Poikilocytosis:
Target cells: 1+
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:
Band heterophils # seen: 0
Band precursor # seen: 0
Hypersegmentation: few
Toxicity: few 1+

Lymphocytes:
Reactivity: few
Enlarged: few
Granular cytoplasm: none
Nucleoli: none

Monocytes:
Activation: mod
Enlarged: mod
Vacuolated: mod
Excessively vacuolated: few

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	36 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	29 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	14 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	55 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	2 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	864,000		~	~	~	No
RBC [a]	2.9 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	31.4 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	12.1 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	108.3 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.72 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	38.54 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.2 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.8 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	14.82 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.30 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	2.07 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.15 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.30 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037363)

Collection Date/Time	26/Nov/2024 07:57	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Jordan Butler
Anatomical Source/Tissue	Left saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

19/Nov/2024

Clinical note

Date	Time	Note	Author
19/Nov/2024	00:00		Josie Rose
Significant	Private	Active Problems	
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media	

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 35%/ 7.1 g/dL (manual)

WBC: 13,320 (Procyte) Manual diff: 29% Het, 0% bands, 4% Lymphs, 66% Monos, 1% Eos, 0% Baso; Morp: moderate hypersegmentation, no toxic heterophils, no reactive lymphs, moderate activated monos

Platelets Minimal clumping: 810,000

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 113 mg/dl, BUN 8 mg/dl, Creat 1.0 mg/dl, Ca 9.3 g/dl, Phos 3.9 mg/dL, Mg 2.14 mg/dl, Alb 3.0 g/dl, Glob 3.8 g/dl; TP (Catalyst): 6.8 g/dl. LDH 697 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	19/Nov/2024 08:29
Sample Type	Whole Blood
Anatomical Source/Tissue	Right auricular vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Gilbert Gomez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
19/Nov/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	19/Nov/2024 08:29
Sample Type	Serum
Anatomical Source/Tissue	Right auricular vein
Collection Method	Phlebotomy
Collected By	Gilbert Gomez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
19/Nov/2024	~/~	Available	PORTLAND/23/23

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	19/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: Moderate
Enlarged: 1+
Other: NONE

Erythrocytes:
nRBC: NONE
Anisocytosis: 2+
Polychormasia: NONE
Hypochromasia: NONE

Poikilocytosis:
Target cells: 1+
Schistocytes: NONE
Keratocytes: NONE
Spherocytes: NONE
Other: NONE

Leukocytes:

Heterophils:
Band heterophils # seen: NONE
Band precursor # seen: NONE
Hypersegmentation: MOD
Toxicity: NONE

Lymphocytes:
Reactivity: NONE
Enlarged:
Granular cytoplasm:
Nucleoli:

Monocytes:
Activation: MOD
Enlarged: MOD
Vacuolated: MOD
Excessively vacuolated: FEW

Notes: Few enlarged heterophils

Entered by: JB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	35 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	29 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	4.0 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	66 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1.0 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	810000		~	~	~	No
RBC [a]	2.74 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	29.8 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.3 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	108.8 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.24 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	37.92 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.3 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	6.6 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	13.32 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	3.86 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	0.53 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.79 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.13 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037331)

Collection Date/Time	19/Nov/2024 08:29	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Gilbert Gomez
Anatomical Source/Tissue	Right auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	19/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

e=jb

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	113 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	8 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	8.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	3.9 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.3 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.14 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	6.8 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.0 g/dL	Not calculated	~	~	~	No
Globulin	3.8 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	26 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	73 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	<0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	136 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	697 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	133 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	4.7 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	28 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	91 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	266 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No
Total Protein (R)	7.1 g/dL	Global sp RI: 6.1 - 9.1 7.8 [7.9] N=211 (25)	~	No	No	No

Sample Detail (GSN: S-HBV24-037330)

Collection Date/Time	19/Nov/2024 08:29	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Gilbert Gomez
Anatomical Source/Tissue	Right auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

12/Nov/2024

Clinical note

Date	Time	Note Author
12/Nov/2024	00:00	Josie Rose
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 39%/ 7.8 g/dL (manual)

WBC: 15,540 (Procyte) Manual diff: 26% Het, 0% bands, 12% Lymphs, 61% Monos, 1% Eos, 0% Baso; Morp: no toxic heterophils, few reactive lymphs, few activated monos

Platelets Minimal clumping: 771,000

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 137 mg/dl, BUN 9mg/dl, Creat 1.2 mg/dl, Ca 10.1 g/dl, Phos 3.7 mg/dL, Mg 2.47 mg/dl, Alb 3.3 g/dl, Glob 4.2 g/dl; TP (Catalyst): 7.5 g/dl. LDH 805 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	12/Nov/2024 08:58
Sample Type	Whole Blood
Anatomical Source/Tissue	Left auricular vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
12/Nov/2024	~/~	Available	PORTLAND/25/25

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	12/Nov/2024 08:58
Sample Type	Serum
Anatomical Source/Tissue	~
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Ambient
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
12/Nov/2024	~/~	Available	PORTLAND/23/23

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	12/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	12/Nov/2024 10:00
Analysis By	Rachel Wells
Analysis Equipment	IDEXX
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes/Comments

Cell morphology

Platelets:

Clumping: 1+
Enlarged: 1+
Other:

Erythrocytes:

nRBC: 0
Anisocytosis: 1+
Polychromasia: 0
Hypochromasia: 0
(notes : normochromic)

Poikilocytosis:

Target cells: rare
Schistocytes: 0
Keratocytes: 0
Spherocytes: 0
Other: 0

Leukocytes:

Heterophils:

Band heterophils # seen: 0 in 200 ct
Band precursor # seen: 0 in 200 ct
Hypersegmentation: few
Toxicity: none

Lymphocytes:

Reactivity: few
Enlarged: few
Granular cytoplasm: none
Nucleoli: none

Monocytes:

Activation: few
Enlarged: few
Vacuolated: few
Excessively vacuolated: none

Notes:

Entered by: RW

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)

- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Exclud. from RI	Clinical Finding	Reviewed
HCT	39 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Est. WBC count	12.5 *10 ³ cells/μL	Global sp RI: 0 - 19 8 [8] N=134 (21)	~	No	~	No
Heterophil % [m]	26 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	12 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	61 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	771,000		~	~	~	No
RBC [a]	3.14 *10 ⁶ cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	33.8 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	13.4 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.6 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	42.68 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	39.64 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.4 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.3 *10 ³ cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	15.54 *10 ³ cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.04 *10 ³ cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.86 *10 ³ cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	9.48 *10 ³ cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.16 *10 ³ cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10 ³ cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037291)

Collection Date/Time	12/Nov/2024 08:58	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Left auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	12/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	12/Nov/2024 10:00
Analysis By	Rachel Wells
Analysis Equipment	IDEXX
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = RW

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	137 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	High	No	No	No
Creatinine	1.2 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	9 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	7.50 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	No
Phos	3.7 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	10.1 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.47 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.5 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.3 g/dL	Not calculated	~	~	~	No
Globulin	4.2 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	27 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	77 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	0 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	134 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	805 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	135 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	6.1 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	High	No	No	No
Na:K ratio	22 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	92 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	273 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No
Total Protein (R)	7.8 g/dL	Global sp RI: 6.1 - 9.1 7.8 [7.9] N=211 (25)	~	No	No	No

Sample Detail (GSN: S-HBV24-037292)

Collection Date/Time	12/Nov/2024 08:58	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	~	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

06/Nov/2024

Sample

Sample Detail

Collection Date/Time	06/Nov/2024 00:00
Sample Type	Wash/Lavage Fluid
Anatomical Source/Tissue	Elephant trunk
Collection Method	Wash/lavage
Collected By	Dimas Dominguez
Reason	Disease Monitoring
Exclude from reference intervals	No

Sample Quality

Color	~
Color Intensity	~

Initial Holding Conditions

Initial Holding Temp.	Frozen
Initial Holding Duration	> 48 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
06/Nov/2024	~/~	Available	NVSL AMES/2/2

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	06/Nov/2024
Requested By	Carlos Sanchez
Laboratory	NVSL AMES
Analysis Start Date	07/Nov/2024
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Accession Number: 24-032868
 Results authorized by: Dr. Kimberly A Lehman, DVM, Director Diagnostic Bacteriology and Pathology Laboratory.
 Phone: 515-337-7526
 Email: NVSL-MB.caseManager@usda.gov

JB/KH

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
M. tb. complex PCR	negative		~	~	~	No
Mycobacterium cultur	No growth		~	~	~	~

Sample Detail (GSN: S-HBV24-037314)

Collection Date/Time	06/Nov/2024 00:00	Collection Method	Wash/lavage
Sample Type	Wash/Lavage Fluid	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Elephant trunk	Reason	Disease Monitoring
Additives/Preservatives	~	Exclude from reference intervals	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

05/Nov/2024

Clinical note

Date	Time	Note Author
05/Nov/2024	00:00	Carlos Sanchez
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 38%/ 7.6 g/dL (manual)

WBC: 13,010 (estim) Manual diff: 29% Het, 0% bands, 11% Lymphs, 58% Monos, 2% Eos, 0% Baso; Morp: none toxic heterophils, few reactive lymphs, few activated monos

Platelets Minimal clumping: 975,000

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 88 mg/dl, BUN 5mg/dl, Creat 1.1.mg/dl, Ca 9.6 g/dl, Phos 4.6 mg/dL, Mg 2.22 mg/dl, Alb 3.2 g/dl, Glob 4.0 g/dl; TP (Catalyst): 7.2 g/dl. LDH 961 U/L.

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals and a value that is closer to other OZ elephants. Ca is within ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples). Normal albumin when compared with ZIMS AND Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

Normoproteinemia with normal albumin when compared with RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; normal TP and Albumin for ZIMS and Mikota/Fowler book using refractometer and automated values; numbers are similar to the ones observed in other elephants at OZ. Ca is also within RI.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	05/Nov/2024 08:20
Sample Type	Serum
Anatomical Source/Tissue	Right saphenous vein
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
05/Nov/2024	~/~	Available	PORTLAND/23/23
05/Nov/2024	~/~	Available	NVSL AMES/1/1

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	05/Nov/2024 08:20
Sample Type	Whole Blood
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
05/Nov/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	05/Nov/2024 08:20
Sample Type	Plasma
Anatomical Source/Tissue	Right saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
05/Nov/2024	~/~	Available	~/~/~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	05/Nov/2024
Requested By	Carlos Sanchez
Laboratory	NVSL AMES
Analysis Start Date	07/Jan/2025
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Accession Number: 24-032868
 Results authorized by: Dr. Kimberly A Lehman, DVM, Director Diagnostic Bacteriology and Pathology Laboratory.
 Phone: 515-337-7526
 Email: NVSL-MB.caseManager@usda.gov

KH

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
M Tb/bovis Ab IC	negative		~	~	~	No

Sample Detail (GSN: S-HBV24-037254-S01)

Collection Date/Time	05/Nov/2024 08:20	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Test Request Detail

Date Requested	05/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

e=jb

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	88 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.1 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	5 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	4.55 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	No
Phos	4.6 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.6 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.22 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.2 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.2 g/dL	Not calculated	~	~	~	No
Globulin	4.0 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	41 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	High	No	No	No
Alk. Phos.	76 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	1 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	227 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	961 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	128 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.4 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	24 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	89 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	255 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No
Total Protein (R)	7.6 g/dL	Global sp RI: 6.1 - 9.1 7.8 [7.9] N=211 (25)	~	No	No	No

Sample Detail (GSN: S-HBV24-037254)

Collection Date/Time	05/Nov/2024 08:20	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test & Result

Test Request Detail

Date Requested	05/Nov/2024
Requested By	Carlos Sanchez
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: MINIMAL
Enlarged: 1+
Other: NONE

Erythrocytes:
nRBC: NONE
Anisocytosis: 1-2+
Polychormasia: 1+
Hypochromasia: NONE

Poikilocytosis:
Target cells: 1+
Schistocytes: NONE
Keratocytes: NONE
Spherocytes: NONE
Other: NONE

Leukocytes:

Heterophils:
Band heterophils # seen: NONE
Band precursor # seen: NONE
Hypersegmentation: FEW
Toxicity: NONE

Lymphocytes:
Reactivity: FEW
Enlarged: FEW
Granular cytoplasm: NONE
Nucleoli: NONE

Monocytes:
Activation: MOD
Enlarged: FEW
Vacuolated: MOD
Excessively vacuolated: FEW

Notes: Few Hyposegmented

Entered by: jb

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	38 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	29 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	11 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	58 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	2 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	975000		~	~	~	No
RBC [a]	2.89 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	31.1 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	12.1 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.6 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.87 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	38.91 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.3 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.8 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	13.01 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	3.77 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.43 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	7.55 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.26 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037255)

Collection Date/Time	05/Nov/2024 08:20	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Right saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

01/Nov/2024

Sample

Sample Detail

Collection Date/Time	01/Nov/2024 00:00
Sample Type	Wash/Lavage Fluid
Anatomical Source/Tissue	Elephant trunk
Collection Method	Wash/lavage
Collected By	Dimas Dominguez
Reason	Disease Monitoring
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light

Initial Holding Conditions

Initial Holding Temp.	Frozen
Initial Holding Duration	> 48 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
01/Nov/2024	~/~	Available	NVSL AMES/2/2

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	01/Nov/2024
Requested By	Carlos Sanchez
Laboratory	NVSL AMES
Analysis Start Date	07/Nov/2024
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Accession Number: 24-032868
 Results authorized by: Dr. Kimberly A Lehman, DVM, Director Diagnostic Bacteriology and Pathology Laboratory.
 Phone: 515-337-7526
 Email: NVSL-MB.caseManager@usda.gov

JB/KH

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
M. tb. complex PCR	negative		~	~	~	No
Mycobacterium cultur	No growth		~	~	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037315)

Collection Date/Time	01/Nov/2024 00:00	Collection Method	Wash/lavage
Sample Type	Wash/Lavage Fluid	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Elephant trunk	Reason	Disease Monitoring
Additives/Preservatives	~	Exclude from reference intervals	No

31/Oct/2024

Sample

Sample Detail

Collection Date/Time	31/Oct/2024 00:00
Sample Type	Wash/Lavage Fluid
Anatomical Source/Tissue	Elephant trunk
Collection Method	Wash/lavage
Collected By	Dimas Dominguez
Reason	Disease Monitoring
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light

Initial Holding Conditions

Initial Holding Temp.	Frozen
Initial Holding Duration	> 48 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
31/Oct/2024	~/~	Available	NVSL AMES/2/2

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	31/Oct/2024
Requested By	Carlos Sanchez
Laboratory	NVSL AMES
Analysis Start Date	07/Nov/2024
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Accession Number: 24-032868
 Results authorized by: Dr. Kimberly A Lehman, DVM, Director Diagnostic Bacteriology and Pathology Laboratory.
 Phone: 515-337-7526
 Email: NVSL-MB.caseManager@usda.gov

JB/KH

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl. from RI	Clinical Finding	Reviewed
M. tb. complex PCR	negative		~	~	~	No
Mycobacterium cultur	No growth		~	~	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037316)

Collection Date/Time	31/Oct/2024 00:00	Collection Method	Wash/lavage
Sample Type	Wash/Lavage Fluid	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Elephant trunk	Reason	Disease Monitoring
Additives/Preservatives	~	Exclude from reference intervals	No

29/Oct/2024

Clinical note

Date	Time	Note Author
29/Oct/2024	00:00	Josie Rose
Significant	Private	Active Problems
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 37%/ 7.4 g/dL (manual)

WBC: 15.39k (ProCyte) Manual diff: 31% Het, 0% bands, 11% Lymphs, 57% Monos, 1% Eos, 0% Baso; Morp: few toxic heterophils, moderate reactive lymphs, few to many activated monos

Platelets 111,900k, minimal clumping

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 85 mg/dl, BUN 10 mg/dl, Creat 1.0.mg/dl, Ca 9.8 g/dl, Phos 4.4 mg/dL, Mg 2.27 mg/dl, Alb 3.1 g/dl, Glob 4.1 g/dl; TP (Catalyst): 7.2 g/dl. LDH 794 U/L, K 5.8 mmol/L

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals. Ca is normal when compared with ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples).

Normal albumin when compared with ZIMS RI and Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; Normal TP and Albumin for ZIMS and Mikota/Fowler book RIs.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	29/Oct/2024 08:50
Sample Type	Whole Blood
Anatomical Source/Tissue	Left saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
29/Oct/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	29/Oct/2024 08:50
Sample Type	Plasma
Anatomical Source/Tissue	Left saphenous vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
29/Oct/2024	~/~	Available	PORTLAND/1/1

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	29/Oct/2024 08:50
Sample Type	Serum
Anatomical Source/Tissue	Left saphenous vein
Collection Method	Phlebotomy
Collected By	Dimas Dominguez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Low activity

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
29/Oct/2024	~/~	Available	PORTLAND/22/22

Notes
~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Test Request Detail

Date Requested	29/Oct/2024
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments
e=jb

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Total Protein (R)	7.4 g/dL	Global sp RI: 6.6 - 9.0 7.6 [7.5] N=1998 (28)	~	No	No	No

Sample Detail (GSN: S-HBV24-037224)

Collection Date/Time	29/Oct/2024 08:50	Collection Method	Phlebotomy
Sample Type	Plasma	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Left saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	29/Oct/2024
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

e=jb

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	85 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	10 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	10.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	4.4 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.8 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.27 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.2 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.1 g/dL	Not calculated	~	~	~	No
Globulin	4.1 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	28 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	76 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	1 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.2 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	134 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	794 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	133 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.8 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	High	No	No	No
Na:K ratio	23 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	92 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	266 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037221)

Collection Date/Time	29/Oct/2024 08:50	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Left saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	29/Oct/2024
Requested By	Josie Rose
Analysis Start Date & Time	~
Analysis By	Heather Brittingham
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Straw
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: Minimal
Enlarged: 1+
Other:

Erythrocytes:
nRBC: NONE
Anisocytosis: 2+
Polychormasia: 2+
Hypochromasia: none

Poikilocytosis:
Target cells: 2+
Schistocytes: none
Keratocytes: none
Spherocytes: none
Other: none

Leukocytes:

Heterophils:
Band heterophils # seen: none
Band precursor # seen: none
Hypersegmentation: FEW
Toxicity: none

Lymphocytes:
Reactivity: MOD
Enlarged: FEW
Granular cytoplasm: FEW
Nucleoli: FEW

Monocytes:
Activation: MANY
Enlarged: MOD
Vacuolated: MOD
Excessively vacuolated: FEW

Notes: none

Entered by: JB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	7 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	Low	No	No	No
Heterophil % [m]	31 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	11 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	57 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	1 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	1,111,900		~	~	~	No
RBC [a]	2.79 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	30.2 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	11.7 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	108.2 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	41.94 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	38.74 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.3 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	4.5 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	15.39 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.77 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.69 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.77 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.15 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037222)

Collection Date/Time	29/Oct/2024 08:50	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Dimas Dominguez
Anatomical Source/Tissue	Left saphenous vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No

22/Oct/2024

Clinical note

Date	Time	Note	Author
22/Oct/2024	00:00		Gail Huckins
Significant	Private	Active Problems	
No	No	<input checked="" type="checkbox"/> AI - ascites <input checked="" type="checkbox"/> EARS (NOS) (historical data), Discharge <input checked="" type="checkbox"/> Entropion, Palpebra (not specified) <input checked="" type="checkbox"/> Exudative otitis <input checked="" type="checkbox"/> Phthisis bulbi, Eye <input checked="" type="checkbox"/> Right ear canal, Otitis media	

Note Subtype: General

Notes/Comments

In-house bloodwork (CBC/Chem) results

CBC:

Hct/TP: 37%/ 7.5 g/dL (manual)

WBC: 14.87k (ProCyte) Manual diff: 29% Het, 0% bands, 9% Lymphs, 60% Monos, 2% Eos, 0% Baso; Morp: no toxic heterophils, no reactive lymphs, few to mod activated monos

Platelets 900k, minimal clumping

Interp: Normal WBC for this elephant with normal M:L

CP: Gluc 107 mg/dl, BUN 6 mg/dl, Creat 1.0.mg/dl, Ca 9.4 g/dl, Phos 3.9 mg/dL, Mg 2.37 mg/dl, Alb 3.1 g/dl, Glob 4.0 g/dl; TP (Catalyst): 7.0 g/dl. LDH 741 U/L, K 5.0 mmol/L

Interp: Normal proteinemia when compared to ZIMS and Fowler/Mikota reference intervals. Ca is normal when compared with ZIMS RI (ZIMS RI: 9.1-11.7mg/dl, N=1167 samples).

Normal albumin when compared with ZIMS RI and Fowler/Mikota book.

Proteins (refractometer) within ZIMS-RI:

Total Protein	Global sp RI: 6.4 - 9.4 7.9 [7.9] N=7461 (306 animals)
Albumin	Global sp RI: 2.7 - 4.3 3.4 [3.4] N=523 (67 animals)

RI from Fowler/Mikota book:

Total Protein	RI: 6.0 - 12 From 14 diff sources
Albumin	RI: 1.5 - 3.5 - as above

A: Normal WBC counts; Normal TP and Albumin for ZIMS and Mikota/Fowler book RIs.

P: Cont. with routine blood sample monitoring, monitoring all parameters as above

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail

Collection Date/Time	22/Oct/2024 08:15
Sample Type	Whole Blood
Anatomical Source/Tissue	Right auricular vein
Additives/Preservatives	EDTA
Collection Method	Phlebotomy
Collected By	Gilbert Gomez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
22/Oct/2024	~/~	Available	PORTLAND/24/24

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Sample

Sample Detail

Collection Date/Time	22/Oct/2024 08:15
Sample Type	Serum
Anatomical Source/Tissue	Right auricular vein
Collection Method	Phlebotomy
Collected By	Gilbert Gomez
Reason	Recheck/Follow-up
Exclude from reference intervals	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Additional Characteristics	~
Degraded	No

Pre-Sampling Conditions

Fasting Duration	< 2 hours
Restraint Type	Behavioral
Activity	Moderate activity

Initial Holding Conditions

Initial Holding Temp.	Chilled/Refrigerated
Initial Holding Duration	<= 10 hours

Sample History

Date	Sample ID / Sample GSN	Status	Laboratory / Test Order / Test Results
22/Oct/2024	~/~	Available	PORTLAND/22/22

Notes

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	22/Oct/2024
Requested By	Gail Huckins
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

E = HB

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
Glucose	107 mg/dL	Global sp RI: 56 - 119 85 [84] N=1634 (114)	~	No	No	No
Creatinine	1.0 mg/dL	Global sp RI: 0.7 - 1.9 1.2 [1.2] N=1568 (120)	~	No	No	No
BUN	6 mg/dL	Global sp RI: 5.0 - 16.0 10.5 [10.3] N=1711 (124)	~	No	No	No
BUN/Creat ratio [c]	6.00 ratio (US)	Global sp RI: 4.0 - 13.6 8.0 [7.8] N=298 (27)	~	No	No	~
Phos	3.9 mg/dL	Global sp RI: 3.0 - 7.0 4.9 [4.8] N=1671 (119)	~	No	No	No
Ca	9.4 mg/dL	Global sp RI: 9.1 - 11.7 10.4 [10.4] N=1719 (122)	~	No	No	No
Mg	2.37 mg/dL	Global sp RI: 1.70 - 2.90 2.29 [2.30] N=910 (91)	~	No	No	No
Total Protein	7.0 g/dL	Global sp RI: 6.4 - 9.1 7.8 [7.8] N=1763 (124)	~	No	No	No
Albumin unspecified	3.1 g/dL	Not calculated	~	~	~	No
Globulin	4.0 g/dL	Global sp RI: 3.2 - 5.8 4.5 [4.6] N=1260 (94)	~	No	No	No
A:G ratio	0.8 ratio	Global sp RI: 0.5 - 1.0 0.7 [0.7] N=1276 (72)	~	No	No	No
AST	27 U/L	Global sp RI: 10 - 35 18 [16] N=1281 (110)	~	No	No	No
Alk. Phos.	74 U/L	Global sp RI: 40 - 243 100 [80] N=1571 (118)	~	No	No	No
GGT	2 U/L	Global sp RI: 0 - 12 4 [4] N=1348 (111)	~	No	No	No
Tot. Bili.	0.1 mg/dL	Global sp RI: 0.1 - 0.5 0.2 [0.2] N=1490 (113)	~	No	No	No
Creatine Kinase	162 U/L	Global sp RI: 54 - 354 136 [116] N=1221 (105)	~	No	No	No
LDH	741 U/L	Global sp RI: 215 - 1,304 593 [569] N=529 (67)	~	No	No	No
Na	131 mmol/L	Global sp RI: 124 - 138 131 [130] N=1674 (119)	~	No	No	No
K	5.0 mmol/L	Global sp RI: 3.8 - 5.7 4.6 [4.5] N=1644 (117)	~	No	No	No
Na:K ratio	26 ratio	Global sp RI: 21.9 - 35.0 28.1 [28.0] N=676 (56)	~	No	~	No
Chloride	91 mmol/L	Global sp RI: 85 - 99 91 [91] N=1584 (103)	~	No	No	No
Osmolality	262 mOsmol/kg	Global sp RI: 248 - 279 263 [263] N=436 (31)	~	No	~	No

Sample Detail (GSN: S-HBV24-037168)

Collection Date/Time	22/Oct/2024 08:15	Collection Method	Phlebotomy
Sample Type	Serum	Collected By	Gilbert Gomez
Anatomical Source/Tissue	Right auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	~	Exclude from reference intervals	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Request Detail

Date Requested	22/Oct/2024
Requested By	Gail Huckins
Analysis Start Date & Time	~
Analysis By	Jordan Butler
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Pink
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Cell morphology

Platelets:
Clumping: minimal
Enlarged: /
Other: /

Erythrocytes:
nRBC: /
Anisocytosis: 1+
Polychormasia: /
Hypochromasia: /

Poikilocytosis:
Target cells: /
Schistocytes: /
Keratocytes: /
Spherocytes: /
Other: /

Leukocytes:

Heterophils:
Band heterophils # seen: /
Band precursor # seen: /
Hypersegmentation: few
Toxicity: /

Lymphocytes:
Reactivity: none
Enlarged:
Granular cytoplasm:
Nucleoli:

Monocytes:
Activation: mod
Enlarged: few
Vacuolated: mod
Excessively vacuolated: few

Notes:

Entered by: HB

Grading Scale:

- 1+ (1-2/hpf)
- 2+ (3-9/hpf)
- 3+ (10-20/hpf)
- 4+ (>20/hpf)
- Few (1-5% of that cell line)
- Moderate or Mod (5-15% of that cell line)
- Many (>14% of that cell line)

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Test Requests & Test Results

Test	Primary Result	Expected Results (Based on Best Available Match) Type: Min- Max Mean [Median] N (Animals)	Evaluation	Excl'd. from RI	Clinical Finding	Reviewed
HCT	37 %	Global sp RI: 27.0 - 43.0 34.7 [34.0] N=3510 (100)	~	No	No	No
Heterophil % [m]	29 %	Global sp RI: 12.5 - 44.6 24.4 [23.0] N=1949 (38)	~	No	No	No
Band % [m]	0 %	Global sp RI: 0.0 - 3.8 0.3 [0.0] N=1099 (53)	~	No	No	No
Lymphocyte % [m]	9 %	Global sp RI: 2.0 - 34.3 15.9 [15.0] N=2453 (71)	~	No	No	No
Monocyte % [m]	60 %	Global sp RI: 10.7 - 77.5 54.1 [57.0] N=2606 (83)	~	No	No	No
Eosinophil % [m]	2 %	Global sp RI: 0.0 - 6.0 2.1 [2.0] N=2367 (78)	~	No	No	No
Basophil % [m]	0 %	Global sp RI: 0.0 - 1.0 0.2 [0.0] N=1391 (69)	~	No	No	No
Est. Platelets	900,000		~	~	~	No
RBC [a]	2.77 *10^6 cells/μL	Global sp RI: 1.96 - 3.44 2.66 [2.64] N=5370 (138)	~	No	No	No
HCT [a]	29.7 %	Global sp RI: 24.1 - 41.7 31.9 [31.6] N=5209 (125)	~	No	No	No
HGB [a]	12.1 g/dL	Global sp RI: 9.4 - 15.1 12.0 [11.9] N=5401 (140)	~	No	No	No
MCV	107.2 fL	Global sp RI: 99.6 - 146.0 120.5 [120.2] N=5024 (123)	~	No	No	No
MCH [c]	43.68 pg	Global sp RI: 39.3 - 48.9 44.0 [44.0] N=439 (40)	~	No	No	~
MCHC [c]	40.74 g/dL	Global sp RI: 32.3 - 42.2 37.2 [37.3] N=429 (34)	~	No	No	~
RDW	13.3 %	Global sp RI: 12.8 - 18.0 14.6 [14.5] N=4043 (62)	~	No	~	No
Cor Retic % [a]	0.2 %	Global sp RI: 0.0 - 0.5 0.2 [0.2] N=52 (5)	~	No	~	No
Cor Retic count [a]	5.5 *10^3 cells/μL	Global sp RI: 3.378 - 12.723 7.159 [6.900] N=230 (9)	~	No	~	No
WBC	14.87 *10^3 cells/μL	Global sp RI: 7.5 - 19.1 12.8 [12.6] N=6339 (139)	~	No	No	No
Heterophil count [c]	4.31 *10^3 cells/μL	Global sp RI: 1.719 - 5.818 3.357 [3.254] N=911 (17)	~	No	No	~
Band count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.465 0.066 [0.000] N=1189 (26)	~	No	~	~
Lymphocyte count [c]	1.34 *10^3 cells/μL	Global sp RI: 0.493 - 5.331 2.360 [2.208] N=2422 (51)	~	No	~	~
Monocyte count [c]	8.92 *10^3 cells/μL	Global sp RI: 1.031 - 10.228 6.138 [6.284] N=2425 (55)	~	No	~	~
Eosinophil count [c]	0.30 *10^3 cells/μL	Global sp RI: 0.000 - 0.650 0.214 [0.180] N=2173 (50)	~	No	~	~
Basophil count [c]	0.00 *10^3 cells/μL	Global sp RI: 0.000 - 0.137 0.012 [0.000] N=1576 (43)	~	No	~	~

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date
Individual	MIG12-29823882	99270 / Chendrawasih	Elephas maximus borneensis/Bornean elephant	Female	~ from 20/Aug/1992 to 20/Aug/1993

Sample Detail (GSN: S-HBV24-037169)

Collection Date/Time	22/Oct/2024 08:15	Collection Method	Phlebotomy
Sample Type	Whole Blood	Collected By	Gilbert Gomez
Anatomical Source/Tissue	Right auricular vein	Reason	Recheck/Follow-up
Additives/Preservatives	EDTA	Exclude from reference intervals	No