



# SOP - Syringe and Implant Gun Calibration and Function

## 1. Syringe Maintenance

- a) Protect syringes and needles from dust and weather and do not leave them lying around in the cattle handling areas overnight.
- b) Designate and mark specific syringes for vaccine use only to avoid washing the vaccine syringes with disinfectants (disinfectants can inactivate vaccines).  
Dismantle vaccine syringes and clean them on a daily basis with hot water only.
- c) Syringes used to administer pharmaceuticals **other than vaccines** should be dismantled and cleaned, on a daily basis, with disinfectants.
- d) Clean vaccine transfer needles with hot water only, avoid disinfectants. Consider using disposable Vacutainer<sup>®</sup> needles when reconstituting vaccines.
- e) Always use a new needle when refilling syringes from a bottle.
- f) Syringes with “automatic draw offs” or “bottle syringes” are good alternatives to the multi-dose syringes that need to be refilled on an ongoing basis.
- a) Protect vaccine syringes (and syringes containing vaccines) from excessive heat and excessive cold during use.

## 2. Syringe Calibration During Use

- a) Prior to filling the syringe with product, work the mechanism to ensure that the syringe appears to function properly.
- b) Fill the syringe with product and administer it appropriately. Look to see that the product moves in and out of the syringe as expected.
- c) After every 5 animals is treated, look at the volume of product used to be sure that the correct amount of product is being administered.
- d) When the syringe is being cleaned, fill the syringe with water and expel the water at each dose setting to verify that correct amount of liquid is being administered. If the incorrect volume is administered the syringe will need to be calibrated or discarded.

## 3. Implant Gun Function

- a) Ensure that the implant guns are not cracked, broken or excessively dirty.  
Replace any defective implant guns as required.
- b) Examine the implant needle and replace needles that are dull, bent, or burred.
- c) Different types of implant guns may require slight modifications to the general implanting procedure. Familiarize yourself with the operation of each type of implant gun before administering any implants:

1. For implant guns with retracting needles, fully insert the needle and then depress the trigger on the implant gun. For implant guns without retracting needles, fully insert the needle and then slowly retract the implant needle manually as the trigger is depressed.
  2. **AFTER** the trigger has been depressed and the implant has been discharged, fully withdraw the implant needle from the ear.
- d) Be sure that the implant gun has successfully delivered an implant. You should be able to see the implant in place. If not, feel the site to make sure.