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**Chilled and frozen mutton and goat  
meat — Specification**

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**ICS: 67.120.10**

**Descriptors:** agricultural products, food products, mutton, Goat, meat definition, types, classes, grade, requirements, packing, labeling.

## **Foreword**

This Ethiopian standard has been prepared under the direction of the Agriculture and food Technology Technical Committee and published by the Quality and Standards Authority of Ethiopia (QSAE)

In the preparation of this Ethiopian standard references have been made to the following:

- Indian Standard 2536:1963 specification for mutton and goat flesh -Fresh, chilled and frozen.
- Codex Alimentarius vol.C Recommended international code of Hygienic practice for fresh meat.

Acknowledgement has been made for the use of information from the above publications.

# Chilled and frozen mutton and goat meat — specification.

## 1 Scope

This Ethiopian standard specifies the requirements, classes and grade for chilled and frozen Mutton and Goat meat

## 2 Normative reference

The following Ethiopian standard contains provisions, which through reference to this text constitute provisions of this Ethiopian standard. At the time of publication the editions indicated were valid. All standards are subject to revision, and possibility of applying the most recent editions of the Ethiopian standard indicated below. Registers of currently valid standards are maintained in the Quality and Standards Authority of Ethiopia.

ES 359:2001, *General standard for the labeling of pre-packaged food.*

ES 1116:2005, Code of practice for ante-mortem and post mortem judgment of slaughter animals and meat

ES 577:2001, Recommended of practice -General principles of food hygiene

## 3 Definitions

For the purpose of this Ethiopian standard the following definitions shall apply.

**3.1**  
mutton or Goat meat  
shall mean the whole or any part of or cut of male and female carcasses of sound mutton or goat animal fit for human food.

**3.2**  
**Carcase**  
shall mean the body of any slaughtered animal after bleeding and dressing.

**3.3**  
**Fresh meat**  
shall mean meat which has not been subjected to any treatment to change its properties or increase its liability for preservation and its temperature is equal to room temperature.

**3.4**  
**Chilled**  
meat shall mean fresh meat, which has been cooled immediately after slaughtering to a temperature of 0 to 3.5. The temperature of the deepest part of the flesh near the bone shall not be more than 3.5°C. 3,5

### 3.5

#### **Frozen meat-**

shall mean fresh meat, which has been primarily cooled at a temperature of 10°C for 10 to 12 hours then frozen to a temperature ranging from minus 18°C to minus 40°C and stored at a temperature not more than minus 10°C.

### 3.6

#### **Veterinary inspector**

shall mean A veterinarian, appointed by the Public authorities to inspect animal and carcasses, ensuring their fitness for human consumption as well as to supervise slaughter houses and meat hygiene.

### 3.7

#### **Conformation**

shall mean the general build, form, shape, contour or out line of the carcass. the most desirable conformation is the one which will yield the greatest quantity of edible meat.

### 3.8

#### **Finish**

shall mean the quality, amount, colour and distribution of fat. Indications are that fat, with in certain limits increases palatability including juiciness, tenderness flavour of the meat and attractiveness of the carcass.

### 3.9

#### **Quality**

shall mean the characteristics of the flesh and the fat included therein. It pertains primarily to the thickness, firmness and strength in fibre and connective tissue. It also involves the quantity, consistency and character of juices and extractives, which are contained in the muscle fibre and the fat surrounding the connective tissue.

## 4 Types

### 4.1 Mutton and Goat meat shall be of the following types

Type A - chilled carcass

Type B - Frozen carcass

## 5 Classes and Grade

### 5.1 The material shall be classified under three main classes based largely upon age as given below.

**5.1.1** Lamb meat is a general term, which refers to the flesh of young ovine animals of both sexes whose age is 12 months or under. Lamb carcasses are distinguished from mutton carcasses by their smaller and softer bones, lighter colored flesh, softer and whiter external and internal fats, smaller size of carcasses and by the break joint of forelegs. The internal and external fats of are softer whiter and lighter colored flesh. Their outer covering of fat is smooth, relatively thin, and evenly distributed and has a creamy or slightly pinkish color. Lamb fat lack brittleness and possess in a greater or lesser degree the softness and sheen characteristics of milk fat. Lambs ranging in age from three to five months yield uniformly tender and lighter-colored meat, which is called milk lamb.

**5.1.2** Yearling mutton: Yearling mutton carcasses are from young sheep usually ranging from 12 to about 20 months old. Such carcasses are distinguished from lamb carcasses by harder and whiter bonny darker and coarser flesh, firmer and thicker exterior fat and more liberal quantities of interior fat. They have wider and larger abdominal cavity and longer body and legs. The break joint of the fore leg usually beaks in ridges similar in shape to a lamb joint, but the surface is rough porous dry and lacks redness. If the leg fails to break at this point, the carcass is a mature mutton.

**5.1.3** Mature mutton is the flesh from both male (castrated and uncastrated), and females of the ovine species that are over 20 months in age at the time of slaughter. In mature mutton, the sides show a distended or barrel - like

appearance. The beak joint fails to break due to hardening and ossification of the bones and the separation of the foot from the foreleg, is there fore made at the ankle joint. The color of mature mutton range from light to dark red.

**5.2 Grades** - Each of the three classes given in 5.1 is again divided into the following six grades as determined by the conformation, finish and quality of the individual carcasses.

**5.2.1 Prime grade** - Prime grade ovine carcasses are practically ideal in conformation, finish and quality. The general outlines of carcasses of this grade are specially attractive being symmetrical to a marked degree owing to an abundance of highest grade palatable flesh. They are compact and blocky have short, thick and plump legs: broad backs, thick, well - proportioned breasts and full thick flanks. All fats are firm and of excellent quality. The outer covering of fat is smooth, of moderate depth, and evenly distributed over the back and sides. Interior fats are plentiful but not excessive. The lean flesh in all parts, of the carcass, is firm and smooth.

**5.2.2 Choice** - Choice grade carcasses have excellent conformation, finish and quality but are usually slightly deficient in one or more respects as compared with prime grade carcasses. The legs in this grade are short and thick. The back, rib, loin, chuck, flank and breast are well fleshed. The outer covering of fat is smooth and well distributed over the back and sides. All fats are of good quality, and the flesh is moderately fine-grained, firm and of proper color.

**5.2.3 Good** - Good grade carcasses have good conformation, finish and quality but are deficient in one or more respects as compared with choice grade. Carcasses are well - proportioned and reasonably plump, but may be slightly deficient in breadth or depth across the backs, hips or shoulders. The carcass is characterized to some extent by the long body. The outer covering of fat layer is smooth and even over the back and hips and to little at the flanks and shanks. The interior fat is plentiful but not evenly distributed. All fats are of good quality, the carcass flesh is moderately firm and fine - grained.

**5.2.4 Commercial**: a carcass of this grade have fair conformation finish and quality. The carcass conformation is rangy and the neck shanks and hips are to some extent thin and long. Also the legs are thin and long lacking plumpness of the better grade. Ribs and loin are rather lacking in flesh. The fat layer in carcasses of this grade is thin and not well distributed. The flesh is less compact and moderately fine grade.

**5.2.5 Utility grade** - A carcasses of this grade are poor in conformation, appearance, and quality. The percentage of bone to flesh is 17 to 19 and the fat content is very low. The flesh is generally coarse, has big -non smooth fibers and is dark red in color.

**5.2.6 Cull** - Cull grade carcasses are of the lowest grade fit for human consumption. Such carcasses are usually from poorly developed or old animals, with all bones markedly prominent and with total deficiency of exterior and interior fats. The flesh is dark, coarse, soft and watery. The appearance is unattractive..

## 6 Requirements

**6.1** Fresh, chilled, and frozen meat of mutton and goat shall be the products of the slaughtering of Sound animals free from contagious disease. The animal shall be subjected to ante-mortem and post mortem examination as prescribed in ES 1116. By the veterinary inspector to ensure that it is fit for human consumption.

**6.2** The slaughter shall be supervised by a competent authority.

**6.3** Mutton and Goat meat shall be prepared, handled chilled or frozen and delivered under hygienic conditions and under proper cover.

**6.4** Mutton or goat meat shall be free from bruises and discoloration and shall have a bright appearance and shall have been neatly dressed, washed & trimmed.

**6.5** The carcasses fit for human consumption shall be branded with appropriate stamps by an authorized person in the abattoir. The stamp ink shall be suitable and harmless to human health.

**6.6** Fresh, carcass shall be chilled so that the temperature at the deepest portion of the flesh near the bone shall be 1°C or lower and shall show no evidence of deterioration.

**6.7** The mutton and goat carcasses shall be frozen, solid when delivered and they shall show no evidence of deterioration..

**6.8** Fresh mutton and goat meat may be aged for a period of 2 to 4 weeks at a temperature between 1°C and 3°C..

**6.9** Fresh mutton and goat carcasses shall be brought to temperature of about 1°C with in 24 hours. The chilled material shall be consumed within 4 weeks under normal condition.

**6.10** Mutton and goat carcasses shall be pre-chilled before freezing and the freezing shall be completed at minus 12 or lower with in 3 days. .

**6.11** Frozen carcasses shall be stored at minus 10°C or lower. The frozen material shall be consumed with in 9 months under normal conditions of storage. .

## **7 Packing and labeling**

**7.1** Packing and Transport. The fresh and chilled material shall be wrapped and delivered in clean and hygienic condition. As prescribed in ES 577:2001 Code of general food hygiene.

**7.1.1** The frozen material shall be moved in refrigerated transport and the packages shall be handled under hygienic conditions. The packages shall not be exposed to direct sun or rain.

### **7.2 Labeling**

**7.2.1** Labeling shall be done in accordance with ES 359:2001 pre packaged foods and the container shall be labeled to give the following information.

- i. Type, class and grade of the material
- ii. Name of the manufacturer
- iii. Batch or code number
- iv. Number of pieces
- v. Net weight and gross weight
- vi. Date of packing
- vii. Date of freezing in the case of the frozen material.
- viii. Expiry date
- ix. When required for religious reasons, the method of slaughter shall be identified and approved by an authorized religious body concerned.