REFERENCE RANGES
Farm Animals
CLINICAL CHEMISTRY

LABOKLIN
LABORATORY FOR CLINICAL DIAGNOSTICS

	Unit	Cattle	Sheep	Goat	Pig	Alpaca	Llama
Vitamins							
β-Carotene	µg/l	> 2500	–	–	–	–	–
Vitamin A	µg/l	130 – 380	–	600 – 1500	–	–	–
Vitamin B12	pg/ml	> 100	> 100	100 – 1500	300 – 800	–	–
Vitamin D3	nmol/l	75 – 125	–	–	–	–	–
Vitamin E	mg/l	> 3	> 3	> 3	1.6 – 4.6	–	–
Hormones							
Insulin	µU/ml	< 5	–	–	–	–	–
Progesterone	ng/ml	follicular phase: < 1 corpus luteum**: 1 - 10	–	–	–	–	
T4	µg/dl	3.4 – 8.2	–	–	–	3.4 – 8.2	3.4 – 8.2
Other values							
Haptoglobin	g/l	< 0.35	< 0.35	< 0.27	< 0.68	–	–
IgG	mg/dl	1700 – 2700*	–	–	1700 – 2900	–	–

* cattle (calf: > 800)
** The concentrations of the gestation corpus luteum are on average higher than those of the cyclic corpus luteum, but can vary greatly between individuals. It is not possible to differentiate between pregnant and non-pregnant based on the progesterone concentration. Between day 17-19 progesterone concentrations > 1 ng/ml indicate a lack of luteolysis, which is indicative of early pregnancy.
The determination of PAG (pregnancy associated glycoprotein) is recommended for pregnancy diagnostics.