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*भारतीय मानक मसौदा*

मुर्गी के चोंच काटने की मशीन – विशिष्टी  
(आई एस 5804 का दूसरा पुनरीक्षण)

*Draft Indian Standard*

**POULTRY BEAK TRIMMING MACHINE — SPECIFICATION**

*(Second Revision of IS 5804)*

**ICS 62.020.30**

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Animal Husbandry and Equipment  
Sectional Committee, FAD 32

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Debeaking is an essential feature for a profitable flock as it prevents losses caused by cannibalism, pickouts, egg eating, feather plucking and feed waste. Debeakers are, therefore, employed to remove upper beak of the bird midway between tip of the beak and nostrils taking care to keep the tongue out. Debeaking is done not by actually cutting the beak off but burning it by heat, and cauterizing and sealing the beak end hygienically, at the same time. Debeakers may also be used for trimming nails of the birds.

This standard covering the details of poultry debeakers was first published in 1974, subsequently, revised in 1987. In this revision, the standard has been brought out in the latest style of Indian Standards and the following major changes have been done:

- a) title of the standard has been changed from “Specification for poultry debeakers” to ‘Poultry beak trimming machine – Specification’ to appropriately reflect its application; and
- b) cauterizing temperature in test for determination of time for attaining cauterizing temperature has been specified.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## 1 SCOPE

This standard specifies the requirements and the methods of test for poultry beak trimming machine.

## 2. REFERENCES

The Indian Standards listed below contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated.

<i>IS No.</i>	<i>Title</i>
IS 277 : 2018	Galvanized steel strips and sheets (Plain And Corrugated) - Specification (Seventh Revision)
IS 513 (Part 1) : 2016	Cold reduced carbon steel sheet and strip: Part 1 cold forming and drawing purpose (Sixth Revision)
IS 1570 (Part 5) : 1985	Schedules for wrought steels: Part 5 stainless and heat - Resisting steels (Second Revision)
IS 6297 (Part 2) : 1973	Specification for transformers and ,inductors (power, audio, pulse and switching) for electronic equipment: Part 2 power transformers

## 3 TERMINOLOGY

For the purpose of this standard, the following definition shall apply:

**3.1 Poultry Beak Trimming Machine** — An equipment designed and constructed for trimming of beaks of poultry by means of an electrically heated blade which would cut cleanly and cauterize the beak at the same time.

**4 Rated Voltage** — The rated voltage shall be 230 V AC, single phase, 50 Hz.

**4.1** Tractor or car batteries may also be used.

**5 Material** — The cutting blade shall be made of stainless steel or ‘alloy steel’. In case of stainless steel, it shall conform to grade X20Cr13 or X30Cr13 of IS 1570 (Part 5). The body of the beak trimming machine shall be made of 0.8 mm steel sheet conforming to IS 513 (Part 1) or 0.63 mm galvanized steel sheets conforming to IS 277. The body may also be mounted out of fiberglass or plastic with top cover of steel sheets.

## 6 Construction

**6.1 Blade** — The wire blade or flat blade with the following dimensions shall be used:

Length, mm	27 to 50
Width, mm, <i>Min.</i>	12
Thickness, mm, <i>Min.</i>	1.6

**6.1 J** The contact area of the blade may be silver tipped.

**6.2 Body** — The body shall be compact and sturdy with sufficient space for air circulation. The dimensions of the beak trimming machine are given below:

<i>Length, mm</i>	<i>Width, mm</i>	<i>Height, mm</i>
300 ± 5	150 ± 5	100 ± 5
300 ± 5	140 ± 5	140 ± 5

**6.3 Rod Chain** — The rod chain shall connect the body at one end and a suitable spring and the wooden or metal foot pedal at the other. The length of the rod chain should be adjustable according to the convenience of the operator.

## **7 Other Requirements**

**7.1** The blade shall attain cauterizing temperature (500 to 675 °C or 950 to 1,250 °F) or the rod hot condition in 5 seconds.

**7.2** A suitable temperature control may be provided to adjust the heat of the blade to suit the age of birds to be debeaked.

**7.3** A transformer with an input of 230 V and output not exceeding 6 V conforming to IS 6297 (Part 2) shall be provided.

**7.4** A flexible power cord, sufficiently long shall be provided to connect the beak trimming machine to the power supply. A power ‘on’/‘off’ switch should be provided.

**7.5** The blade should be capable of cutting at least 3 000 beaks without any carbon deposit on the blade.

**7.6** A bulb may also be provided to facilitate debeaking of the birds during night time.

## **8 Marking and Packing**

**8.1 Marking** — Each beak trimming machine shall be marked legibly and indelibly with the following particulars:

- a) Manufacture’s name or trade-mark,
- b) Rated input in watts, and
- c) Batch or code number.

### **8.2 BIS Certification Marking**

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the Bureau of Indian Standards Act, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

**8.3 Packing** — As agreed to between the purchaser and the supplier.

## 9 Tests

**9.1 Time for Attaining Cauterizing Temperature** — The blade after it is switched on, shall attain its cauterizing temperature of 500 °C to 675 °C (950 °F to 1,250 °F) or the red-hot condition within 5 seconds at an ambient temperature of 27 °C in a draught free condition.

**9.2 Corrosion Resistance Test** — There shall be no red stains or spots on the blade after conducting the test prescribed in **9.2.1**.

**9.2.1 Copper sulphate test** — The blade shall be scrubbed with soap and warm water, rinsed in hot water followed by a dip in 96 percent ethyl alcohol and dried. The sample shall be completely immersed in the copper sulphate solution, at room temperature, allowed to remain for six minutes and then washed off with fresh water. The copper sulphate solution shall be made up as follows:

Copper sulphate	: 4.0 g
Sulphuric acid	: 10.0 g
Water	: 90.0 ml