BIOSYNTHESIS OF VOLATILES BY Pleurotus ostreatus (Jacq.:Fr.) Kumm. MUSHROOMS ON SUBSTRATES ENRICHED WITH VEGETABLE OILS

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The purpose of the study was to analyze possible ways and intensity of synthesis of volatile flavor compounds by Pleurotus ostreatus (Jacq.:Fr.) Kumm. mushrooms in the process of intensive cultivation on sunflower husk and barley straw with the addition of vegetable oils (sunflower and corn) as a potential source of unsaturated fatty acids. Methods of sensory profile analysis and ultraviolet spectroscopy were used. Sensory profile analysis of dried samples of fruit bodies showed an increase in the intensity of mushroom, meat and grassy notes of flavor on substrates with the addition of vegetable oils in a concentration of 1% and 5% of the weight of the substrate. For the strain IBK-551 marked increase in the intensity of sweet and floral attributes of the aroma on both substrates with the addition of corn oil. UV spectroscopy of hexane extracts of dried samples of fruit bodies revealed maxima of light absorption in the range of 200–210 nm and 260–300 nm. There was a difference in intensity of light absorption of samples of different strains cultivated on substrates with the addition of vegetable oils.

Key words: Pleurotus ostreatus, volatile aroma compounds, sunflower oil, corn oil, sensory profile analysis, UV spectroscopy.

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https://doi.org/10.15421/021775