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भारतीय मानक मसौदा
मांस उत्पादों और मांस जानवरों की शब्दावली
भाग 2 : मुर्गीपालन के अलावा

[आई एस IS 8539 (Part 2)]

Draft Indian Standard

TERMINOLOGY OF MEAT PRODUCTS AND MEAT ANIMALS

PART 2 : OTHER THAN POULTRY

[IS 8539 (Part-2)]

ICS 67.120.20

Slaughter House and Meat Industry
Sectional Committee, FAD 18

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FOREWORD

(Formal clause will be added later)

Various terms relating to meat products and meat animals used in meat trade may, often connote different meaning to different parties and, therefore, may lead to avoidable disputes, Moreover, with the increased international trade in meat products, there is a need to precisely define various terms to facilitate their uniform interpretation.

In order to address the above requirement, this standard has been formulated. This standard has been published in two parts. Part 1 of the above standard covers terminologies of meat products and meat animals for poultry. This Part 2 has been developed in order to cover terminologies of meat products and meat animals other than poultry.

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

1.1 This standard (Part 2) covers definitions of terms relating to meat animals and meat products other than poultry.

2 DEFINITIONS

2.1 Abattoir — A licensed place/ building/ premises where food animals are slaughtered humanely in a hygienic manner with proper ante-mortem and post-mortem inspection by veterinarian for human consumption.

2.2 Ante-Mortem Inspection — Inspection of live food animal within 24 hours prior to slaughter by a qualified veterinarian in the lairage to assess its fitness for slaughter.

2.3 Average Live Weight— The weight of the whole animal, before slaughter.

2.4 Bacon — Cured meat product from the side and spare ribs of a pig.

2.5 Back Fat Thickness — Measurement of the thickness of the subcutaneous fat on a carcass, usually pork carcass, expressed in inches.

2.6 Barrow — A male pig that has been castrated before sexual maturity.

2.7 Beef — The edible portion of bovine animals including cattle and buffaloes.

2.8 Bell Scraper — A bell shaped device used to remove the hair from a hog carcass.

2.9 Blast Freezing — The most commonly used commercial method for freezing meat products, in which air is cooled to between -10°C to -40°C, and then increased to an air velocity of 760 mph by blowers which cause the product to be frozen at a rapid rate. The meat products must be wrapped to protect them from freezer burn.

2.10 Blood Splashing — The appearance of minute hemorrhages in the muscle, fat and connective tissue due to rupture of minute capillaries owing to a transient rise in blood pressure during electrical stunning, not relieved quickly enough by slaughter.

2.11 Bloom — The colour and general appearance of a carcass surface when viewed through the semi-transparent layers of connective tissue, muscle and fat which form the carcass surface. The carcass surface appears purplish red immediately after dressing. Once exposed to oxygen, it changes to bright cherry red after about 30 minutes and can retain that colour for up to three days depending on storage conditions.

2.12 Boning — Process of removing meat from the bones of a carcass, the meat of which is then termed “boned-out”. This process is conventionally carried out after the carcass has set

(completion of rigor mortis) and chilled. Boning can also be carried out prior to rigor and is then termed hot boning.

2.13 Bovine — Bovine refers to cattle or buffalo.

2.14 Boar — An entire adult male pig.

2.15 Break Joint — Used in lamb grading to aid in estimating skeletal maturity. There is a thin layer of soft cartilage between the metacarpal and the spool joint, making it easy to break the spool joint from the metacarpal; hence, the rough edge of the metacarpal is referred to as the "break joint." As sheep advance in maturity, the thin layer of soft cartilage undergoes ossification and becomes bone, fusing the spool joint and the end of the metacarpal together, making it impossible to break the spool joint from the foreshank of the carcass.

2.16 Brisket — Cut that includes the anterior end of the sternum bones, the deep pectoral muscle, and the supraspinatus muscle. Commonly sold as either boneless flat cut or boneless point cut.

2.17 Buck — A male goat more than one-year-old.

2.18 Bull — An entire male bovine.

2.19 Calf — A young bovine from birth to weaning (six–nine months old).

2.20 Canned Meat Product — The meat products packed in hermetically sealed containers or pouches which have been thermally processed at specified temperature, pressure and time combination followed by rapid cooling to render the product shelf stable.

2.21 Captive Bolt Pistol — An instrument used to stun food animals immediately prior to slaughter. A pistol provided with a blank cartridge which propels a bolt that is driven into the animal's brain (penetrative type) or merely creates an impact on the skull (non-penetrative type) and thereby renders an animal unconscious. The cartridge as well as the bolt is held within the barrel of the pistol in both penetrative and non - penetrative type.

2.22 Carcass — The body of any slaughtered food animal after bleeding and dressing.

2.23 Casing — Also known as sausage casing, is the material that encloses the filling of a sausage. Natural casings are made from animal intestines or skin; artificial casings are made of collagen and cellulose.

2.24 Chevon — The edible portion of domestic goats.

2.25 Chitterlings — The small intestines of the hog.

2.26 Chop — A cut of meat including parts of the rib.

2.27 Chuck — The wholesale cut of beef which includes the first five ribs of the forequarter excluding the brisket and shank.

2.28 Cold Shortening — A condition caused when muscles are exposed to cold temperatures (15° °C to 20°C below normal) while the muscle is in the pre-rigor state, causing the muscle to shorten and the meat produced thereof is tough.

2.29 Cold Slaughter — Slaughtering of dead animals.

2.30 Commercial Sterility — It is a condition achieved by application of heat which renders the product free of viable forms of microorganisms having public health significance as well as other microorganisms of non-health significance capable of reproducing in the food under normal non-refrigerated conditions of storage and distribution.

2.31 Comminution — A process by which particle size is reduced for incorporation of meat raw materials into finished products.

2.32 Condemned — Carcass marked as unsound, unhealthy and unfit for human consumption.

2.33 Continuous Powered System — The system that involves the mechanical moving of the carcasses suspended on a spreader (gambrel) and trolley along a rail continuously. Sophisticated equipment is associated with this slaughter line, for example, mechanical hide puller and moving top inspection table. The carcasses can be revolved a full 360° while on the rail, allowing the operator to work all sides from one position.

2.34 Cull — Breeding animals of any species slaughtered at the end of their productive lives. The term most commonly refers to dairy cattle or suckler cows, sows and ewes.

2.35 Cured Meat Product — Meat product prepared after curing meat with common salt, nitrate or nitrite and adjuncts for the purpose of preservation and obtaining desirable colour, flavour and shelf life.

2.36 Curing — The process of addition of salt, sugar, nitrite and/or nitrate in a certain proportion for the purposes of preservation of meat and adding flavor and color to meat.

2.37 Cut — General term used for a piece, segment, or section of a carcass produced by butchering.

2.38 Dark Cutter (s) — Carcasses which have muscle tissue that is dark coloured rather than the desirable cherry red. It is usually the result of the depletions in muscle glycogen stores.

2.39 Dehairing Machine — A machine with rotating rubber paddles that removes the hair from a scalded hog carcass.

2.40 Depilation — The process of removing hair from a hog carcass during slaughter.

2.41 Dew Claw Remover — A hook shaped device that is used to remove the dew claws from a hog during dressing of a carcass.

2.42 Doe — A female goat more than one-year-old at the time of slaughter.

2.43 Dressing Percent — The weight of carcass expressed as a percentage of the live weight. Also referred to as carcass yield.

2.44 Dressed Weight — The weight of a chilled animal carcass. Beef with kidney knob in; veal with hide off; lamb and mutton with pluck out; pork with leaf fat and kidneys out, jowls on and head off.

2.45 Dried or Dehydrated Meat Products — Meat products in which part of free water has been removed by evaporation or sublimation. Meat products preserved by dehydration are conveniently divided into two groups based on water activity (a_w) levels; low-moisture and intermediate-moisture meat products :

- a) Low-moisture meat products— Meat products having an a_w of less than 0.60 and containing less than 25% moisture.
- b) Intermediate-moisture foods— Meat products having an a_w between 0.60 and 0.85 and containing less than 50% moisture.

2.46 Electrical Stunner — A device that delivers an electrical current to a food animal so as to render it unconscious at the time of slaughter.

2.47 Electrical Stimulation — A process in which high voltage electric current is passed through a pre-rigor carcass, that causes the muscle to contract, and is used to obviate cold shortening.

2.48 Emulsion Meat Products — Meat products made by chopping meat and water with the addition of common salt (NaCl) until a fine, protein-rich slurry is formed. This matrix is then capable of binding fat, water and other non-meat ingredients. After cooking, the salt soluble proteins are coagulated and this results in an immobilization of the fat, water and other constituents.

2.49 Exsanguination — The technique used to drain blood from an animal by which slaughter is effected. Also known as sticking or bleeding.

2.50 Evisceration — Removal of the internal organs from the animal during dressing of a carcass.

2.51 Ewe — A female sheep more than one-year-old.

2.52 Fabrication — Process of cutting carcass into standard wholesale and retail cuts.

2.53 Fasting — Withholding feed from the animal prior to slaughtering (water is provided at *ad libitum* basis)

2.54 Feathering — Fine streaks of fat in muscles between ribs/intercostal muscle. Is another estimate of the intramuscular fat deposition, i.e. marbling.

2.55 Fermented Meat Product — The meat product produced by action of starter culture (selected fermenting microorganisms such as lactic acid bacteria or yeast, or both) in the presence of salt by the process of fermentation, ripening and drying. It may contain non-meat ingredients such as sugar, spices, seasonings and condiments.

2.56 Fillet — Boneless beef/pork tenderloin.

2.57 Finish — The amount of subcutaneous fat on an animal.

2.58 Flaying — Act of removal of hide.

2.59 Flank Streaking — The streaks of fat appearing in the primary flank muscle and secondary flank muscle. Used in lamb carcass grading.

2.60 Freeze Drying — The process of freezing meat and then lowering the atmospheric pressure so that the water is removed by sublimation.

2.61 Freezer Burn — Greyish-brown leathery spots on frozen food that occurs when air reaches the food's surface and causes surface drying.

2.62 Gambrel — A stainless-steel rod suitably fabricated into an inverted V shape, where the ends of the arms are turned upward (about 180°) to form a structure similar to a hook, to spread the carcass. The rod at its apex (base of the V) is curved to form a circle of 5cm diameter, to which is harnessed a chain. The gambrel is harnessed by means of the circular structure to a hog trolley. The two arms of the rod are joined together by means of another steel rod.

2.63 Grading — The process of segregating units of any commodity into lots or groupings that has a relatively high degree of uniformity in certain specified attributes which are associated with market preferences and valuation. Grading may include quality grading and yield grading. The quality grade of beef carcasses is based on separate evaluations of two general considerations:

- a) the Quality or the palatability indicating characteristics of the lean and
- b) the conformation of the carcass.

Yield grades are determined primarily by objective measurements.

2.64 Giblets — Heart, liver and gizzard.

2.65 Gilt — A young female pig that has not yet had piglets

2.66 Hanging Tender — The portion of the diaphragm muscle that is attached to the back region of the last rib.

2.67 Heifer — A female bovine that has not had a calf.

2.68 Hide Puller — A device used to remove the hide by attaching a chain to the hide and pulling it either up or down away from the carcass.

2.69 Hogget — A young sheep before it reaches sexual maturity, aged between nine months and one year.

2.70 Intermittent Powered Rail — The mechanical moving of the carcasses suspended on a spreader (gambrel) and trolley along a level rail at intervals by means of a variable timing device which can be pre-set to suit the slaughter rate.

2.71 Jowl — A wholesale cut of the pork carcass which includes the cheek muscle and fat skin surrounding it.

2.72 Kidney Heart and Pelvic Fat (KHP) — The internal fat surrounding the heart and kidneys and in the pelvic area.

2.73 Kid — A young male or female goat.

2.74 Lairage — The section of an abattoir where animals are held and accorded rest prior to slaughter and ante-mortem inspection is carried out.

2.75 Lamb — A young sheep less than one year old.

2.76 Lard — Rendered fat from a hog.

2.77 Leaf fat — The abdominal and kidney fat in a carcass that is removed during dressing. It is the fat that lines the belly cavity between the ribs and the viscera.

2.78 Loin — A wholesale cut of a beef, pork or lamb carcass. Generally, loin is the most valuable cut of the carcass.

2.79 Marbling — Intramuscular fat of the rib-eye; used in determining yield grade.

2.80 Marinade — A mixture of non-meat ingredients such as salt, phosphates, acids, tenderizers, sugar, seasoning and flavoring agents, in the form of liquid solution or powder that is applied to uncooked meat for marination.

2.81 Marinated Meat — Meat mixed with the marinade for suitable time period based on the method of marination in order to improve colour, flavour, yield, tenderness and other functional properties of meat.

2.82 Marination — The process of applying an aqueous solution or powder composed of ingredients such as salt, phosphates, acids, tenderisers, sugar, seasoning and flavourings to meat product.

2.83 Maturity — A measure of the age of the animal.

2.84 Meat Inspection — Inspection of meat by qualified individuals to eliminate unwholesome, adulterated, or mislabeled meat or meat products from the food supply to protect consumers from the physical, biological, and chemical hazards that may originate in food animals, the environment, or people. Animals are inspected before and after death.

2.85 Meat Products — Any product prepared from meat and other ingredients through various processing methods in which meat should be the major ingredient of all the essential ingredients but shall not include the following products:

- a) Meat extracts, soup, stock and meat sauces;
- b) Products containing fragments of meat, but which contain a quantity of meat or meat product not exceeding ten percent of the total weight of the final product.

2.86 Melts — Industry terminology for spleens.

2.87 Moving Top Evisceration Table — A machine that consists of a conveyor belt that has trays attached which is moving at the same rate as the carcass is on the rail.

2.88 Mutton — The edible portion of domestic sheep.

2.89 Ovine — Refers to sheep.

2.90 Pastern Joint — The joint which is severed to remove the hind hoof of a lamb during slaughter.

2.91 Patella — Knee Cap. The small bone that covers the joint of the femur and tibia and fibula.

2.92 Paunch — The abdominal contents of cattle that are removed during evisceration.

2.93 Peeler — A machine that is used to removed the edible cellulose casing from sausages.

2.94 Pelt — The skin of a lamb that is removed during pelting.

2.95 Percent Cutability — The percentage of the lean boneless cuts that are in a carcass.

2.96 Piglet — A baby or young pig before it is weaned.

2.97 Pizzle eye — The small piece of connective tissue that form the attachment of the penis to the body at the posterior portion of the aitch bone.

2.98 Plate — A wholesale cut of the beef carcass that include ribs 6 through 12. The retail cuts of the short rib and skirt originate from this wholesale cut.

2.99 Pluck — The organs of the thoracic cavity which include the heart, lungs and trachea.

2.100 Pneumatic Clippers — Clippers that are powered by air pressure used to cut or remove the front or fore hoof of the carcasses during slaughter.

2.101 Pork — The edible portion of domestic pigs.

2.102 Porterhouse — Choice cut of beef from between the prime ribs and the sirloin.

2.103 Post-Mortem-Inspection — The systematic examination of dressed carcasses, their organs including blood in a hygienic manner immediately after slaughter in the presence of adequate amount of light by a meat inspector with the object of providing wholesome meat to the consumers.

2.104 Primals — The basic major cuts of meat into which carcasses or sides are separated.

2.105 Pullet — A young female in her first laying season, or prior to her first lay.

2.106 Ram — Entire male sheep that is more than one year old

2.107 Reactor — Animal that shows evidence of disease in response to a specific test application.

2.108 Rib Eye Area (REA) — Size or area of a cross section of the longissimus muscle at the 12th rib cross section in beef and lamb carcasses.

2.109 Rib Fingers — The intercostal muscles.

2.110 Restructured Meat Products — Meat products that have been ground, flaked, or chopped and formed into steak or chop or any other shape with a texture that is closer to that of an intact steak than that of ground meat.

2.111 Rigor Mortis — The irreversible contraction of muscle post-mortem due to formation of permanent actomyosin bridges. It is usually associated with stiffening of joints.

2.112 Round — A primal cut of beef steak from the rear leg of a cow, which is divided into multiple cuts.

2.113 Seam Fats — Fat deposited between muscle bundles (in the "seams" between the bundles).

2.114 Shroud — A cloth that has been soaked in chlorinated water and is wrapped around a carcass to smooth the fat, remove the blood and reduce cooler shrink.

2.115 Shell Loin — The bone-in strip loin in beef.

2.116 Side — One half of a split carcass.

2.117 Siding — Removal of the hide from the sides of a beef animal.

2.118 Silver skin — A heavy membrane separating muscle groups

2.119 Singeing — The process of removing butts of hair on a hog carcass remaining after depilation, by burning it off.

2.120 Smoked Meat Product — The meat product is prepared by exposing the cured or cooked meat to smoke produced by hard wood for flavor and preservation. Alternatively, liquid smoke (oil-based, water soluble or dry powder) shall be applied to meat through dipping or drenching, atomizing (spraying) or directly mixing with meat formulation.

2.121 Sow — An adult female pig.

2.122 Splitting Platform — A platform in which the splitting saw operator stands and moves in concert with the carcass so that the splitting can be performed without slowing the movement of the carcass through the slaughter procedure.

2.123 Spool Joint — On the end of the metacarpal, is a joint that resembles the appearance of a spool of thread known as spool joint. As sheep advance in maturity, the thin layer of soft cartilage between the break joint and spool joint undergoes ossification and becomes bone. The ossification process fuses the spool joint and the end of the metacarpal together, making it impossible to break the spool joint from the fore-shank of the carcass.

2.124 Stag — A male pig that has been castrated after sexual maturity.

2.125 Starter Culture — The culture of microorganisms which are used for initiating fermentation in meat product.

2.126 Steer — A castrated male bovine more than one year old.

2.127 Strap (Ligamentum Nuchae) — The thick, elastic band of ligament embedded between the muscle bundles of the dorsal surface of the neck (also called ‘back strap’).

2.128 Stunning — The process by which animals are rendered either unconscious or insensible to pain immediately prior to slaughter by mechanical instruments, gases or electricity.

2.129 Tallow — The rendered fat from a beef carcass.

2.130 T-Bone — Cut of beef that includes the short loin and a ‘T-shaped’ bone with meat on each side.

2.131 Tender Stretch — A procedure of suspending an animal by the aitch bone so that the muscles of the loin and the rib area are physically restrained from contraction and is carried out to obviate cold shortening.

2.132 Tripe — Rumen, reticulum and omasum of compound stomach animals.

2.133 Trotter — The lower hind shank in lamb. That portion normally removed at the break joint.

2.134 Variety Meats — A term usually used to describe offal items such as heart, liver, tongue, brain, sweetbread, etc.

2.135 Vertical Suspension Dressing — The slaughter system in which the animal is suspended by its hind limbs throughout the slaughter process.

2.136 Weaner — A lamb that has been recently weaned from its mother.

2.137 Wether — A castrated male sheep.