Chemical studies of ozonized olive oil

[Chemische Untersuchungen an ozonisiertem Olivenöl]

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Inst. Lebensmittelchem. -Technol., Tech. Univ. Wien, Vienna, Austria.

Fette, Seifen, Anstrichmittel 84(5): 188-191, 1982.

CODEN: FSASAX

ISSN: 0015-038X.

Journal written in German.

CAN 97:98205

AN 1982:498205

CAPLUS

Abstract

Ozonized vegetable oils are antibacterial agents of pharmacol. interest. The compn. of pure olive oil and of slightly and highly ozonized oils was investigated by extn. with EtOH and thin-layer and gas chromatog. of the exts. The peroxide and thiobarbituric acid nos. of the oils were: pure 6 and 0.87, weakly ozonized 774 and 56.4, and highly ozonized 918 and 196.5. The malondialdehyde concns. were <0.01, and 0.21, and 0.41 g/L, resp. Chromatog. on silica gel plates with petroleum ether-Et2O-HOAc (80:20:1) sepd. the classes: monoglycerides, 1,2-diglycerides, 1,3-diglycerides, free fatty acids, triglycerides, carbonyl compds., and hydrocarbons. Gas chromatog. of individual spots identified malondialdehyde, caproic acid pelargonic acid, and pelargonaldehyde. The mechanism of ozonization is discussed.

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