

Appendix 1

Clinical pathology

Reference values (WIL Research Laboratories)

Haematology:	Serum chemistry:
Heinz bodies 0–150 $10^3/\mu\text{l}$	A/G ratio 0.81–1.50
Erythrocyte count 7.64–11.6 $10^6/\mu\text{l}$	Alanine aminotransferase 51–150 U/l
Haemoglobin (PCV) 28.8–50.6%	Albumin 3.2–4.0 g/dl
Haemoglobin 10.1–16.0 g/dl	Alkaline phosphatase 28–98 U/l
MCH 12.0–15.0 pg	Amylase 695–1050 U/l
MCHC 29.6–35.3 g/dl	Aspartate aminotransferase 14–59 U/l
MCV 34.4–46.9 fl	Bilirubin
Platelet count 134–698 $10^3/\mu\text{l}$	Calcium 9.7–11.5 mg/dl
Reticulocyte count 8.3–69.8 $10^3/\mu\text{l}$	Chloride 114–126 mEq/l
Total leukocyte count 8.2–22.7 $10^3/\mu\text{l}$	Cholesterol 59–179 mg/dl
Differential leukocyte count	Creatinine 0.8–1.6 mg/dl
Basophil 0–0.05 $10^3/\mu\text{l}$	Creatine kinase 112–3023 U/l
Eosinophil 0.14–1.71 $10^3/\mu\text{l}$	Gamma glutamyltransferase 0.1–1.5 U/l
Lymphocyte 2.45–10.91 $10^3/\mu\text{l}$	Globulin 2.5–4.2 g/dl
Neutrophil 2.98–16.34 $10^3/\mu\text{l}$	Glucose 4.8–9.0 mmol/l
Monocyte 0.7–4.0 $10^3/\mu\text{l}$	Lactate dehydrogenase 60–300 U/l
Coagulation factors:	Magnesium 2.4–3.0 mg/dl
Activated partial thromboplastin (APTT) 11.2–17.7 s	Phosphorus 4.5–8.5 mg/dl
Prothrombin time (PT) 8.0–11.2 s	Potassium 3.93–6.59 mEq/l
Fibrinogen 109–168 mg/dl	Sodium 152–163 mEq/l
Urinalysis:	Sorbitol dehydrogenase 3.0–11.0 U/l
Colour and appearance descriptive	Total bilirubin 0.03–0.13 mg/dl
Glucose \pm	Total bile acids 0.3–13.8 $\mu\text{mol/l}$
Leukocytes \pm	Total protein 6.1–7.8 g/dl
Ketones \pm	Triglyceride 20–148 mg/dl
Microscopy of sediment descriptive	Urea nitrogen 17.1–31.6 mg/dl
Nitrites \pm	Blood gases (venous):
Occult blood \pm	pH 7.11–7.39
pH 6.0–8.5	PCO ₂ 3.7–8.1 kPa
Protein \pm	
Specific gravity 1.0380–1.0920	
Urobilinogen 0.2–1.0 mg/dl	
Volume 1–42 ml	

PCV = packed cell volume (haematocrit), MCH = mean corpuscular haemoglobin, MCHC = mean corpuscular haemoglobin concentration, MCV = mean corpuscular volume

Data collected from 16 cats during phase 1 and phase 2 study

Comparison between groups and with time — yes = $P < 0.05$, no = no significant difference

pH						
<i>PC</i>						
Day	–5	4	5	18/28	19/29	25/35
Mean	7.31	7.35	7.27	7.30	7.31	7.28
SD	0.08	0.04	0.13	0.05	0.06	0.13
<i>PB</i>						
day	–5	4	5	18/28	19/29	25/35
mean	7.33	7.34	7.24	7.31	7.31	7.23
SD	0.06	0.04	0.06	0.04	0.05	0.17

Between groups: no

With time: yes

Haematocrit %						
<i>PC</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	31.5	27.3	29.2	26.5	29.2	32.5
SD	3.7	2.4	3.1	4.7	3.4	3.3
<i>PB</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	32.6	27.4	30.6	26.8	29.2	31.8
SD	1.9	2.7	1.9	4.5	2.4	4.0

Between groups: no

With time: yes

Activated partial thromboplastin (s)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	12.5	12.3	12.2	13.3	12.9	11.6
SD	1.3	0.7	1.2	1.3	1.5	0.9
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	13.1	12.6	12.2	12.4	12.5	12.2
SD	0.6	0.6	1.1	1.2	0.7	0.9

Between groups: no

With time: yes

Platelets ($10^3/\mu\text{l}$)						
<i>PC</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	444	476	520	407	386	456
SD	157	112	102	182	122	184
<i>PB</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	491	423	592	567	445	591
SD	114	206	90	62	241	132

Between groups: no

With time: yes (? Bio)

Prothrombin time (s)						
<i>PC</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	9.5	8.6	8.3	8.5	7.7	8.6
SD	0.5	0.2	0.2	0.4	0.3	0.7
<i>PB</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	9.6	8.3	8.2	8.2	7.6	8.5
SD	0.6	0.2	0.2	0.2	0.3	0.3

Between groups: no

With time: yes (?bio)

Basophils ($10^3/\mu\text{l}$)						
<i>PC</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	0.02	0.01	0.12	0.03	0.07	0.07
SD	1.67	1.33	1.63	0.06	0.07	0.10
<i>PB</i>						
Day	-5	4	5	18/28	19/29	25/35
Mean	0.05	0.05	0.02	0.04	0.07	0.13
SD	0.06	0.08	0.02	0.07	0.08	0.22

Between groups: no
With time: no

Eosinophils ($10^3/\mu\text{l}$)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	0.67	0.92	1.01	0.81	1.15	0.84
SD	0.21	0.45	0.34	0.35	0.42	0.39
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	0.77	0.94	1.23	0.65	0.95	0.91
SD	0.40	0.37	0.66	0.23	0.17	0.65

Between groups: no
With time: yes

Fibrinogen (mg/dl)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	151	186	237	163	220	158
SD	15	20	38	33	30	34
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	147	199	260	178	230	147
SD	17	15	35	18	22	16

Between groups: no
With time: yes

Lymphocytes ($10^3/\mu\text{l}$)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	6.96	6.33	7.81	5.68	6.24	8.36
SD	3.70	3.00	3.12	4.02	3.48	4.16
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	6.90	6.48	9.30	5.72	6.26	10.82
SD	2.51	3.01	4.68	3.02	3.26	4.93

Between groups: no
With time: yes

Total leukocytes ($10^3/\mu\text{l}$)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	15.55	14.20	17.15	13.49	15.87	16.45
SD	8.51	5.56	6.43	5.77	4.93	6.54
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	14.68	16.09	19.71	13.07	15.27	18.59
SD	3.80	5.10	8.64	4.56	5.14	7.55

Between groups: no
With time: yes

Alanine aminotransferase (U/l)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	81	68	66	65	70	90
SD	37	26	26	16	17	18
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	80	66	61	65	75	88
SD	11	6	8	11	12	15

Between groups: no
With time: yes

Albumin (g/dl)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	3.7	3.3	3.3	3.0	3.4	3.4
SD	0.2	0.1	0.2	0.2	0.2	0.3
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	3.6	3.4	3.4	3.0	3.4	3.5
SD	0.1	0.2	0.1	0.2	0.2	0.2

Between groups: no
With time: yes

Alkaline phosphatase (U/l)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	100	84	84	90	79	105
SD	14	11	21	17	9	15
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	89	77	72	73	71	104
SD	21	18	19	18	20	25

Between groups: no
With time: yes

Aspartate transaminase (U/l)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	36	31	19	34	19	40
SD	17	23	7	33	3	16
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	31	19	17	25	20	35
SD	11	2	4	6	6	9

Between groups: yes

With time: yes

Calcium (mg/dl)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	10.9	10.7	10.8	10.6	10.9	11.2
SD	0.3	0.3	0.3	0.4	0.4	0.7
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	10.6	10.8	10.7	10.3	11.0	11.1
SD	0.3	0.3	0.4	0.4	0.5	0.7

Between groups: no

With time: yes

Creatine kinase (U/l)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	1816	1483	475	722	447	1329
SD	2562	1855	573	969	280	1385
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	840	284	337	914	332	1008
SD	525	178	236	1017	421	723

Between groups: no

With time: no

Blood urea nitrogen (mg/dl)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	26.0	22.4	27.4	22.1	24.0	26.6
SD	3.0	3.1	3.4	2.7	4.0	3.1
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	25.7	23.0	27.1	23.6	27.2	26.8
SD	3.6	1.7	3.6	1.4	4.8	2.3

Between groups: no

With time: yes

Creatinine (mg/dl)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	0.8	0.8	0.8	0.7	0.8	0.9
SD	0.2	0.2	0.1	0.1	0.2	0.2
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	0.8	0.8	0.8	0.7	0.8	0.9
SD	0.2	0.1	0.2	0.2	0.2	0.2

Between groups: no

With time: yes

Amylase (U/l)						
<i>PC</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	831	851	887	759	851	891
SD	140	104	119	81	111	127
<i>PB</i>						
Day	-5	4	5	18/29	19/29	25/35
Mean	880	879	941	843	913	855
SD	136	96	102	71	141	107

Between groups: no

With time: yes