Compositional Guideline for Deer velvet antler powder

Name of the ingredient

Deer velvet antler powder (ABN)

Definition of the ingredient

The above-named substance is pulverised, dried deer antler, including velvet, which has been obtained from the stags of the following deer species: red deer (*Cervus elaphus*), elk/wapiti (*Cervus canadensis*) or a crossbreed of the two. The age of antler at the time of removal is between 40–85 days from previous harvest or casting.

The stags from which the substance is obtained must have been bred and raised in New Zealand and fulfil the requirements for animals suitable for human consumption (as provided by the *Animal Products Act 1999* (New Zealand) and the regulations made under that Act). Antlers must be removed according to the National Velvetting Standards Body (NVSB) Code of Practice.[1]

Table 1. Ingredient specific requirements

Test	Method reference	Acceptance criteria
Description		
Appearance	Visual	Brown powder
Characteristics		
Loss on drying	BP (Appendix IX D)	Not more than 15% w/w
Identification		
TLC	NZFSA OMAR 06/22: Korea: export of sliced deer velvet	Matches standard
Assay		
Calcium	ICP or AAS	3.7–14.4% w/w

Test	Method reference	Acceptance criteria
Total protein as amino acids	AOAC 982.30, AOAC 988.15, AOAC 985.28	39.4–98.5% (sum of all procedures)
Notes		
1. National Velvetting Standards Body (NVSB) (April 2009). Farmer Velvet Antler Removal Manual. Deer Industry New Zealand.		

Table 2. Incidental constituents

Test	Method reference	Acceptance criteria
Residual Solvents		
Ethanol	BP (Appendix VIII L, Residual solvents), Ph Eur method 2.4.24)	Not more than 0.5% w/w
Incidental metals and non-metals		
Lead	ICP or AAS	Not more than 1.0 ppm
Arsenic	ICP or AAS	Not more than 3.0 ppm
Cadmium	ICP or AAS	Not more than 0.05 ppm
Mercury	ICP or AAS	Not more than 0.1 ppm
Pesticide residues and environmental contaminants: (including agricultural and veterinary substances)		
Lignocaine	GC-MS or HPLC-MS	Not more than 0.1 ppm
Xylazine	GC-MS or HPLC-MS	Not more than 0.5 ppm
Other organic or inorganic impurities or toxins		
Ash	Gravimetric	15.0–47.6% (dried basis)
Microbiology		
While substance manufacturers are encouraged to include limits for objectionable		

Test	Method reference	Acceptance criteria
microorganisms, it is the product into which those substances are formulated that is subject to a legally binding set of criteria. The Therapeutic Goods Order No. 77 *'Microbiological Standards for Medicines'* mandates that any finished product that contains the ingredient, alone or in combination with other ingredients, must comply with the microbial acceptance criteria set by Clause 9 of the Order.		

Key to abbreviations:

AAS = Atomic absorption spectrometry

AOAC = Association of Official Analytical Communities

BP = British Pharmacopoeia

GC = Gas chromatography

HPLC = High-pressure liquid chromatography

ICP = Inductively coupled plasma spectrometry

MS = Mass spectrometry

NZFSA OMAR = New Zealand Food Safety Authority Overseas Market Access Requirements

Ph Eur = European Pharmacopoeia

TLC = Thin layer chromatography