

## HYDROLYSIS OF HAZELNUT FAT BY MOULDS USING SOLID STATE FERMENTATION

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Fungal growth may cause hydrolysis of fat and thus can reduce the quality of the nut, shorten the shelf life and produce off-flavors. Hazelnut is one of the fat-rich agricultural product and its fat content is between 48-72% depending on the variety. In this study hydrolysis of hazelnut fat by different mould species were investigated by using IATROSCAN TH-10 TLC/FID type chromatograph. The amount of free fatty acid (FFA), triacylglycerol and partial glyceride contents of hazelnut fat in varying relative humidity and temperatures were determined. The amount of FFA formation was higher by *Aspergillus niger* and *A. flavus* than *Trichotecium roseum*. FFA levels increased with increasing RH and reached 62% after 28 days of storage at 90% RH by *A. flavus*. During storage some partial glycerides were also formed.

Keywords: Hazelnut fat, hydrolysis, moulds fermentation

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