

SAMPLING INSTRUCTIONS

DNA SAMPLE COLLECTION KIT COMPONENTS

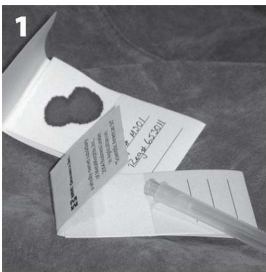
- MMIG MicroCard
- Sample Submission Form
- 18-Gauge Hypodermic Needle
- Detailed instructions for collection and shipment of samples
- Terms & Conditions for MMIG's DNA Testing Services



SEMEN SAMPLES

Semen straws must be labeled with appropriate animal identification. Package straws so they will be protected from bending and breakage during shipment. There is no need to ship semen straws on ice or liquid nitrogen.

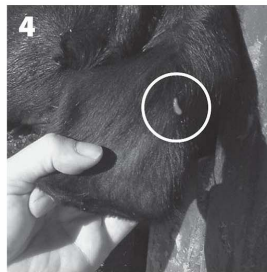
BLOOD SAMPLING INSTRUCTIONS



MicroCard with and without a sample collected



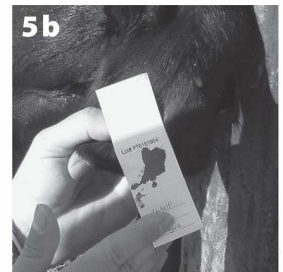
Piercing the ear with the needle



A drop of blood on the surface of the ear



Placing the MicroCard against the drop of blood



MicroCard with adequate blood filling the circle

- 1 Label the MicroCard from the Sample Collection Kit with the proper animal's identification (i.e. tag, tattoo or registration number).
- 2 Remove the kit's hypodermic needle from its plastic cover.
- 3 Holding the tip of the animal's ear, use the needle to gently pierce the ear two or three times with each piercing about one-eighth of an inch from each other.
- 4 Wait five to 10 seconds for a drop of blood to form.
- 5 a. Holding the back of the MicroCard, lift the matchbook-style flap to expose the absorbent filter paper, press the filter paper to the blood on the top side of the ear. The blood spot must be collected on the thicker filter paper, just above the 3 blank lines that are used to write the animal's ID information.
b. If more blood is needed, press the filter paper on the drop of blood on the underside of the ear. For a sufficient sample, the blood blot should be the size of a quarter.
- 7 Repeat steps 1-6 for each animal being tested; always use a new needle for each animal sampled to prevent sample-to-sample contamination.
- 8 Keep sample cards separate until the bloodstains are dry. Fill out the Sample Submission Form provided, making sure to match the ID number on the MicroCard with the corresponding ID number on the paperwork.

SHIPPING

- 1 Samples should be stored and sent at room temperature.
- 2 Do not place MicroCard blood samples in plastic baggies, as this does not allow adequate drying of the blood sample on the card.
- 3 Include an accurately completed and signed Sample Submission Form.
- 4 Include the appropriate fees for processing your samples.
- 5 Mail Samples and Sample Submission Form by regular U.S. mail or express courier to:
MMI Genomics, Inc.
Attention: Cattle Customer Support
1756 Picasso Ave.
Davis, CA 95618

MMI GENOMICS, INC.



Advancing the Cattle Industry Through Innovative,
Value-adding Life Science Technologies
Tru-Parentage . Tru-Identity . Tru-Traceability . Tru-CoatColor

1756 Picasso Avenue, Davis, California 95618
800.311.8808, www.breedtru.com