

Essential oil percentage of celery and parsley and their components as affected by method extraction - Mohammed Sayed Aly Mohammed-National Research Center

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Celery essential oil percentage gave insignificant effect according to the two used methods, meanwhile parsley essential oil percentage appeared significant values, the main components of the two plants were decreased with extracted by evaporator, (limonene of celery and Myristicin of parsley). Limonene was decreased from 71.32% with hydro distillation to 42.04% with evaporator hydro distillation, myristicin was lower from 77.58% to 53.69% according to the previously methods. Monoterpene hydrocarbons were decreased in two plants with evaporator hydro distillation, but oxygenated compounds were increased and the decrease was very low in both two plants, meanwhile sesquiterpene hydrocarbons cleared decrease in celery and increase in parsley.

Medicinal and aromatic plants are often used as natural medicines because of their remedial properties. Product of plant origin, has become an exciting area of research in drug discovery and development. Medicinal and aromatic plants are mainly exploited for essential oil extraction for many application in industries. This study aims to evaluate two extraction methods on essential oil percentage and components of celery and parsley seeds. Celery essential oil percentage gave insignificant effect according to the two used methods, meanwhile parsley essential oil percentage appeared significant values, the main components of the two plants were decreased with extracted by evaporator, (limonene of celery and myristicin of parsley). Limonene was decreased from 71.32% with hydro distillation to 42.04% with evaporator hydro distillation, myristicin was lower from 77.58% to 53.69% according to the previously methods. Monoterpene hydrocarbons were decreased in two plants with evaporator hydro distillation, but oxygenated compounds were increased and the decrease was very low in both

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meanwhile parsley essential oil percentage appeared significant values, and the main components of the two plants were decreased with extracted by evaporator, (limonene of celery and myristicin of parsley). Limonene is a colorless liquid aliphatic hydrocarbon classified as a cyclic monoterpene, and is the major component in the oil of citrus fruit peels. The D-isomer, occurring more commonly in nature as the fragrance of oranges, is a flavoring agent in food manufacturing. Limonene is a popular additive in foods, cosmetics, cleaning products, and natural insect repellants. For example, it's used in foods like sodas, desserts, and candies to provide a lemony flavor. Limonene is extracted through hydrodistillation, a process in which fruit peels are soaked in water and heated until the volatile molecules are released via steam, condensed, and separated. Due to its strong aroma, limonene is utilized as a botanical insecticide. It's an active ingredient in multiple pesticide products, such as eco-friendly insect repellents. Other household products containing this compound include soaps, shampoos, lotions, perfumes, laundry detergents, and air fresheners. Additionally, limonene is available in concentrated supplements in capsule and liquid form. These are often marketed for their supposed health benefits. This citrus compound is also used as an aromatic oil for its calming and therapeutic properties. While

Myristicin is a naturally occurring compound found in common herbs and spices, the most well known being nutmeg. It is an insecticide, and has been shown to enhance the effectiveness of other insecticides in combination. The nerves that are blocked are those responsible for controlling the movement of muscles present in the gut, urinary tract, lungs, and other parts of the body. If they are working incorrectly, this can lead to disorders such as gastritis, diarrhoea, cystitis, asthma, bronchitis, etc.. Thus, preventing the nerves firing can alleviate the symptoms of some of these ailments. Indeed, many folk remedies recommend taking nutmeg oil for nausea, stomach upsets, indigestion, or even toothache. Although none of these 'remedies' are medically proven, nutmeg oil is used in some cough syrups and as a natural food flavouring in baked goods, beverages (e.g. Coca Cola) and sweets. The results showed that Limonene was decreased from 71.32% with hydro distillation to 42.04% with evaporator hydro distillation, myristicin was lower from 77.58% to 53.69% according to the previously methods. Monoterpene hydrocarbons were decreased in two plants with evaporator hydro distillation, but oxygenated compounds were increased and the decrease was very low in both two plants, meanwhile sesquiterpene hydrocarbons cleared decrease in celery and increase in parsley.