

# Adulteration of meat

---

Fahim Shaltout

[Type the author name]

# Adulteration of meat:

Through selling of frozen thawed meat as chilled (fresh) meat

so we can differentiate between chilled fresh and thawed frozen meat

through:

1- Naked eye = Physical examination

2- Chemical tests:

A- Photometric test

B-colour test

1- Naked eye = Physical examination:

N.B:

The colour of meat due to presence of Myoglobin pigment in muscle.

Myoglobin is a water-soluble protein. It consists of a protein portion

(globin) and a non protein (porphyrin ring = heme portion) with a

central iron atom.

Factor affecting colour of meat:

1- Species of animal:

As in table below

2-Muscle location and function:

- o Leg muscle contains (1.7-2.0 mg/g wet tissue) myoglobin.

- o Heart muscle contains (2.9 mg/g wet tissue) myoglobin.

- o Gizzard muscle contains (19.5-26.5 mg/g wet tissue)

Older aged animal contain more amount of myoglobin than young

animal as:

Mature Beef contain 16-20 mg/g wet tissue myoglobin but veal

contains 1-3 mg/g wet tissue myoglobin.

4- Nutrition

5- Exercise

Effect of species on the myoglobin content of meat:

Species	Colour	Myoglobin
mg/g wet	Pork	Grayish
pink	1-3	Beef
Bright	cherry red	4-10
Lamb	Brick red	4-8
Poultry	Light red	1-2
Tuna	White	0.5-1