捌、英文摘要

EFFECT OF TEA POLYPHENOLS ADDITION ON QUALITY OF MEAT PRODUCTS

The purpose of this study is to investigate the effect of different sources (tea polyphenols、tea polyphenols extracted from green tea) and concentration (500、1000 ppm) of tea polyphenols addition on the keeping quality of pork patties and Chinese sausage. Pork patties were taken for the keeping quality test, the proximate analysis, fatty acid content, scavenging effects of DPPH radical, shear values and sensory evaluation in 0, 2, 4, 6 and 8day storage at 4℃. Pork patties were taken for the keeping quality test and fatty acid content in 0, 1, 2 and 3 month storage at -20℃. Chinese sausage were taken for the keeping quality test, the proximate analysis, shear values and sensory evaluation in 0, 2, 4, 6 and 8 week storage at 4℃.

Pork patties storage at 4℃, the results showed that additions of tea polyphenols and tea polyphenols extracted from green tea had significant inhibition effects on total microbial count ($p<0.05$). In color, pork patties with different sources tea polyphenols added had significant lower L-, a- and b-value ($p<0.05$). Sample with tea polyphenols, had significant lower pH-value ($p<0.05$). Sample with different sources tea polyphenols added had significant lower TBA-value ($p<0.05$). In scavenging effects of DPPH radical, addition tea polyphenols extracted

from green tea had significant better scavenging effects than tea polyphenols than control ($p < 0.05$). In fatty acid detection, the content at saturated and unsaturated fatty acids no significant differences were found at all storage period ($p > 0.05$).

For pork patties storage at -20℃, pork patties with different sources tea polyphenols added had significant lower L-, a- and b-value ($p < 0.05$). Sample with tea polyphenols and tea polyphenols extracted from green tea had no significant differences were found in pH-value ($p > 0.05$). Sample with tea polyphenols and tea polyphenols extracted from green tea addition, had significant lower TBA-value ($p < 0.05$).

Pork patties with control and different tea polyphenols added at color, odor, hardness, specially odors and overall acceptability no significant differences($p > 0.05$). In shear value, sample with tea polyphenols extracted from green tea addition, had significant lower shear value ($p < 0.05$).

For Chinese style sausage, the results showed that addition of tea polyphenols and tea polyphenols extracted from green tea can inhibited total microbial count, Lactic acid bacteria and Coliform grows ($p < 0.05$). In color, addition tea polyphenols and tea polyphenols extracted from green tea can significant reduce Chinese style sausage's L- and a-value ($p < 0.05$). Sample in control had significant lower pH-value ($p < 0.05$). Sample with tea polphenols and tea polyphenols extracted from green tea addition, had significant lower TBA-value ($p < 0.05$). Chinese style sausage with different tea polyphenols added had a better color, odor,

hardness, juiciness and overall acceptability scores, but no significant differences ($p > 0.05$). In shear value, no significant differences were found ($p > 0.05$) .

The results indicated that meat products with additions of tea polyphenols and tea polyphenols extracted from green tea, can retard microorganism grows and delay oxidation levels, with no side effects to products.

Keyword: Tea polyphenols、Tea polyphenols extracted from green tea、Pork patties、Chinese sausage