ROSSDALES LABORATORIES

REFERENCE RANGES

ADULT NON-THOROUGHBRED HORSES

Clinical Pathology Reference Ranges – Means & Ranges

Test	Abbreviation	Units	Mean	Range
Total erythrocytes	RBC	$x10^{12}$/l	8.2	6.2-10.2
Packed cell volume	PCV	l/l	0.37	0.31-0.43
Haemoglobin	Hb	g/dl	13.5	11.1-15.9
Mean cell volume	MCV	fl	46.0	40.0-50.0
Mean cell haemoglobin concentration	McHc	g/dl	36.1	33.5-38.7
Mean cell haemoglobin	McH	pg	16.6	15.2-19.0
Total leucocytes	WBC	$x10^9$/l	7.5	6.0-10.0
Segmented neutrophils	Segs	$x10^9$/l	4.4	3.4-5.4
	Segs	%	58	51-65
Lymphocytes	Lymphs	$x10^9$/l	2.6	2.0-3.2
	Lymphs	%	35	29-41
Monocytes	Monos	$x10^9$/l	0.3	0.2-0.4
	Monos	%	4	2-6
Eosinophils	Eos	$x10^9$/l	0.2	0-0.4
	Eos	%	2	1-3
Platelets	Plts	$x10^9$/l	156	100-250
Plasma viscosity	PV	mPa	1.50	1.45-1.55
Total Protein	TSP	g/l	63	53-73
Albumin	Alb	g/l	35	29-41
Globulin	Glob	g/l	28	18-38
Alpha 1 globulin	x1 glob	g/l	1.2	0.4-2.0
Alpha 2 globulin	x2 glob	g/l	5.8	3.2-8.4
Beta 1 globulin	x1 glob	g/l	7.4	4.0-10.8
Beta 2 globulin	x2 glob	g/l	5.3	1.7-8.9
Gamma globulin	xglob	g/l	9.0	4.6-13.4
Plasma fibrinogen	Fib	g/l	2.1	0.3-3.9
Serum amyloid A	SAA	mg/l	1.3	0-20
Aspartate amino transferase	AST	iu/l	263	102-350
Creatinine kinase	CK	iu/l	186	110-250
Lactate dehydrogenase	LD	iu/l	525	225-700
LD isoenzyme 1	LD1	% total LD	14	10-18
LD isoenzyme 2	LD2	% total LD	26	22-30
LD isoenzyme 3	LD3	% total LD	38	34-42
LD isoenzyme 4	LD4	% total LD	18	13-23
LD isoenzyme 5	LD5	% total LD	4	1-7
Gamma glutamyl transferase	GGT	iu/l	16	1-40

Test	Abbreviation	Units	Mean	Range
Glutamate dehydrogenase	GLDH	iu/l	3	1-10
Serum alkaline phosphatase	SAP	iu/l	204	147-261
Intestinal alkaline phosphatase	IAP	iu/l	47	13-87
	IAP	% total SAP	22.6	10-34
Urea	Urea	mmol/l	5.2	2.5-10.0
Creatinine	Creat	µmol/l	125	85-165
Bromsulphalein half time clearance	BSP	Seconds	168	138-198
Glucose	Glu	mmol/l	4.9	4.3-5.5
Total bilirubin	TBili	µmol/l	20	13-34
Direct bilirubin	DBili	µmol/l	9	4-16
Bile acids	BAcids	µmol/l	5.1	1-8.5
Cholesterol	Chol	mmol/l	2.45	2.0-3.3
Triglycerides	Trigs	mmol/l	0.7	0.2-1.2
Lipase	Lip	mmol/l	30	8-50
Amylase	Amyl	iu/l	9	3-15
Calcium	Ca	mmol/l	3.1	2.9-3.3
Fractional urinary clearance	Ca	%	6.2	2.6-15.5
Phosphate	PO4	mmol/l	1.4	0.9-1.9
Fractional urinary clearance	PO4	%	0.3	0.02-0.53
Magnesium	Mg	mmol/l	0.8	0.6-1.0
Fractional urinary clearance	Mg	%	11.7	3.8-21.9
Copper (serum)	Cu	µmol/l	18.2	14.0-22.0
Copper (plasma)	Cu	µmol/l	23.0	18.0-28.0
Zinc	Zn	µmol/l	12.7	10.0-15.0
Sodium	Na	mmol/l	138	134-142
Fractional urinary clearance	Na	%	0.09	0.02-1.0
Potassium	K	mmol/l	4.0	3.0-5.0
Fractional urinary clearance	K	%	32.8	15-65
Chloride	Cl	mmol/l	99	95-103
Fractional urinary clearance	Cl	%	0.72	0.04-1.6
Cortisol	Cort	nmol/l	136	71-240
Fasting Insulin	Ins	µiu/ml	25.5	8.0-47.5
Tri-iodothyronine	T3	nmol/l	1.0	0.48-1.46
Thyroxine	T4	nmol/l	22.7	7.7-42.8
Troponin	cTnI	ng/ml	0.1	0.05-0.2
Selenium	Se	µmol/l	3.0	0.7-8.4

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