



# Standard Operating Procedure

## Ring Test Measurements – Sample Device Distribution

### PURPOSE:

All ICAR approved laboratories must participate in annual ring test measurements. This ensures devices tested at any ICAR approved laboratory will receive comparable test results. This Standard Operating Procedure (SOP) outlines the procedures by which ICAR approved laboratories choose the sample device type and then conduct the necessary quantity of test measurements to provide an accurate summary of their individual lab results. ICAR can then review these results to measure overall uniformity between ICAR approved laboratories.

Note: It is automatically assumed within this SOP that ISO 24631-1 and ISO 24631-3 are the ISO standards used for conducting the tests pertinent for the Ring Test measurements.

### PROCEDURE:

1. Two RFID device types are chosen of which one type is HDX and one is FDX-B.
2. One of the sample device types shall be a ferrite coil and the other sample device type shall be an air coil.
3. Each ICAR approved laboratory is issued three samples of each RFID device type which they will use for the Ring Test, i.e. three HDX devices and three FDX-B devices.
4. The measurements are obtained and recorded three times for each sample device as illustrated in the below table:

<b>HDX Sample Device 1</b>	<b>FDX-B Sample Device 1</b>
Measurement 1	Measurement 1
Measurement 2	Measurement 2
Measurement 3	Measurement 3
<b>HDX Sample Device 2</b>	<b>FDX-B Sample Device 2</b>
Measurement 1	Measurement 1
Measurement 2	Measurement 2
Measurement 3	Measurement 3
<b>HDX Sample Device 3</b>	<b>FDX-B Sample Device 3</b>
Measurement 1	Measurement 1
Measurement 2	Measurement 2
Measurement 3	Measurement 3

5. The completed results are then sent to Service-ICAR utilising the ICAR Ring Test Sample Device Measurement Template as outlined in ICAR SOP/002/RTM.
6. The sample devices are then rotated between the ICAR approved laboratories to measure the uniformity of test results with the eventual outcome that each laboratory has tested all the sample devices used in the Ring Test.