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EVALUATION OF THE QUALITY OF THE BUFFALO MILK PRODUCED IN SOUTH-WESTERN ROMANIA

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Introduction

The paper makes and evaluation of the buffalo milk produced in south-western Romania by determining milk:

- ***protein,***
- ***fat,***
- ***lactose***
- *fatty acids profile: monounsaturated acids ; polyunsaturated acids ; saturated acids*

Material and Methods

The origin of the milk samples –
two groups of buffaloes:
- south region – DOLJ county (19 samples);
- western region – OLT county (15 samples);

➢There were determined:
- the protein level - by Kjeldahl method;
- the fat level – the organic solvent extraction method;
- the lactose level – iodometric method;
- the fatty acid profile: mono-unsaturated, polyunsaturated and saturated of fat – gazcromatografic method;

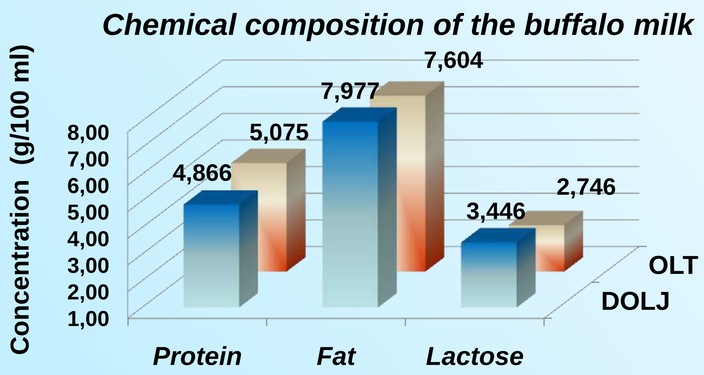
➢Analitic methods used – in accordance with Romanian standards (STAS), and intrernational standards (ISO, AOAC);

➢The statistic processing of the results - Microsoft Excel and Origin 6.1 programs.

Results and discussion

Nutritional Values of Different Fresh Milk-Types
U.S. Department of Agriculture (per 100ml)

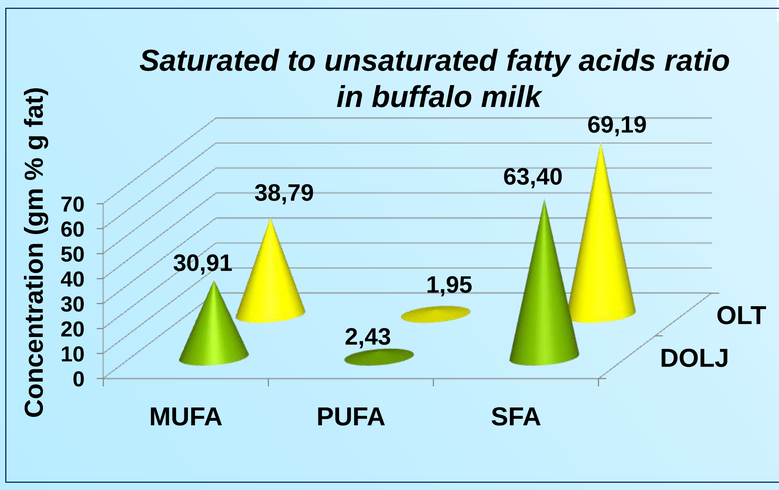
NUTRIENT	*UM*	*COW*	*GOAT*	*BUFFALO*	*SHEEP*
Water	gm	87.99	87.03	83.39	80
Protein	gm	3.29	3.56	3.75	5.98
Ash	gm	0.72	0.82	0.79	0.96
Carbohydrates	gm	4.66	4.45	5.18	5.36
Energy	kcal	61	69	97	108
Monounsaturated (MUFA)	gm	0.965	1.109	1.787	1.724
Polyunsaturated (PUFA)	gm	0.124	0.149	0.146	0.308
Saturated (SFA)	gm	2.079	2.667	4.597	4.603



Protein:
- *the highest level of protein was found in the milk from OLT*
- *there was a significant difference between DOLJ and ➢OLT county (P < 0,05)*

Fat:
- *the highest level of fat was found in the milk from DOLJ*
- *there was not significant difference between DOLJ and OLT county (P < 0,05)*

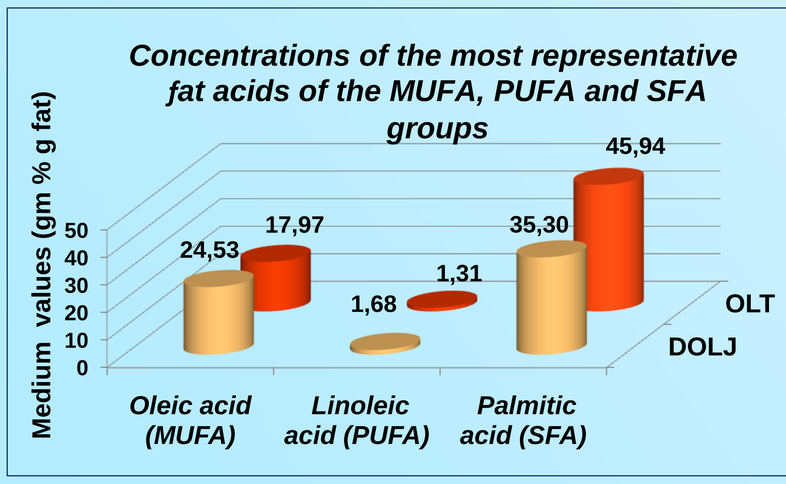
Lactose:
- *the highest level of lactose was found in the milk from DOLJ*
- *there was a significant difference between DOLJ and OLT county (P < 0,05)*



Monounsaturated acids:
- *the highest level was found in milk from OLT*
- *there was a significant difference between DOLJ and OLT county (P < 0,05)*

Polyunsaturated acids:
- *the highest level was found in the milk from DOLJ*
- *there was a significant difference between DOLJ and OLT county (P < 0,05)*

Saturated acids:
- *the highest level was found in the milk from OLT*
- *there was a significant difference between DOLJ and OLT county (P < 0,05)*



Oleic acid, linoleic acid and palmitic acid:

- *there was a significant difference between DOLJ and OLT county (P < 0,05)*

Conclusions

The milk samples - were significantly differentiated (P<0,05) by:
- the level of protein : DOLJ – OLT
- the level of lactose: DOLJ – OLT
- were not significantly differentiated (P<0,05) by - - the level of fat: DOLJ – OLT

For the both regions of the country, the medium values of chemical composition of the buffalo milk are comparable with other published results.

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