Taking Nasal Swabs from Large Animals for DNA Isolation

1 Purpose / Introduction

1.1 To collect nasal swabs from large animals for downstream isolation of DNA for the purpose of genotyping or other analyses.

2 Equipment/Reagents/Materials

2.1 Nitrile Gloves

2.2 Performagene Nasal Swabs (PG-100) DNA Genotek

3 Principle

3.1 Nasal swabbing is a non-invasive procedure for collection of DNA from animals. It requires minimal restraint of the animal, normally sheep, for a period of a maximum of one minute while the sample is being collected. The nasal swabs can be used to isolate DNA for genotyping to assess parentage, SNP analysis or other DNA analyses.

4 Procedure

4.1 1. The animal should be gently restrained by an animal technician at the large animal unit.

2. Remove the swab from the plastic wrapping taking care not to touch anything.

3. Holding the tube, rub the nasal swab inside the animals nostril for up to 5 seconds. Ensure the sponge looks wet and is coated with the nasal sample to achieve the best DNA collection.

4. Hold the tube upright and unscrew the cap from the tube.

5. Turn the cap upside down and place the nasal swab in the tube and screw the cap on tightly.

6. Invert and shake the tube vigorously 10 times to thoroughly mix the sample.

7. Clearly write the animal's ear tag number on the tube, the species and the date of collection.

8. The swabs can be stored at room temperature for up to one year. If samples are stored for periods > one year, they should be stored at -20°C.

5 Risk assessment

5.1 Care should be taken when working around live animals as they have the potential to bite and kick. A skilled farm animal technician should always be present to restrain the animal when nasal swabs are being taken.

5.2 Suitable PPE should be worn including nitrile gloves, lab coat or boiler suit and appropriate footwear for working around large animals.