



Additional information for trainers - Cobalt use in greyhounds

Cobalt is a naturally occurring trace element that is normally present in greyhounds at very low levels as a result of normal dietary intake. Cobalt is also present in the structure of vitamin B12 (cyanocobalamin).

On 1 September 2015, Greyhounds Australasia will introduce a urinary threshold for cobalt of 100 ng/mL within GAR 83 (10) (see Warning – Cobalt use in greyhounds)

Trainers are advised to be extremely cautious using products that contain cobalt close to racing as this may inadvertently lead to a rise in urinary cobalt levels. Compliance with GAR 83A Raceday Treatment (see Warning – Raceday treatment) will minimise the risk of inadvertently exceeding the threshold, however a greater withholding period will be required for some substances, particularly injectable products.

This threshold has been determined following a national population survey that measured urinary cobalt levels in 762 greyhounds sampled on race day. The median value was 3.44 ng/mL and 74% of samples were below 10 ng/mL. It has been set at 100 ng/mL to allow for a robust margin of safety with normal amounts of cobalt supplementation through routine nutritional sources.

Trainers are advised that the **administration, particularly by injection and on multiple occasions or at larger 'off-label' doses, or in combination with other cobalt containing products, of certain registered 'supplements' close to racing may result in a level of cobalt in a subsequent sample that exceeds this threshold.** Trainers are therefore advised to avoid the use of these supplements close to racing.

While there is generally no medical indication for cobalt supplementation in a healthy greyhound fed a balanced diet, where veterinary advice indicates these supplements are required, they should be given following the labeled advice of the manufacturer and ensure an adequate withholding period is followed prior to racing.

Examples of injectable vitamin supplements that contain cobalt and/or vitamin B12 include: V.A.M., Hemo-15, Hemoplex, Amino-lite 34X, Kynoselen, Tripart, Coforta, Folic Acid and Vitamin B-12, Dynajec and Cophos B. Various parasiticides, drenches and oral haematinics also contain cobalt.

For a current list of APVMA registered products that contain cobalt or vitamin B12 (cyanocobalamin) visit: <https://portal.apvma.gov.au/pubcris>

Possession of these registered products is acceptable if appropriately obtained and labeled in accordance with GAR 84(2). Possession of highly concentrated cobalt salts may be considered a breach of GAR 79A(7).

Administration study results:

This information is made available to participants, in order to assist them to comply with the rules. The detection times are not withdrawal times and should not be construed as such. There are many relevant factors in relation to any substance that could give rise to unpredictable and prolonged excretion times including:

- An animal's general health status, its physiology, metabolism, hydration status, fitness level, training regime, nutritional and dietary supplementation and concurrent medical treatment.
- Dose rate (i.e. the amount given per kg) – a higher dose will take longer to remove from the body system and could be detrimental to the dog's health. Combining similar supplements may also increase the dose rate as each may contain cobalt.
- Treatment duration and frequency (i.e. how long a supplement is given for and how often) – a cumulative effect could occur where supplements are given for extended periods, particularly when this is against the directions of the manufacturer ('off-label').
- Route of administration (i.e. orally or by injection) – injection of cobalt supplements will lead to much greater levels of cobalt and therefore requires greater withholding periods prior to racing than orally administered cobalt. Oral administration of some highly concentrated products will still lead to a breach of the cobalt threshold and require an adequate withholding period.
- Pharmaceutical preparation (i.e. how much cobalt it contains) – different cobalt salts contain different amount of cobalt. The preparations may also have different properties that result in e.g. different rates of absorption.

Careful consideration of the above factors and adequate veterinary advice is important prior to administering cobalt containing substances, particularly by injection. More conservative withdrawal times may need to be implemented.

The following admin studies were performed on 6 greyhounds:

VAM® Paste

VAM® Paste (CEVA) is a commercially available product registered as a supplement (vitamins, amino acids and minerals) paste. The cobalt salt is cobalt sulfate (240 µg/mL) and contains cyanocobalamin (150 µg/mL). This is equivalent to around 98 µg/mL of cobalt. The manufacturer's recommended dose rate in dogs is 0.25-1mL per 10kg bodyweight, twice weekly, administered orally.

Dose administered: 1mL/10kg, administered orally on two occasions on alternate days. This is equivalent to a dose rate of 24 µg/kg of cobalt sulfate.

Results: Cobalt levels detected above the 100 ng/mL threshold (maximum 317 ng/mL) for up to 6 hours after the second dose, but did not return to resting levels for 24 hours. A cumulative effect may occur with this product. A minimum withholding period of 24 hours is suggested.

VAM® Injection

VAM® Injection (CEVA) is a commercially available product registered as a supplement (vitamins, amino acids and minerals) injection. The cobalt salt is cobalt sulfate (240 µg/mL) and contains cyanocobalamin (150 µg/mL). This is equivalent to around 98 µg/mL of cobalt. The manufacturer's recommended dose rate in dogs is 0.25-1mL per 10kg bodyweight, twice weekly, administered intramuscularly.

Dose administered: 1mL/10kg, administered intramuscularly on two occasions on alternate days. This is equivalent to a dose rate of 24 µg/kg of cobalt sulfate

Results: Cobalt levels detected above the 100 ng/mL threshold (maximum 6523 ng/mL) for up to 48 hours after the second dose, but did not return to resting levels for at least 72 hours. A cumulative effect may occur with this product. A minimum withholding period of 96 hours is suggested.

Hemo-15® Injection

Hemo-15® (Virbac) is a commercially available product registered as a supplement (iron, amino acid and B-vitamin) injection. The cobalt salt is cobalt gluconate (0.7 mg/mL) and contains cyanocobalamin (150 µg/mL). This is equivalent to around 99 µg/mL of cobalt. The manufacturer's recommended dose rate (in horses) is 1mL per 50kg of bodyweight, administered intravenously.

Dose administered: 1mL, administered intravenously, once per day for three days. This is equivalent to a dose rate of 20 µg/kg of cobalt gluconate, based on a 35kg dog.

Results: Cobalt levels detected above the 100 ng/mL threshold (maximum 1350 ng/mL) for up to 24 hours after the third dose, but did not return to resting levels for 48 hours. A cumulative effect may occur with this product. A minimum withholding period of 48 hours is suggested.

For further information please contact your state controlling body.

N.B. Reliance on this communication will not be a defence in the event of a breach of the rules. All participants in races do so subject to, and take full responsibility for their compliance with, the rules which contain, amongst other things, provisions relating to prohibited substances, the disqualification of greyhounds that have been found to have received them and the punishment of those who administer them.