10.8. APPROVAL OF OFFICIAL PERMANENT IDENTIFICATION DEVICES. PART 2: ELECTRONIC PERMANENT IDENTIFICATION DEVICES

10.8.1 Introduction

The ICAR procedure for testing the performance and reliability of electronic permanent identification devices considers the following issues:

- Ease of application and use
- Efficiency of animal recognition
- Durability and tamperproof quality
- Animal welfare and human health

The following transponder containing device types shall be considered as permanent electronic identification (EID) devices:

- Electronic ear tags
- Ruminal boluses
- Injectable transponders

Where EID devices are intended for use in official identification schemes, it is the manufacturer´s responsibility to comply with the requirements of the relevant jurisdiction. This document will guide the manufacturer through the steps of initially obtaining and then retaining ICAR approval for an EID device.

The approval procedure is composed of three distinct phases:

1. Phase 1: Manufacturer`s formal application (Section 10.8.5.1)
2. Phase 2: Preliminary Assessment (Section 10.8.5.3)
3. Phase 3: Laboratory Test - Technical Evaluation (Section 10.8.5.4)

The test procedures within this document must be carried out by ICAR approved test laboratories. The fees for these test procedures will be borne by the manufacturer of the device to be tested.

An approved product can have its approval withdrawn in the event of poor performance results over an unacceptable period of time or if the manufacturer fails to comply with the requirements subscribed. ICAR and/or national authorities may randomly take samples of approved tags from the market place and subject them to appropriate testing to ensure approved ear tags continue to meet ICAR standards. The manufacturer may be required to meet the costs of these assessments if the product fails to meet ICAR standards.

The manufacturer must advise ICAR of any sub-standard performance of products not in accordance with previous test results. The manufacturer must also inform ICAR of any change to the composition of an approved EID device.

ICAR approval does not imply that the EID device is suitable for all environments. Users of EID devices are encouraged to access the list of approved animal ID devices found on the ICAR website (www.icar.org).

10.8.2 Scope

This document describes the evaluation procedures for measuring the composition and the performance of EID devices. Procedures can vary depending on the type of EID device.

Successful completion of the procedures described in this document will result in the registration of the approved EID device as a device recommended by ICAR for official identification purposes. The approved EID devices are published on the ICAR website in the list of approved animal identification devices.

10.8.3 References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11357	Plastics - Differential scanning calorimetry (DSC) - Part 1: General principles
ISO 7724-3	Methods of test for paints - Part 3: Determination of colour and colour difference: calculation
ISO 105-A02	Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour
ISO 105-A05	Textiles - Tests for colour fastness - Part A05: Instrumental assessment of change in colour for determination of grey scale rating
EN ISO 4892-2	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
ISO 11785	Radio-frequency identification of animals - Technical concept
EN/IEC 60068-2-1	Environmental testing - Part 2-1: Tests - Test A: Cold
EN/IEC 60068-2-2	Environmental testing - Part 2-2: Tests - Test B: Dry heat
EN/IEC 60068-2-6	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)
EN/IEC 60068-2-32	Environmental testing - Part 2-32: Tests - Test Ed: Free fall
EN/IEC 60068-2-78	Environmental testing - Part 2-78: Tests – Test Cab: Damp heat, constant
ISO 24631-1	Radiofrequency identification of animals - Part 1: Evaluation of conformance of RFID transponders with ISO 11784 and ISO 11785
ISO 24631-3	Radiofrequency identification of animals - Part 3: Evaluation of performance of RFID transponders conforming with ISO 11784 and ISO 11785

10.8.4 Definitions

10.8.4.1 Approval code

An approval code is alpha-numeric consisting of "A" (for approved), followed by 3 numbers. The approval code is used to identify and register an EID device that has successfully passed the approval procedure. This code may be embossed or printed on all ICAR approved EID devices for official identification. In case of EID ear tags the placement of the

approval code should conform to the requirements of the relevant jurisdiction governing the location where the ear tag is in use.

10.8.4.2 Electronic ear tags

An electronic ear tag is able to be fixed to an animal´s ear and deemed to be composed of three principal features:

- The front part with or without flag which is often, but not always, the “female” component of an ear tag combination. The front part is designated as such because it will be in the front of the animal`s ear when the ear tag combination is applied correctly. It is often, but not always, contains the transponder containing tag part.
- The rear part with or without flag which is often, but not always, the “male” component of ear tag combination. The rear part is designated as such because it will be at the back of the animal`s ear when the ear tag combination is applied correctly. In exceptional cases it could be the transponder containing tag part.
- The locking mechanism which comprises of the locking gap in the female component of an ear tag and the pin of the male component of the ear tag combination.

The tested electronic ear tag is the one described in the Application Form and subsequently tested and approved by ICAR.

10.8.4.3 Ruminal bolus transponder

In a ruminal bolus the transponder is placed into a non-degradable, acid resistant high specific gravity container able to be orally administered to a ruminant, which remains permanently in its fore stomach.

The tested ruminal bolus is the one described in the Application Form and subsequently tested and approved by ICAR.

10.8.4.4 Injectable transponder

An injectable transponder is a small transponder able to be injected into an animal’s body and encapsulated in a biocompatible and non-porous material such as glass or specific plastic.

10.8.4.5 Manufacturer

The manufacturer is deemed to be the company or person submitting the application for the approval of an EID device and has accepted the conditions of ICAR for the control of production as outlined in this document.

10.8.4.6 Reference color (for electronic ear tags only)

The color of the electronic ear tags used in the laboratory tests must be yellow with black printing. On the test samples, preferably on the rear part, the manufacturer will print a uniform solid block of 10mm x 10mm in the same color as the color of printing on the tag.

10.8.4.7 Reference ID codes

The EID devices submitted to the laboratory tests must be programmed with the test code 999 followed by zeroes and a four digit code in the end as pretended in Annex 10.8.1.

For electronic ear tags the same reference ID codes must be printed on the front part of the ear tag additionally. Font style and size have to be exactly the same the manufacturer uses in his production line and on the market. Font size and style have to be specified in the application form (Annex 10.8.2).

10.8.5 ICAR Approval Procedure

10.8.5.1 Manufacturer`s Formal Application

To submit an ear tag for ICAR approval within the scope of the tests described in this document, the manufacturer must complete an application and send it to:

Service - ICAR
ICAR Secretariat
Via Tomassetti 3 - 1/A
00161 Rome, Italy
Tel.:+39-06-44202639
Fax: +39-06-44266798;
E-mail: icar@icar.org

The application must comprise of:

- A letter of application,
- Application Form (Annex 10.8.2), and
- Material Safety Data Sheets (MSDS) for the compounds used in the manufacturing of the ear tag. These documents may also be known as Safety Data Sheets (SDS).

Copies of the Application form can be obtained from the ICAR website or from the ICAR secretariat.

By signing the application form, the manufacturer agrees to fulfill the conditions of ICAR with respect to not just the test procedures but also in the payment of the applicable charges and the ongoing monitoring and assessments applicable for approved EID devices.

10.8.5.2 PRELIMINARY ASSESSMENT (not for injectable transponders)

10.8.5.2.1 Manufacturer Requirements

At the commencement of the Preliminary Assessment the manufacturer will deliver:

(a) For electronic ear tags:

- A sample of 100 ear tags programmed with the reference ID codes and the reference printings respectively, applied using the same techniques and style as used (or intended to be used) in the commercially marketed tags. Note: Tags used in this phase are likely to be destroyed during testing.
- Two pairs of tag applicators or equivalent device(s) supplied for the application of tags to animals.

(b) For ruminal boluses:

- A sample of 25 boluses programmed with the reference ID codes and, if possible, with the reference printings respectively.
- One bolus applicator supplied for the application of boluses to animals.

10.8.5.2.2 Test procedures

10.8.5.2.2.1 Electronic ear tags

To assess conformance of the electronic ear tags with the information given in the application form and to also detect any major failure (electronic non-readability, damage of the tag at application, possible unlocking without deformation, inappropriate design considering welfare requirements etc), the ear tags will be submitted to a preliminary assessment.

10.8.5.2.2.1.1 Ear tag design

Electronic ear tags shall have smooth, rounded corners and no sharp edges or protrusions specifically on the shaft of the piercing pin. The weight of the complete locked ear tag and the dimensions (height, width and thickness) of the front plate, rear plate and pin will be measured. Measured values and observations on the tags related to animal welfare will be reported.

10.8.5.2.2.1.2 Electronic readability check

For every electronic ear tag sample in the assessment a test read with an ICAR approved handheld reader is done to ensure that the information read meet the requirements according to chapter 10.8.4.7.

10.8.5.2.2.1.3 Locking mechanism checks

The primary purpose of these tests is to verify that the male to female locking mechanism, once correctly applied using the supplied applicator, cannot be subsequently dismantled in such a way that would allow the tag to be re-used in a different animal. A locked ear tag should be tamperproof so tampering with the locked tag in a potentially fraudulent way renders the tag unusable.

10.8.5.2.2.1.3.1 Application test

The evaluation of application will be carried out in two groups:
Group 1: 60 tags locked together without insertion through ears or imitation ears,
Group 2: 40 tags to be applied and locked into ears obtained post slaughter or into imitation ears of polymer film with the same hardness and thickness as the ears of an 18 month old animal.

Performance level to be achieved for the 100 ear tags:

- Successful locking of the front and rear tag part of all ear tags
- No breakage at locking
- No deformation after locking
- No unlocking without breakage or damaging.

The test centre will also check rotation of tag parts on locked tags. The following characterization will be used:

(1) tag parts rotate freely, signed by ***
(2) tag parts rotate but not freely, signed by **
(3) tag parts do not rotate, signed by *

10.8.5.2.2.1.3.2 Resistance of the locking system

The sixty electronic ear tags locked without ears are divided in three groups of 20 tags. Those three groups will be subjected to increasing forces to determine the force required to cause breakage or unfastening of the ear tag. The forces will be applied at a speed rate of 500 mm/min. The force applied to cause breakage or unfastening of each ear tag will be recorded.

(1) Group 1: axial test at ambient conditions (21 °C ± 5 K)
(2) Group 2: axial test at +80 °C (± 5 K); the forces will be applied immediately after the tags are removed from the heating or climatic chamber
(3) Group 3: transverse test at +80 °C (± 5 K); the forces will be applied immediately after the tags are removed from the heating or climatic chamber.

Requirements: Broken or unfastened tags must not be re-useable. At ambient temperature axially torn tags shall not break or unfasten with the application of a force lower than 250 Newton. For to 80 °C heated ear tags, the equivalent value is 150 Newton. For transversally torn tags the number of tags unlocked without breakage or sustainining permanent damage is recorded.

10.8.5.2.2.2 Ruminal boluses

To assess conformance of the ruminal boluses with the information given in the application form and to also detect any major failure (electronic non-readability, fitting of boluses and applicator, inappropriate design considering welfare requirements etc), the boluses will be submitted to a preliminary assessment.

10.8.5.2.2.2.1 Bolus design

Ruminal boluses shall have cylindrical shape with smooth surface, rounded corners and at least the front part to be hemispheric. Weight and dimensions (length, diameter) will be measured. Measured values and observations on the bolus related to animal welfare will be reported. Additionally will be observed if the boluses can glide easily within the applicator to assure quick and risk-minimized insertion into the animal.

10.8.5.2.2.2.2 Electronic readability check

For every bolus sample in the assessment a test read with an ICAR approved handheld reader is done to ensure that the information read meet the requirements according to chapter 10.8.4.7.

10.8.5.2.2.3 Conclusion of the Preliminary Assessment

The technician or test center will prepare a report of the tests and will submit it electronically to Service-ICAR which will further submit it to the comments of the ICAR Sub-Committee for Animal Identification. All information collected during preliminary assessment will be treated as confidential and only disclosed to the manufacturer of the EID device.

Assuming that the Preliminary assessment is successful, the manufacturer will be asked to confirm their willingness to proceed to the Technical evaluation (laboratory test).
If a device has not performed satisfactorily, ICAR will provide the full test report giving the reasons for the tag`s failure to the manufacturer.

10.8.5.3 LABORATORY TEST - TECHNICAL EVALUATION

10.8.5.3.1 Assigning a Test Centre

Following successful completion of the Preliminary Assessment, Service-ICAR will assign one of the accredited test laboratories to carry out the Laboratory Tests. The preferred choice of the manufacturer may be taken into consideration.

10.8.5.3.2 Manufacturer Requirements

At the commencement of the Laboratory test the manufacturer will deliver:

(c) For electronic ear tags:

- A sample of 200 ear tags programmed with the reference ID codes and the reference printings respectively, applied using the same techniques and style as used (or intended to be used) in the commercially marketed tags. Note: Tags used in this phase are likely to be destroyed during testing.
- One tag applicator or an equivalent device supplied for the application of tags to animals.

(d) For ruminal boluses:

- A sample of 100 boluses programmed with the reference ID codes and, if possible, with the reference printings respectively.

10.8.5.3.3 Granting of a Test Code

A specific test code will be allocated by ICAR for the EID device undergoing testing. The manufacturer will be advised of the test code so that it is printed or engraved on each ear tag and, if possible, bolus produced for the Technical evaluation (Laboratory Test).

10.8.5.3.4 Assessment of DESCRIPTIVE PARAMETERS

The different parameters that describe the EID device will be assessed and compared to the information provided in (1) the Application Form and, if applicable, (2) the report of the Preliminary Assessment to ensure accuracy of description and compliance of the EID devices supplied for the two test phases.

10.8.5.3.4.1 Weight and dimensions

The weight of the complete locked electronic ear tag, ruminal bolus or injectable transponder and the dimensions as described in chapter 10.8.5.2.2.1.1(electronic ear tags) and in chapter 10.8.5.2.2.2.1 (boluses and injectable transponders) respectively will be measured at five randomly chosen test samples.

10.8.5.3.4.2 Print contrast

This test applies to electronic ear tags only.

According to ISO 105-A05 (EN 20105) the print contrast of the printed reference ID codes (represented by the laser block) will be measured by a spectral photometer. The color difference compared to “black” will be given as percentage value as well as the CIELAB coordinates to describe the real color of the ear tag printing.

10.8.5.3.4.3 Composition

This test applies to electronic ear tags only.

Several criteria which define the chemical and physical composition of an ear tag will be evaluated.

As ear tags are attached to ”food producing“ farm animals throughout their lifetime, they must meet special demands dictated by international laws and regulations. In addition, relevant substances affecting animal, human or environmental health need to be detected.

For the analyses a total of about 20 ear tags is necessary.

10.8.5.3.4.3.1 Characteristics of the plastic of the ear tag

To characterize the basic component of the plastic raw material, one ear tag is submitted to Attenuated Total Reflectance-Fourier Transform Infrared (ATR-FTIR) spectroscopy analysis. If the ear tag contains a flag, the ear tag plate is pressed directly against the ATR-crystal. In case of tags without flag the laboratory has to decide in individual cases if sample preparation is necessary. After analysis, the resulting ATR spectrum will be compared with characteristic spectra stored in specific databases.

In the next step, a material sample is submitted to Differential Scanning calorimetry (DSC) analysis according to ISO 11357 to analyze the thermal characteristics of the material. This analysis allows the detection of overlapping IR curves e.g. if an additional component of minor quality is used to stretch the main component. The test is performed in two heat-up phases: (1) 30°C – 200°C to get information about post cross linking of the plastic material to detect processing effects and (2) 30°C – 400°C to analyze the thermal parameters. Melting point and glass transition temperature are given as to be very specific thermal characteristics of the plastic material.

10.8.5.3.4.3.2 Plasticisers

For some plastic recipes plasticisers are used to make the material more flexible.

Twelve phthalate plasticisers, categorized as critical ones, are analyzed:
DIBP, DBP, DMEP, BBP, DOP/DEHP, DNOP, DINP, DIDP, DIHP, DHNUP and additionally octylphenole and iso-nonylphenole. None of the substances can exceed the limit value of 0.1 %.

10.8.5.3.4.3.3 Harmful substances

In plastics, two groups of harmful substances must be analyzed: polynuclear aromatic hydrocarbons (PAH) and heavy metals.

PAH contained in, for example, pigmented plastics or in recycled materials are classified as carcinogenic and are absorbed via skin contact. There are 17 PAH that are classified as ”priority pollutants“ and representatives for these elements must be analyzed by gas chromatography. These are: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b/j]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, dibenzo[a,h]anthracene, indeno[1,2,3-cd]pyrene, benzo[g,h,i]perylene and indeno[1,2,3-cd]pyrene. The sum of all those PAH in the ear tag material must not be higher than 10 mg/kg.

Heavy metals can occur in pigmented plastics. Some of these are critical and must be recorded: Cadmium (Cd), lead (Pb), mercury (Hg) and chromium (Cr). If chromium is detected, an additional analysis of carcinogenic hexavalent chromium will be done. The following limit values must not be exceeded:

Cadmium: 100 mg/kg
Lead: 10 mg/kg
Mercury: 1 mg/kg
Chromium: 10 mg/kg (Chromate (Cr VI): < 1 mg/kg)

10.8.5.3.5 PERFORMANCE assessment

The tests described in this chapter refer to stability and endurance of the EID devices considering lifetime or useful life of the animals the devices are attached to.

The performance assessments are summarized in the following table:

	Electronic ear tags			**Ruminal boluses**	**Injectable transponders**
	new	UV/rain aged	damp heat treated	new	new
Artificial ageing (ISO 4892-2, A)	×				
Free fall (IEC 60068-2-32)	×	×		×	×
Cold (IEC 60068-2-1)	×				
Dry heat (IEC 60068-2-2)	×			×	×
Damp heat (IEC 60068-2-78)	×				
Sinusoidal vibration (IEC 60068-2-6)	×			×	×
Tensile test of the locking system	×	×	×		
Visual readability - Typography - Color contrast	 × ×	 × ×			
Electronic readability (ISO 24631-1, ISO 24631-3)*	×	×	×	×	×

*: readability test is performed after every environmental test

10.8.5.3.5.1 Initial readability test

Every sample of the EID device shall be read before starting any kind of environmental testing. The test is done according to ISO 24631-1 and 24631-3. Identification number (ID code), resonance frequency, minimal activation field strength and all performance parameters are measured and recorded. Those values will be used as the reference for every following read test.

10.8.5.3.5.2 Resistance to artificial ageing

This test applies to electronic ear tags only.

In accordance with EN ISO 4892-2, 40 eartags are tested against resistance to UV light. The exposure chamber shall be fitted with xenon-arc lamps according to EN ISO 4892-2 and operated continuously for 1 000 h at (38 ± 3) °C chamber temperature and at maximum (65 ± 3) °C black panel temperature, giving a cycle of 120 minutes of radiant exposure thereof 102

minutes dryness and 18 minutes of rain simulation. The irradiance level of the xenon lamps shall be 60 W/m² (300 – 400 nm).

After artificial ageing the change in color shall be less than delta E* of 10 CIELAB units when measured in accordance with ISO 105-A05, or a grey scale change of less than 3 when measured in accordance with ISO 105-A02.

A readability test is performed according to ISO 24631-1 and ISO 24631-3 on 20 randomly chosen tags to ensure every tag, as a whole, has survived the procedure with the chip in situ and there shall be no change in the information read. The measured values are compared to those of the initial test.

10.8.5.3.5.3 Resistance to tensile loading

This test applies to electronic ear tags only.

To test the tensile strength of the locking mechanism the ear tag is affixed to a test jig simulating its application and attempts are made to remove the ear tag forcibly by pulling it.

The test jig shall support an ear tag under test, simulating a relevant service application. The class 1 tensile test machine shall operate at a speed rate of (500 ± 25) mm/min and be capable of generating loads of up to 1 000 N.

When tested in accordance with ISO 527-1 until breakage, ear tags shall resist a minimum tensile load of 250 N. Test is done using new ear tags, UV/rain aged tags and tags submitted to damp heat treatment (chapter 10.8.5.3.5.x), in groups of ten samples each.
The tests are carried out at a temperature of (-23 ± 2) °C, (+23 ± 2) °C and of (+45 ± 2) °C and ambient humidity. An increasing load will be applied in axial direction. The maximum load and the effect(s) of the tensile force on the appearance and/or efficacy of the ear tags will be recorded. Retagging must be impossible.

10.8.5.3.5.4 Resistance to free fall

When tested in accordance with IEC 60068-2-32 with a height of fall of 1000 mm onto concrete surface, the EID device shall not split or crack during various attempts:
The transponder containing part of an eartag and the bolus or injectable transponder respectively is leveled in 3 attitudes (horizontally, vertically top and bottom), two drops in each attitude shall be done. The test is carried out on three new samples and, for ear tags, with UV/rain aged samples additionally.

The test shall be carried out at a temperature of (21 ± 3)°C and ambient humidity. For electronic ear tags the test is repeated additionally after 1 hour storage at (-20 ± 2)°C immediately after removing off the climatic chamber.

After the test a readability test is performed according to ISO 24631-1 and ISO 24631-3 on those EID devices to ensure every device has survived the procedure with the chip in situ and there shall be no change in the information read. The measured values are compared to those of the initial test.

10.8.5.3.5.5 Resistance to cold

This test applies to electronic ear tags only.

In accordance with IEC 60068-2-1, 10 new ear tags are exposed to a constant climate of (-25°C ± 2) °C for 24 hours.

Afterward a readability test is performed according to ISO 24631-1 and ISO 24631-3 on those ear tags to ensure every device has survived the procedure with the chip in situ and there shall be no change in the information read. The measured values are compared to those of the initial test.

10.8.5.3.5.6 Resistance to dry heat

In accordance with IEC 60068-2-2, 10 new samples of the EID device are exposed to a constant climate of (+55°C ± 3) °C for 24 hours.

Afterward a readability test is performed according to ISO 24631-1 and ISO 24631-3 on those ear tags to ensure every device has survived the procedure with the chip in situ and there shall be no change in the information read. The measured values are compared to those of the initial test.

10.8.5.3.5.7 Resistance to damp heat

In accordance with IEC 60068-2-78 (also: ISO 4611), 10 new samples of the EID device are exposed to a constant climate of (+40°C / 93 % RH) for 21 days in a climatic chamber.

Afterward a readability test is performed according to ISO 24631-1 and ISO 24631-3 on those ear tags to ensure every device has survived the procedure with the chip in situ and there shall be no change in the information read. The measured values are compared to those of the initial test.

10.8.5.3.5.6 Resistance to vibration

In accordance with IEC 60068-2-6, 10 new samples of the EID device are exposed to sinusoidal vibration with a frequency sweep from f1 = 10 Hz to f2 = 2000 Hz. Vibration amplitude below the cross-over frequency of 60 Hz shall be a constant displacement of 0.75 mm (peak value) and above the cross-over frequency a constant acceleration of 10 g (100 m/s^2). Duration of endurance shall be 10 sweep cycles.

Afterward a readability test is performed according to ISO 24631-1 and ISO 24631-3 on those EID devices to ensure every device has survived the procedure with the chip in situ and there shall be no change in the information read. The measured values are compared to those of the initial test.

10.8.5.3.5.7 Assessment of visual readability

This test applies to electronic ear tags only.

Five new ear tags and five UV/rain aged tags will be selected for the assessment of typography of the (laser) printings.

Five white pages of paper printed with five randomly chosen numbers as given in Annex 10.8.1 will be prepared. Font size, print style and space between the digits will be the same as used for the ear tags.

The test samples and the pages with printed numbers are placed on a vertical surface at head height (viewing surface) in a random order. Appropriate lighting in the laboratory room has to be ensured. Five assessors initially standing at a distance of 12 meters from the viewing surface, commence walking towards it, successively trying to read the numbers on different ear tags and pages. For each assessor, the distance at which each device (tag or page) initially can be read without mistake, will be registered in an evaluation sheet.

The mean reading distances for the pages and for the ear tags will be separately calculated for each assessor and for the average for the assessors.

Requirements to be met are:

- for *new, untreated tags*:
  The mean distance at which the reference printing is read on the ear tags must be at least 80 % of the mean distance at which the pages are read.
- for *aged tags*:
  The mean distance at which the reference printing is read for the ear tags should not be less than 65 % of the mean distance at which the pages are read.

10.8.5.3.6 Conclusion of the laboratory tests

The test centre will prepare a report of the tests and will submit it electronically to Service - ICAR which will further submit it to the comments/approval of the ICAR Sub-Committee for Animal Identification. All information collected during the laboratory tests will be treated as confidential and only disclosed to the manufacturer of that EID device.

When the results are satisfactory, ICAR will send the report and an official letter to the manufacture granting the ICAR full approval to the EID device which passed successfully the test.

Each test report on a successfully tested EID device will include a summary sheet in which the test laboratory makes an evaluation of the best adaptability of the tag for use in different production systems or environmental conditions.

If the results are unsatisfactory, the manufacturer will receive a test report with the reasons of the test failure from ICAR.