



HOW TO

# A1/A2 milk



## - *sampling and submission of milk samples for phenotype testing*

Milk samples submitted to Gribbles Veterinary from dairy cattle can now be tested to determine if the animals produce type A1 and/or A2 milk. This information is potentially very valuable for New Zealand dairy farmers and may assist farmers with their herd management plans.

A2 milk exclusively containing the A2 protein is priced higher than normal A1 milk in NZ. Only about 30% of NZ dairy animals are estimated to contain the A2 gene. The A2 corporation in NZ claims that the A2 milk has less detrimental effects on human health. Upon digestion the A1 beta-casein releases a protein fragment called beta-casomorphin7 or BCM7, and opioid which has been implicated in suppression of the immune system. It is produced by many of the cows of European origin, and levels are considerably higher in Friesian compared with Jersey cows. Asian and African cows, buffalo, yaks, camels, and nearly all sheep do not produce this milk (nor do humans which only produce A2).

### Materials required:

15mL sample tubes \* / permanent marker pen\* / tube racks\* / frozen ice packs / chilly bin / tape

\* These items can be obtained from Gribbles Veterinary free of charge.

### Sampling tips:

- Obtain sample tubes, racks and marker pens from Gribbles Veterinary prior to collecting the samples.
- Ensure ice-packs are frozen prior to commencing sampling.
- We recommend these samples are collected using a two-person approach – one person manages the tubes and labelling, the other strips the milk from the teat of the cow directly into the tube. This process is usually carried out at milking time.

### How to:

- Person 1 labels the sample tube with the cow tag number using a permanent marker (write on the white tube label).
- Unscrew the lid then pass the tube to Person 2 who strips around 5mL of milk into the tube and hands it back to Person 1 to recap. Ensure cap is firmly screwed into place.
- Once the tubes are sampled and capped, place them back into the holding racks provided.
- When the racks are full, place them into a chilly-bin or other suitable vessel for shipping along with a frozen ice-pack. The chilly-bin/vessel must be sealed with tape prior to shipping.
- Complete a submission form listing the tag numbers of all cows sampled, and ensure the testing required is clearly stated.
- If the samples cannot be collected for transport same day, they **MUST** be refrigerated or frozen overnight until collected.
- Ship all samples directly to **Gribbles Veterinary, 5 Karewa Place, Hamilton.**



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*Please refer to our current price book for sample types, test turn-around times and pricing. If you have any questions or would like any further information, please contact your local Gribbles Veterinary laboratory or Territory Manager.*