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Czech J. Food Sci.

E. Abd El-Moneim Mahmoud, J.

**Dostařalová, D.
Lukešová, M. Doležal:
Oxidative Changes of
Lipids during
Microwave Heating of
Minced Fish Flesh in
Catering**

Czech J. Food Sci., 27 (2009): S17-S19

The influence of microwave heating (microwave oven Electrolux, 2450 MHz, 400 W) from 8 up to 24 min on the oxidation and fatty acid composition of lipids of common carp (*Cyprinus carpio*) and Atlantic mackerel (*Scomber scombrus*) minced fish flesh were studied. The heating treatment at all conditions reduced moisture and therefore, increased lipid and dry matter contents. The isolated lipids were subjected to the following analyses: peroxide value, acid value and content of conjugated dienes (by absorbance at 232 nm). The free fatty acid content in the lipid fraction of the fish flesh was significantly reduced by cooking.

Conjugated diene levels in fish muscle increased and peroxide values decreased for all cooked samples. Changes in fatty acids composition were only small.

Keywords:

acid value; common carp; conjugated dienes; fatty acids; fish lipids; lipid oxidation; mackerel; microwave heating; peroxide value

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