



5.5

5.8

6.0

6.3

6.5

6.9

7.0

Meat pH

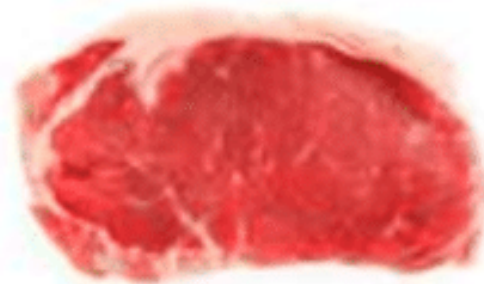


Animal flesh pH 7.1

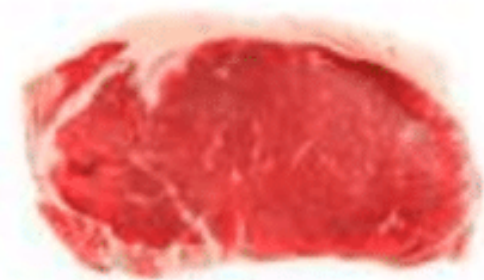


slaughtered

pH 5.4 - 5.7



Spoiled meat
pH 6.5 and above



Fresh meat
pH 5.8 - 6.2



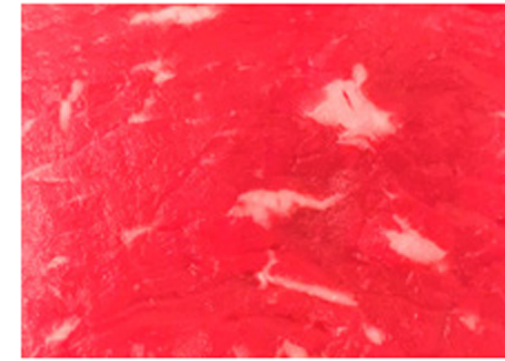
Normal-pH
Immediately after
cutting



Normal-pH
1 h (4 °C)



Normal-pH
1 h (1 °C)



Dark-cutter
Immediately after
cutting



Dark-cutter
1 h (4 °C)



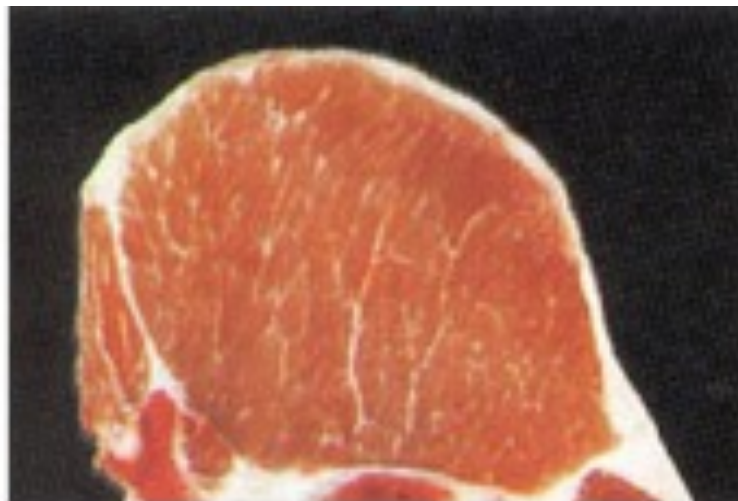
Dark-cutter
1 h (1 °C)





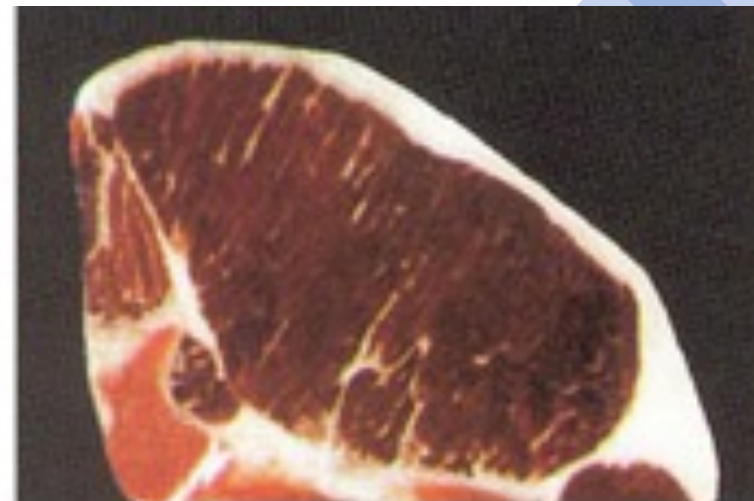
PSE

A rapid drop in meat pH while meat temperature is still high usually causing a breakdown of muscle protein and the meat becoming very pale with pronounced acidity (pH values of 5.4–5.6 immediately after slaughter) and poor flavor. This type of meat is difficult to use or cannot be used at all by butchers or meat processors and is



Normal

Muscle glycogen is not depleted prior to slaughter and a slow drop in pH occurs postmortem as glycogen is metabolized into lactic acid. The pH eventually drops 6.0–6.2 (depending upon the meat species) which is the optimal range for water binding.



DFD

The muscle glycogen has been used up during the preslaughter period, thus after slaughter, there is little lactic acid production, which results in DFD meat. This meat is of inferior quality as the less pronounced taste and the dark colour is less acceptable to the consumer and has a shorter shelf life due to the abnormally high pH-value of the meat (6.4–6.8).

Normal meat	PSE meat	DFD meat
		

