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EFFECT OF SWEET GRASS EXTRACT ON OXIDATIVE STABILITY OF BURGER PATTIES WITH MECHANICALLY PRESSED AND DEFATTED HEMP SEED ADDITIVES

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Lipid oxidation is one of the major causes of deterioration of meat and -products quality leading to consumer dissatisfaction and economic loss. Lipid oxidation also reduces the nutritional and sensory properties of meat. It can be inhibited by the use of antioxidants. The use of plant origin proteinaceous ingredients is another trend in the development of meat products. Many plants are good sources of various nutrients and bioactive compounds; some of them have been shown as effective antioxidants improving the overall quality of meat products. Hemp seeds are good source of various nutrients; however, currently they are mainly used for high nutritional value oil, whereas its press-cake contains proteins, dietary fibre and minerals.

The aim of this study was to evaluate the oxidative stability of pork burger patties with the addition of dried mechanically pressed hemp seeds (2%), fully defatted by supercritical CO_2 extraction hemp seed (2%), sweet grass (*Hierochloe odorata*) extract (2%) and sweet grass extract with dried pressed hemp seed additive (0,5 and 1,5% respectively) compared with control sample (without additives) during the storage on days 0, 4, 8 and 15.

The addition of sweet grass extract decreased the oxidation process; the content of formed malondialdehyde remained the lowest compared to other burger patties with plant based additives. Good results were also obtained by the use of hemp additives.

In conclusion, results showed that sweet grass extract inhibits the formation of lipid oxidation in burger patties during storage, it may be a promising natural antioxidant of meat products improving oxidative stability.

Keywords: meat quality, oxidation, antioxidants, sweet grass extract, hemp seed additives

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