

July 29, 1987

# CARAWAY OIL

## BACKGROUND

Synonyms: Oil of Caraway  
Oils, Carum Carvi

CAS Number: 8000-42-8

FEMA Number: 2238

CoE Number: 112

Caraway oil is a volatile oil distilled from the dried, ripe fruit of Carum carvi L. It is a colorless to pale yellow liquid having the characteristic odor and taste of caraway (Food Chemicals Codes, 1972). The main constituent of caraway oil is  $\alpha$ -carvone (Opdyke, 1979). Caraway oil has been in public use since the 1920's. It is found in soap, creams, lotions, and perfumes at a usual range of 0.01-0.02% in the final product (Opdyke, 1979). Caraway oils functional use in foods is as a flavoring agent (Food Chemicals Codex, 1972).

## TOBACCO USES

Caraway oil is used in tobacco products and imparts a strong, weedy, herbaceous, fatty taste to the smoke while giving a harsh, herbaceous, woody aroma to the smoke (Leffingwell et al., 1972).

## REGULATORY STATUS

Caraway oil was granted GRAS status by FEMA (1965) and is approved by the FDA as a direct food additive (21 CFR 182.20). The Council of Europe (1981) listed caraway (oil) as a natural source of flavorings commonly added in small quantities to food; its use is considered acceptable with a possible limitation of the active principle in the final product.

Caraway oil may be applied either at a stage in the manufacture, or directly to the final tobacco blend such that the total level in the final tobacco blend does not exceed 0.15% in cigarette, cigar or hand-rolling tobacco and 0.5% in pipe tobacco calculated on a dry-weight basis (Dept. of Health and Social Security, 1979).

## BIOLOGICAL EFFECTS

Acute and Chronic Toxicity - The acute oral LD50 in the rat was reported to be 3.5 mL/kg (2.7-4.7 mL/kg) (Opdyke, 1979) [3500 mg/kg, (Sax, 1984)]. The acute dermal LD50 in the rabbit was reported to be 1.78 mL/kg (1.46-2.18 mL/kg) (Opdyke, 1979) [1780 mg/kg (Sax, 1984)]. Undiluted caraway oil applied to the backs of hairless mice produced no irritating effects (Opdyke, 1979).

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