



Name:	UNLOCK AHD B <sub>12</sub> 2000 + Selenium Injection	AHD 2000 B12 Injection + Selenium For the investigated and control of	
Pack Size/s:	500mL	exball and selenium deficiencies in abeep and cattle.	
AHD Product Code:	UB122000		
Main Points:	For the prevention and treatment of vitamin B <sub>12</sub> (cobalt) and selenium deficiencies in sheep and cattle	At the statement and the statement of th	
Status:	OTC /Vet		
Ingredients:	<ul> <li>Hydroxocobalamin (as acetate) 2000µg/mL</li> <li>Selenium (as sodium selenate) 4mg/mL</li> </ul>		
Indications:	<ul> <li>Cobalt is an essential component of vitamin B<sub>12</sub> (cyanocobalamin) which in ruminants is synthesised by microorganisms in the rumen. Under conditions of adequate dietary cobalt, microbial synthesis of vitamin B<sub>12</sub> is usually sufficient to meet the animal's requirements. Vitamin B<sub>12</sub> deficiencies occurs in animals grazing pastures with low cobalt content. Inadequate cobalt content of pastures may be related to a primary soil cobalt deficiency or various factors which reduce cobalt intake by plants. Seasonal variations in pasture cobalt content occur and deficiency is commonly associated with rapid spring pasture growth.</li> <li>Vitamin B<sub>12</sub> has an essential role in ruminants as co-enzymes involved in the energy-producing pathway, gluconeogenesis. Propionic acid, a major product of carbohydrate metabolism in the rumen is converted to glucose in the liver via a B<sub>12</sub>-containing enzyme. This conversion is critical in ruminants as they absorb little dietary glucose and are therefore dependent on gluconeogenesis for glucose production.</li> <li>Vitamin B<sub>12</sub> also acts as a co-enzyme in the formation of DNA, so is essential for cell maturation, division and growth. Deficiencies of vitamin B<sub>12</sub> result in a general depression of cellular development and growth. Normal red blood cell production involves particularly rapid cellular growth and proliferation, thus adequate amounts of vitamin B<sub>12</sub> are vital for this process.</li> </ul>		
Action:	Vitamin $B_{12}$ has an essential role in ruminants as a co-enzyme involved in the energy -producing pathway, gluconeogenesis. Propionic acid, a major product of carbohydrate fermentation in the rumen, is converted to glucose in the liver via a $B_{12}$ – containing co -enzyme. This conversion is critical in ruminants, as they absorb little dietary glucose and are therefore dependent on gluconeogenesis for glucose production. Vitamin $B_{12}$ also acts as a co- enzyme in the formation of DNA, so essential for cell maturation, division and growth. Deficiencies of vitamin $B_{12}$ result in a general depression of cellular development and tissue growth. Normal red blood cell production involves particularly rapid cellular growth and proliferation, thus adequate amounts of vitamin $B_{12}$ are vital for this purpose.		





## **Product Information**

Administration:	Do not use unless selenium deficiency has been diagnosed.	
	By subcutaneous or intramuscular injection. Injection to be given into the anterior half of the neck.	
	Repeat as directed by veterinary surgeon. Frequency of dosing should be related to the severity of the deficiency.	
	• Do not use at the same time as any other selenised fertiliser, prill or product without consulting with a veterinarian. Do not exceed the stated dose or dose more frequently than 3-weekly.	
Dosage:	<ul> <li>Lambs: 0.5mL at tailing or weaning</li> <li>Adult Sheep: 1-1.5mL pre-lambing</li> <li>Calves: 2.3mL from 2 months of age</li> </ul>	
	Adult Cattle: 4-6mL pre-calving	
Special Precautions:	Do not use at the same time as any other selenised fertiliser, prill or product without consulting with a veterinarian. Do not exceed the stated dose or dose more frequently than 3-weekly.	
	WITHHOLDING PERIODS. NIL	
Storage:	DISPOSE of empty container by wrapping with paper and putting it in the garbage.	
	STORE below 25°C (air conditioning). Protect from light. Once vial is broached use contents within 6 months or discard	
	KEEP OUT OF REACH OF CHILDREN	
Registration:	Registered pursuant to the ACVM Act 1997 No A011785.	
	See www.foodsafety.govt.nz for registration conditions	
Category:	Dietary support	

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