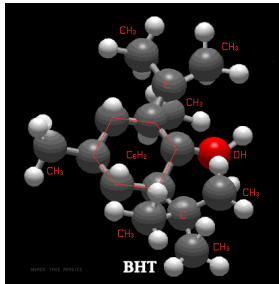


# INNOVATION OF TRADITIONAL MEAT PRODUCTS BY APPLICATION OF NATURAL POLYPHENOLIC SUBSTANCES

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Traditional means proven usage in the community market for a time period showing transmission between generations: this time period should be the one generally ascribed as one human generation, at least 25 years (EU, 2006)

Traditional product has to be linked to a territory and tradition continue over time, and also prepared from traditional raw materials with traditional composition, processed and stored on a traditional type of production and/or processing according to uniform and constant local use.

## Pate

is one of the traditional Polish food considered as an added value product with high nutritional and sensory qualities, which has an important gastronomic tradition.



# Polish traditional pates

**Pasztet zapiekany**



**Pasztetowa z Nadolnej  
w pętkach**



**Pasztet w słoju  
tradycyjny z Górna**



**Pasztet z Sobień Jezior**



**Kiszka pasztetowa dukielska**



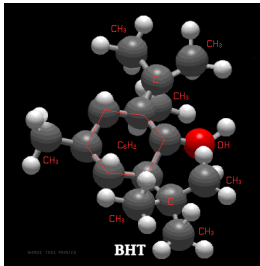
**Pasztet domowy szydłowiecki**



**Żymlok opolski biały**



Relatively low level of understanding of the traditional and innovation concepts by consumers creates the possibility for further improvement of traditional food products by a. o. enhancing the nutritional value e.g. reducing salt, saturated fat or sugar content, and improving the products' shelf-life  
Guerrero et. al. (2009)



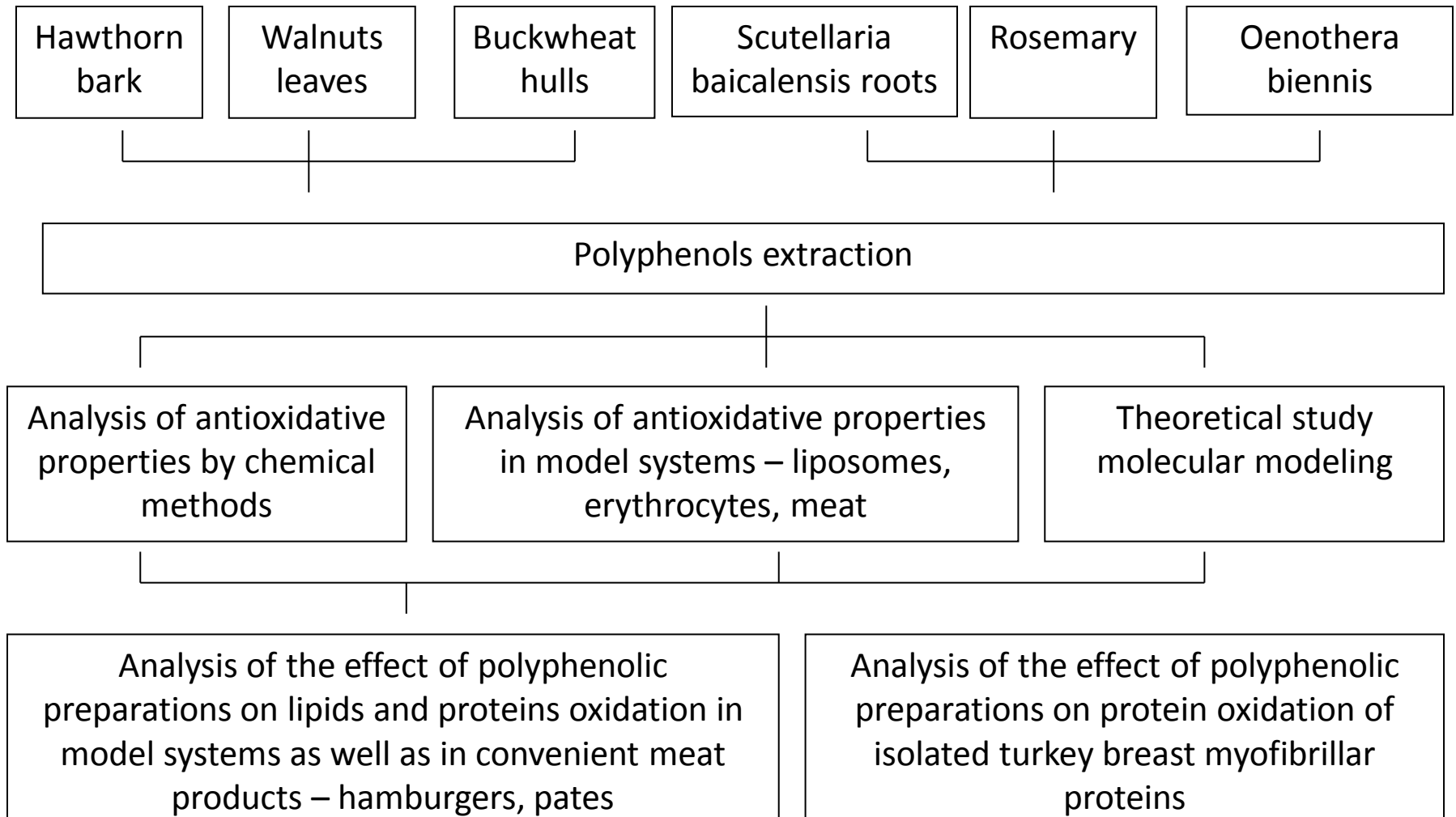


# Objective of the study

evaluation the quality of poultry liver pates processed with plant polyphenolic preparations

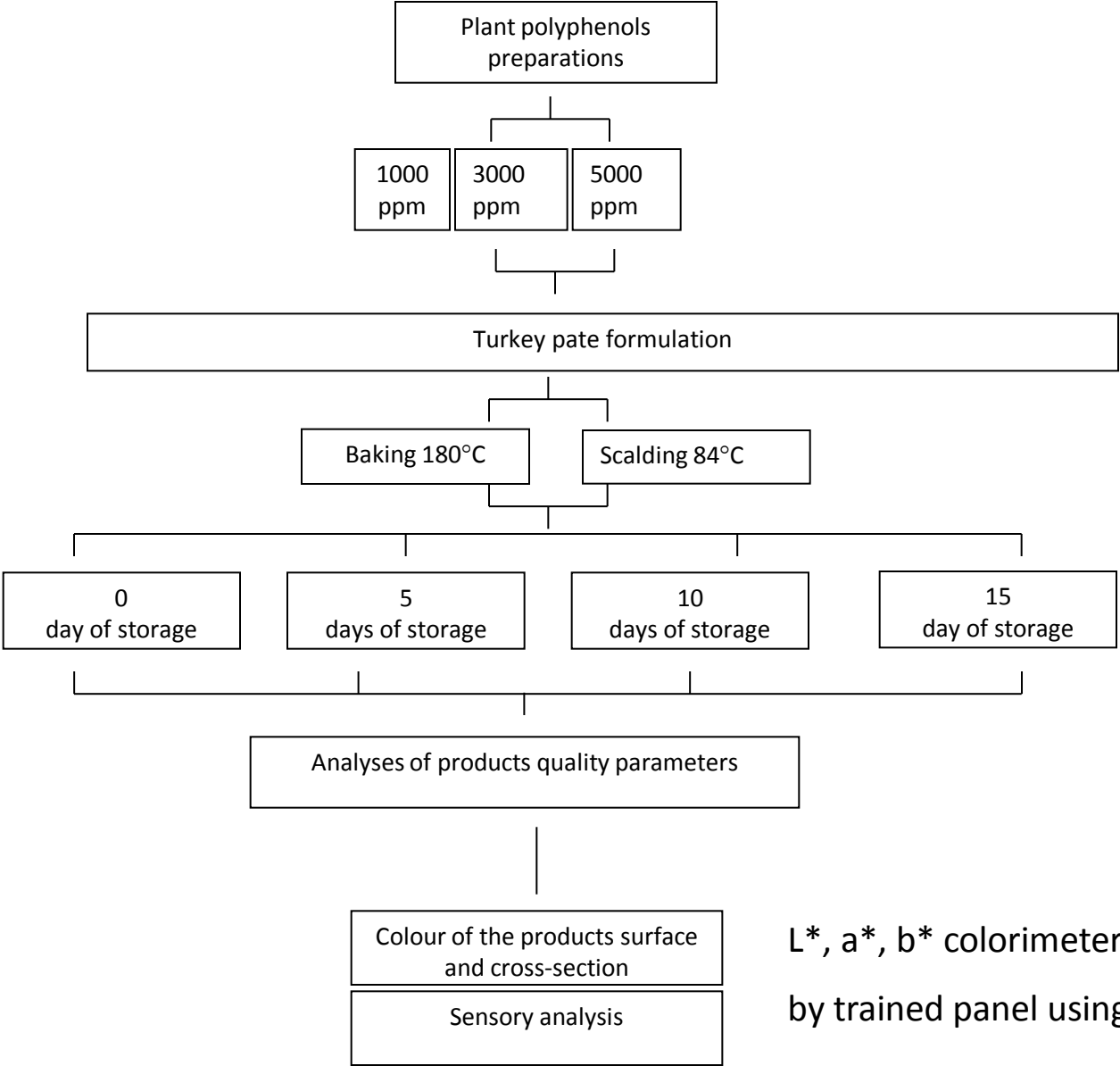


# Design of the study



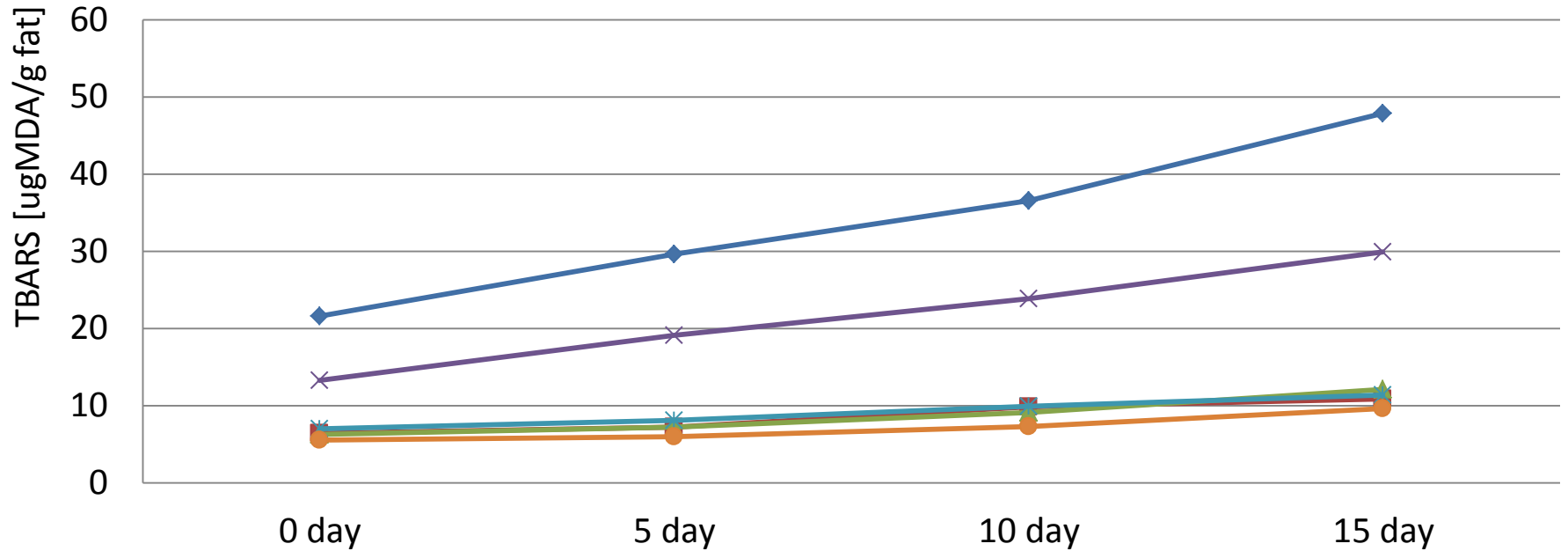


Design of the experiment



L\*, a\*, b\* colorimeter  
by trained panel using 5-grade scale of acceptance

# Thiobarbituric acid reactive substances TBARS in turkey pates



◆ control

■ hawthorn 5000 ppm

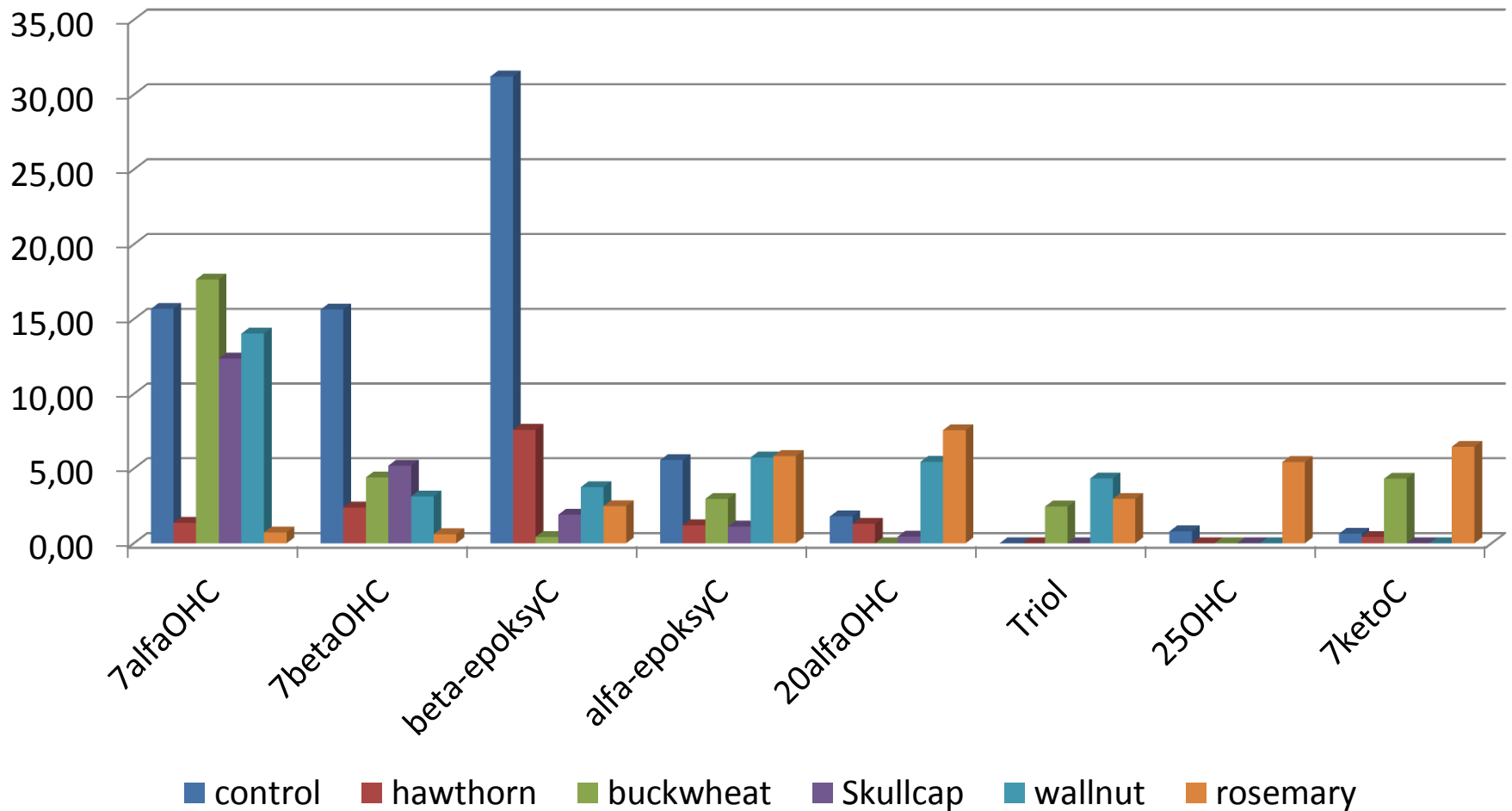
▲ buckwheat 5000 ppm

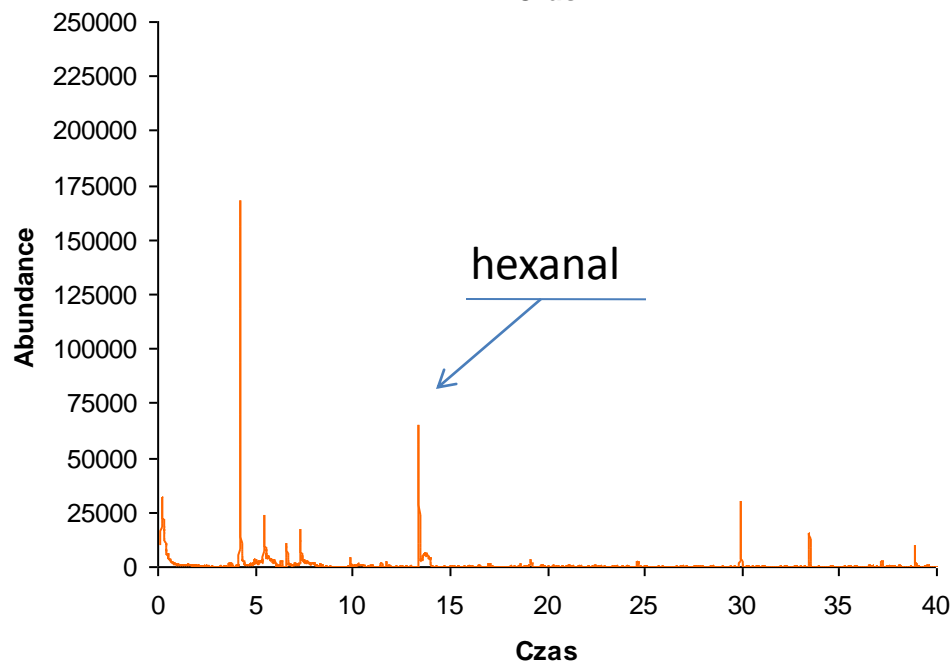
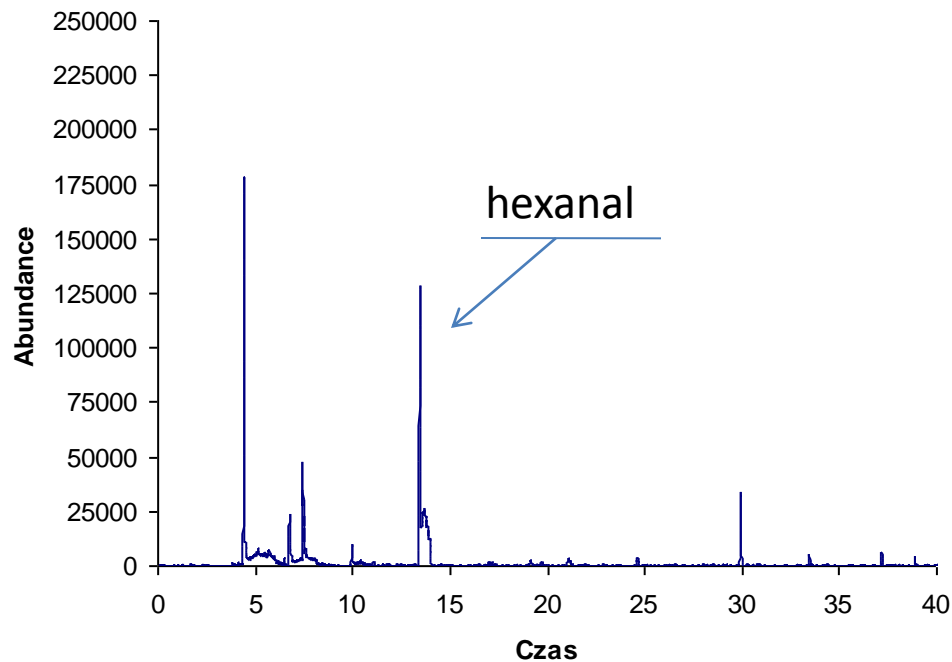
✕ Scutellaria baicalensis 5000 ppm

✱ rosemary 5000 ppm

● rosemary extract 200 ppm

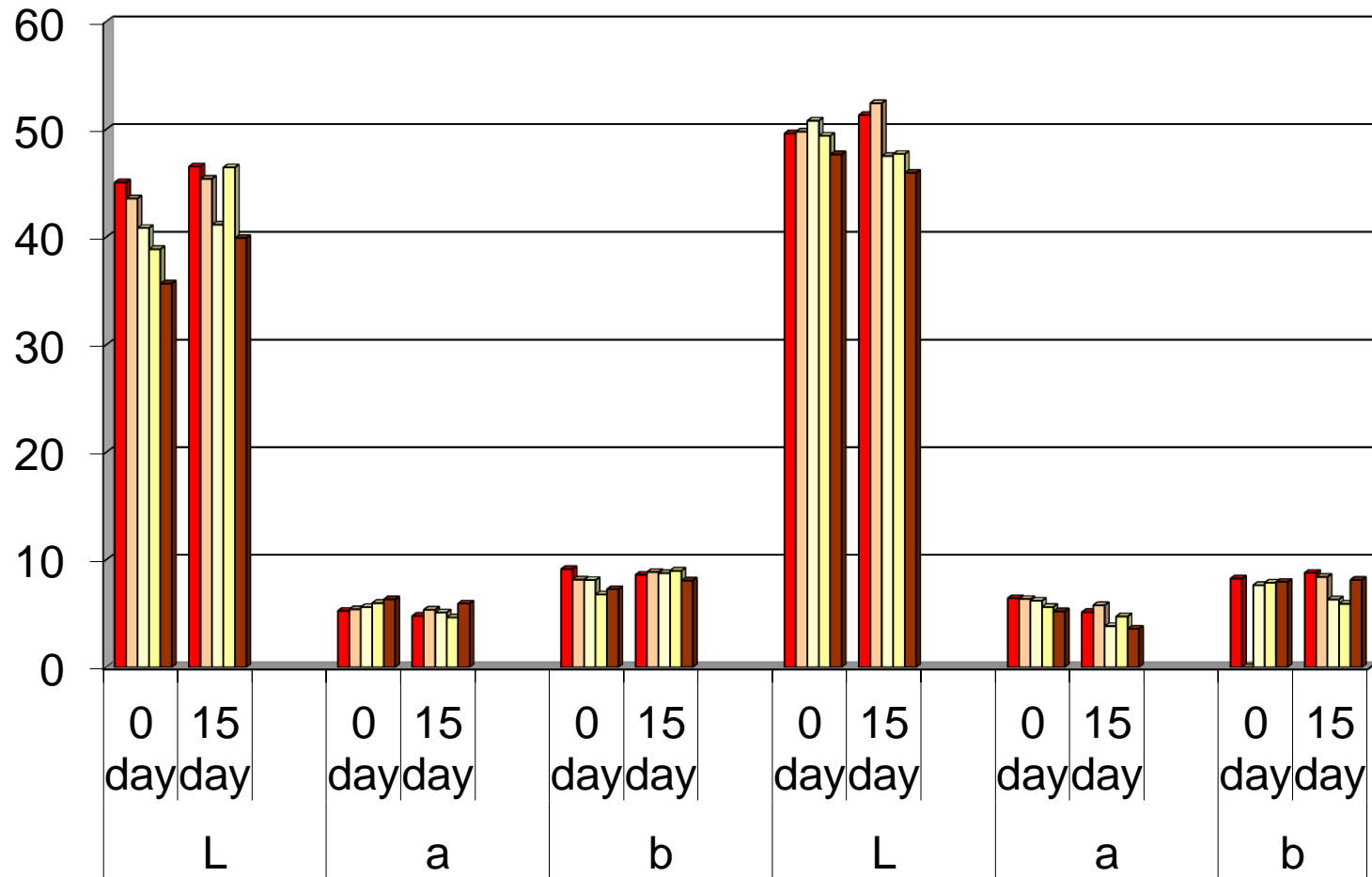
# Cholesterol oxides content in stored poultry pates formulated with plant polyphenolic preparations





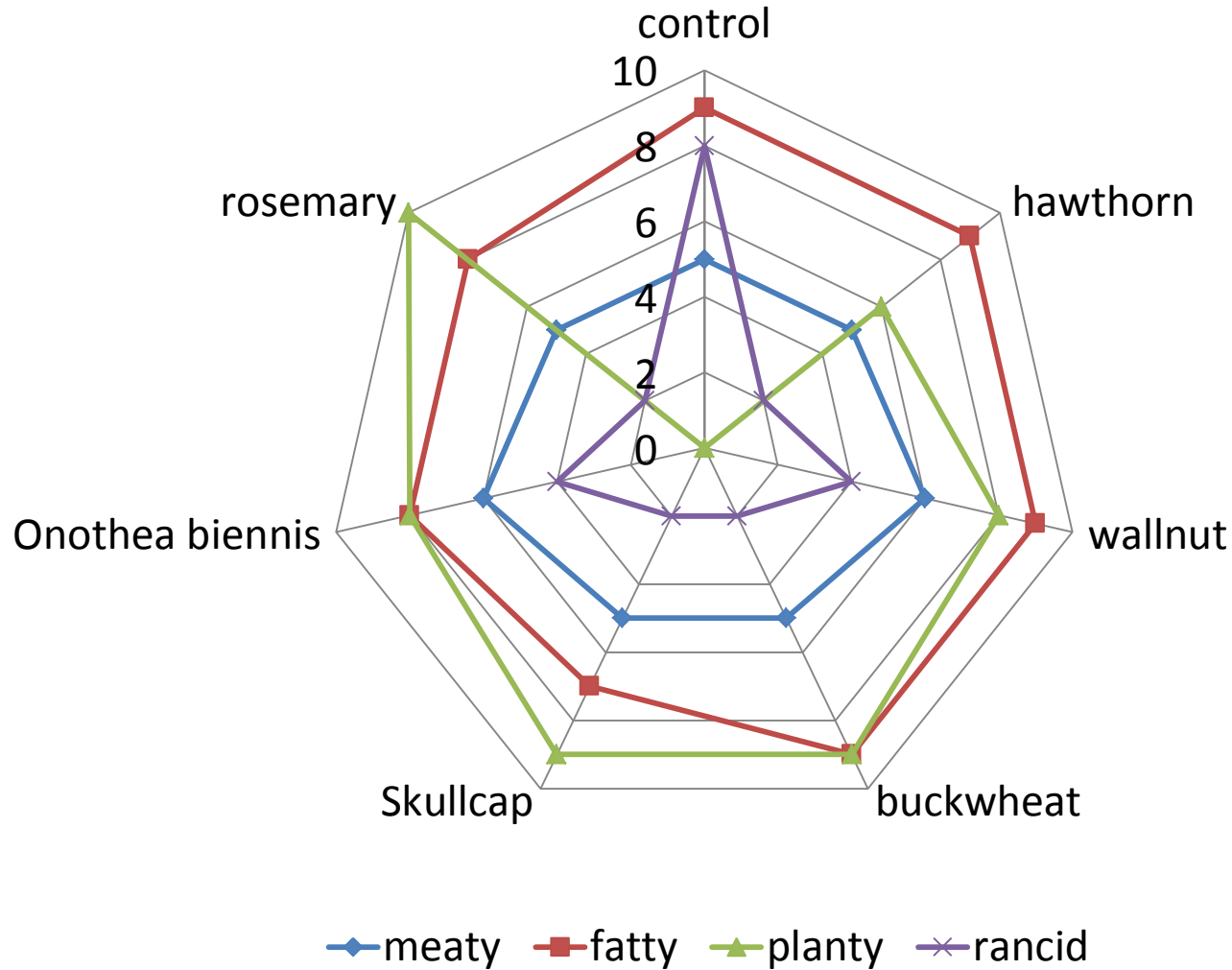
Chromatogram (GC/MS)  
of volatile compounds  
in control turkey pates and  
pates containing 1000 ppm  
of buckwheat hulls  
preparation after 15 days of  
chilled storage

# Color of turkey pates formulated with plant polyphenols preparations

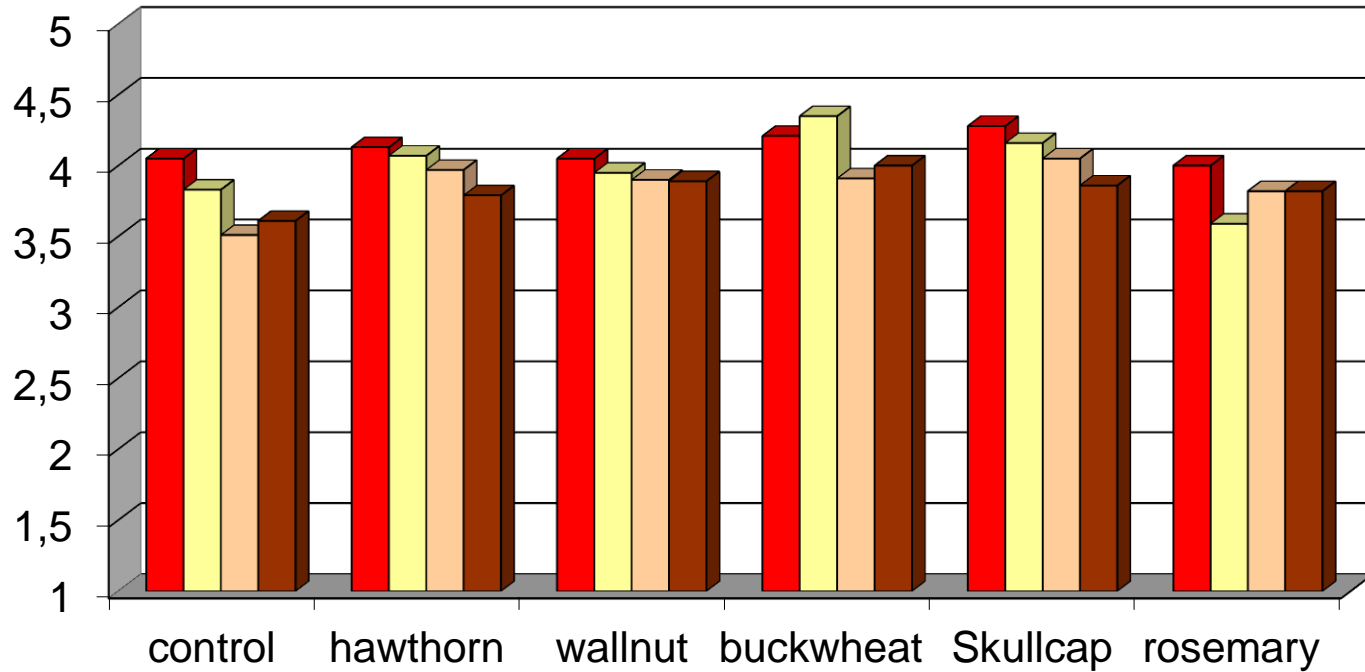


■ control    
 ■ hawthorn    
 ■ walnut    
 ■ buckwheat    
 ■ rosemary

# Intensity of selected flavors in stored traditional meat pate



# Sensory acceptance of traditional meat pate formulated with plant polyphenolic preparations



■ 0 day ■ 5 day ■ 10 day ■ 15 day

# Conclusions

1. Polyphenol preparations obtained from non-conventional plant sources such as hawthorn bark and leaves, wallnuts leaves, as well as buckwheat hulls can be successfully implemented into meat products as a natural antioxidants but in the limited concentration.
2. Hawthorn, buckwheat, wallnuts and Scullcap polyphenol preparations are effective in limitation of lipid oxidation in thermally treated traditional poultry meat pate.
3. Polyphenols preparations diminish the intensity of off-flavour components formation in thermally treated and chilled stored products.
4. Addition of plant polyphenols preparations change selected quality parameters, such as color and sensory characteristics, of poultry meat pate without having a significant negative effects on consumer acceptance of the products.



**Thank you for your attention!**

