The quality of a new sheep meat product. Effect of salting and ageing process

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Introduction

- **Meat from heavier animals, particularly culling ewes is very depreciated and worthless.**
- **Meat more suitable to process as drying, curing with salts or smoking products.**
- **The objective was to study a strategy which gives value-added to meat from culled ewes, with a very low commercial price, and to create a new sheep meat product.**

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Materials and methods

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Materials and methods

- Fresh m… (in *L. dorsi m.*) characteristics as:
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Materials and methods

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  - – vacuum packaging.

Materials and methods

- The effects of ageing, salting and drying on physical characteristics of meat were assessed *in subscapularis* and *semimembranosus ms*.:

  - color; and
  - water activity (a_W)

Statistical analysis

- The experimental design was completely random.
- Parameters such as pH, water-holding capacity, texture, pigments, water activity and color, in fresh meat, during salting and air-drying, were analyzed. The effect of ageing was studied.
- Fresh meat pH, color, and aw as well as pigment determination, water-holding capacity and texture, and color and aw during salting and air-drying data were submitted to an analysis of variance, with ageing as only treatment with two levels (72 e 120 h).
- One-way ANOVA procedure from SPSS software for Windows, version 17.0, was used.

Results and discussion

Table 1: Means ± standard deviation of fresh meat color and physical parameters. Effect of ageing.

Color parameters	Effect of ageing		Significance
	Ageing 1	Ageing 2	
L*	$35.32\pm0.63_a$	$31.07\pm0.43_b$ SR6	***
a*	$17.00\pm055_a$	$14.67\pm0.30_b$	***
b*	$10.50\pm0.27_a$	$6.55\pm0.31_b$	***
H*	$31.82\pm0.55_a$	$23.82\pm0.67_b$	***
C*	$180.52\pm1.05_a$	$98.05\pm6.67_b$	***
Physical parameters			
pH	5.56±0.28	5.69±0.05	NS
a_w	0.90±0.01	0.96±0.00	NS
WHC	26.80±1.36	32.56±1.91	NS
DO*	4.77±0.39	4.89±0.45	NS
SF (kgf/cm^2)	$8.97\pm0.28_a$	$6.20\pm0.24_b$	***

Means in the same column with different superscripts differ significantly: * P<0.05; ** P<0.01; *** P<0.001 NS – not significant

Diapositiva 8

SR6 Eu reduziria a informação dos quadros, tirando os desvios padrão e os a's e b's. na minha opinião não terão muita importancia para a apresentação.

Sandra Rodrigues; 19/07/2010

Results and discussion

Table 2:. Means ± standard deviation of meat color parameters. Effects of salting and air-drying

Parameters	Effect of salting		Significance
	Ageing 1	Ageing 2	
L*	34.22	33.394_{b}	***
a*	9.76	9.79	NS
b*	7.51	6.54	***
H*	42.41	38.62	***
C*	81.41	70.90	***
	Effect of air-drying		
L*	29.32	30.11	***
a*	4.68	3.91	***
b*	6.43	5.50	***
H*	52.99	54.28	*
C*	32.63	22.77	***

Means in the same column with different superscripts differ significantly: * P<0.05; ** P<0.01; *** P<0.001; NS – not significant.

Results and discussion

Table 3: Means ± standard deviation of activity of water (a_w). Effects of salting and air-drying, according ageing

a_w	Ageing 1	Ageing 2	Significance
Fresh meat	0.901	0.96	NS
Salting	0.86	0.87	***
Air-drying	0.76	0.79	***

Means in the same column with different superscripts differ significantly: * P<0.05; ** P<0.01; *** P<0.001; NS – not significant.

Conclusions

- Ageing, salting and air-drying affect the color parameters making the meat darker and reducing the water activity which was SR4 extremely important for final product preservation.
- The ageing process is important in terms of meat texture, since it makes the meat more tender as result of a shear force reduction.

Diapositiva 11

SR4 is

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