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EFFECT OF VOLATILE HYDROXYTYROSOL IN CAR PERFUME ON NERVOUS TISSUE

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Abstract:

With the widespread use of automobiles, automobile perfumes have also come into our lives. The quality of car perfume directly affects the mood and safety of drivers. Car perfume can keep the air in the car clean, remove odors in the car, kill bacteria, and play a role in purifying the air. Car perfume is conducive to driver's driving safety. It can create a refreshing and pleasant atmosphere in the narrow space of the car to keep the driver's mind clear and calm, which can reduce the incidence of traffic accidents and increase the taste of the car .Car perfume, in addition to the scent, is still a good small decoration in the car, active atmosphere, improve driving pleasure. Car perfume contains a certain amount of hydroxytyrosol. During the volatilization process, hydroxytyrosol will stimulate the brain and olfactory nerves, enter the thalamus, and then affect our cortical area. This is why people feel comfortable and refreshing when they smell perfume in a car.

Keywords: Car perfume, hydroxytyrosol, perfume volatility, nerve tissue

1. Introduction

Car perfume is used by people with various personalities. People's hobbies, personalities, tastes, and even moods and sorrows will leave marks on the use of perfume, or show their true colors. This provides a basis for people to divide their personality and personality according to their ideas.

A car perfume is a liquid that mixes essential oils, fixatives, and alcohol to give a car a long-lasting and pleasant smell. In car perfumes, alcohol has side effects on the driver. The formula of car perfumes is based on flavors, and the filler is mainly dipropylene glycol and dipropylene glycol ether, which has a slow release fragrance.

Car perfume can keep the air in the car clean, remove odors in the car, kill bacteria, and play a role in purifying the air. The smell of perfume is conducive to driving safety. Car perfume can create a refreshing and pleasant atmosphere in the small interior space of the car, so as to keep drivers clear and calm, so as to reduce the incidence of traffic accidents and add elegance to the car.

2. Volatile effect of hydroxytyrosol in car perfume in specific space

Car perfume contains a certain amount of ethanol. Ethanol is an organic substance, commonly known as alcohol, with a chemical formula of CH3CH2OH (C2H6O or C2H5OH) or EtOH. It is a flammable, volatile, colorless and transparent liquid at room temperature and pressure. Its aqueous solution has a wine odor and is slightly irritating. It has the smell of wine and pungent spicy taste, slightly sweet. In the chemical formula, although both hydroxide and hydroxyl groups are atomic groups, hydroxyl groups are functional groups and hydroxides are ions. In addition, hydroxide-containing substances

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are alkaline in aqueous solutions, while hydroxyl-containing substances are mostly acidic. The commonality of hydroxide and hydroxyl groups in organic chemistry is nucleophilicity.

Both alcoholic and phenolic hydroxyl groups are easily oxidized by various oxidants. Therefore, during the synthesis of polyfunctional compounds, the hydroxyl group or part of the hydroxyl group needs to be protected to prevent it from participating in the reaction and then converted in an appropriate step. Car perfume and human perfume have one thing in common, which is to remove odors, but in comparison, this characteristic of car perfumes is particularly prominent, eliminating odors in the car and making the air fresher on the road. The scent it emits is faint, not as strong as human perfume. Choosing a car perfume with a better calming effect is very helpful for driving safety, such as a cool herb scent, a pleasant amber scent, a mint scent, a fruit scent and a sweet flower scent that can relax nerves and so on. Car perfume also has a cologne flavor, which is easy to cause excitement and stimulate the adrenal glands.

3. Effect of hydroxytyrosol on the olfactory nerve

Mood and emotions are different: mood are our inner feelings, which come from our cognitive process. But emotion is not the same thing. Emotion is the chemical reaction of the body and the result of a chemical reaction. Emotion is manifested externally. Its time is short but its intensity is strong. It is a chemical reaction triggered by chemical components.

Car perfume is the most common and effective way to act on the mood regulating system. Because the aroma can reach our nervous system directly. The smell, the sound you hear, the things you see, the taste you taste, and the taste goes directly into our olfactory bulb. It has a pipe into our olfactory system (Olfactory Cortex). One is to enter the thalamus and then affect our cortical area.

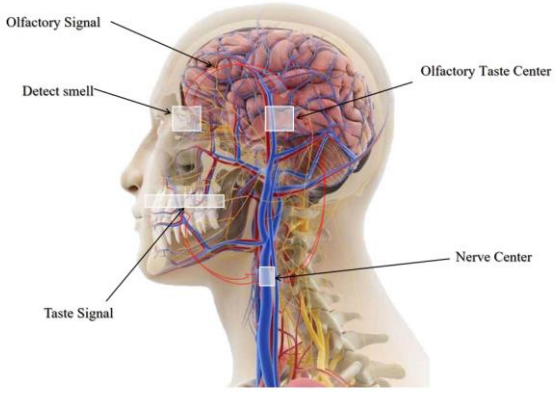

Figure 1. Relationship between olfactory system and brain nerves

When our olfactory system sends the aroma to the amygdala, it immediately starts the emotional response, and then it will be sent to Hypothalamus, which will enter our Brain (brain stem) and Spinal cord, and then enter the body's autonomic nervous system (ANS),

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and finally enter the endocrine system. Another path through the amygdala into the hypothalamus link activates our pituitary gland and ultimately affects the endocrine system.

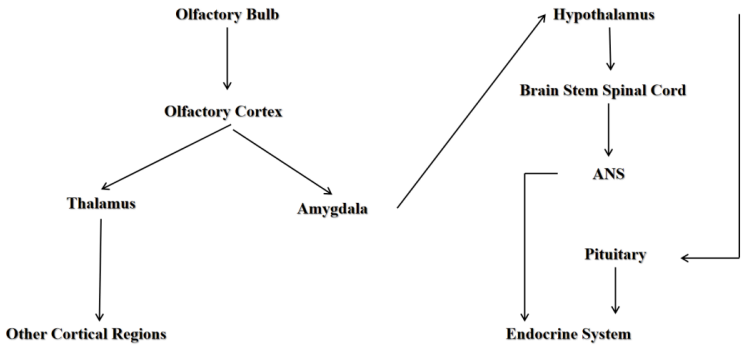

Figure 2.Relationship between brain system and olfactory bulb response

4. Effects of hydroxytyrosol on brain nerves

Hydroxytyrosol is a phenolic compound with a chemical name of 3, 4-dihydroxyphenylethanol, a molecular formula of C 8 H 10 O 3, and a relative molecular weight of 154.16. It has good fat and water solubility and is easily soluble In water and dimethyl sulfoxide, the solubility in water can reach 5g / 100mL, with the maximum absorption value at 280nm.Hydroxytyrosol uses phenolic hydroxyl as a hydrogen donor, which can reduce singlet oxygen to triplet oxygen with lower activity and reduce the generation of oxygen radicals; Hydroxytyrosol can react with more active free radicals to form polyphenol free radicals with lower activity, breaking the free radical chain reaction. In addition, the or tho-phenolic hydroxyl groups of hydroxytyrosol can chelate with metal ions, reducing the catalysis of metal ions on the oxidation reaction.

When some people are intoxicated with the world of aphrodisiac perfumes, it is the fragrance produced by various spices that plays an important role in your senses, making you feel happy, happy and elegant. The medical basis is that smell is directly related to the pituitary gland that secretes hormones. When stimulated by a certain smell, it will directly affect sexual behavior. Any fragrance or perfume is extracted from the fragrance, and is the essence of the fragrance. The fragrances used to make perfumes have aphrodisiac effects, and the fragrances emitted by perfumes are reminiscent of people and are confused.

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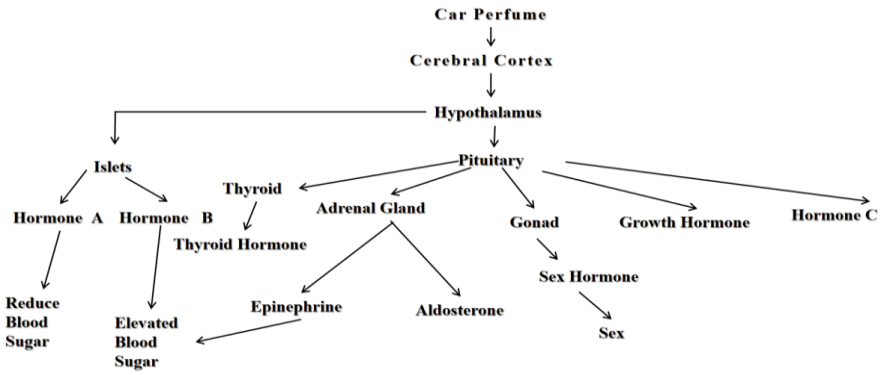


Figure 3. Brain perfume response to car perfume

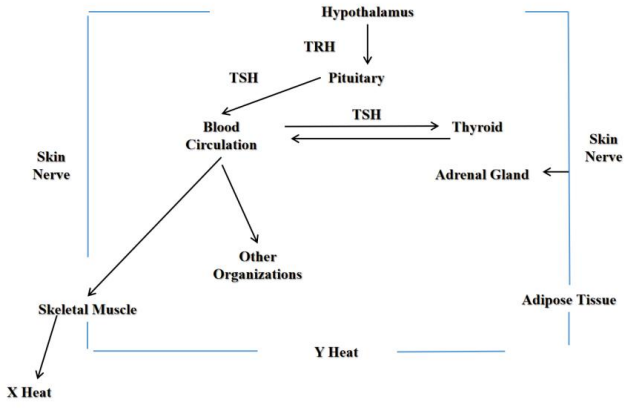
5. Hydroxytyrosol stimulates human skin and nerves under high temperature

Some car perfumes, to better play its seductive charm, you also need to use your body skin heat to excite it. Therefore, you need to directly put the perfume on your skin under a certain high temperature. Under your burning heart, your skin problems are constantly rising. Then, the various flavors of the perfume are also excited because of your body temperature changes.

5.1. Moist skin is most likely to stimulate deep fragrance

You want the seductive smell of the deepest layer of perfume, you also need to apply it to wet skin. Therefore, you can choose to evaporate the perfume at a certain temperature. With the help of water vapor and humidity, you can force the deepest thing out again.

Figure 4. Schematic diagram of perfume volatility temptation



As for the reason why the taste of perfume spreads more easily, it is because the perfume composition is mainly composed of some saturated vapor pressure and volatile aromatic organics and ethanol solutions, which have a considerable concentration at room

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temperature and pressure. In addition, human olfactory cells have extremely low detection limits for the taste of some molecules, and trace concentrations can be detected, such as thiols. In addition, the diffusion effect is affected by the diffusion coefficient. Low-boiling organic compounds generally have good diffusion effects.

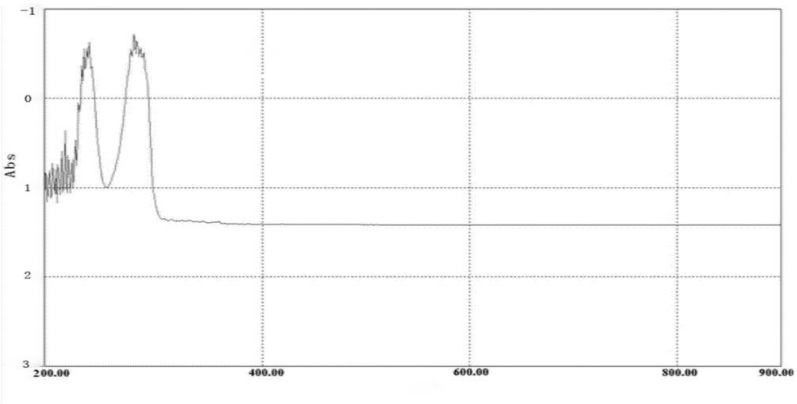

Table 1: Perfume volatile effect chart

5.2. Hydroxytyrosol has been shown to have a variety of in vitro antioxidant activities. It can scavenge hydrogen peroxide, hydroxyl groups and other free radicals, as well as reactive nitrogen radicals and superoxide anions. It also blocks the peroxidation chain reaction and inhibits the production of metal ion catalyzed products of ROS.

The antioxidant activity of hydroxytyrosol in humans has been studied. Studies show that hydroxytyrosol-rich extract obtained from olive oil processing plant wastewater can effectively prevent human LDL oxidation (induced atherosclerosis) and remove superoxide anions at a low concentration of 20 mg / kg And hypochlorous acid. An extract rich in hydroxytyrosol was obtained from olive leaves (hydroxytyrosol accounts for about 92% of the total phenol in the extract), and its antioxidant activity was investigated. Results when the concentration was 100 mg / kg, the extract showed good resistance to oxidation of various food fats, and had no cytotoxicity and inhibited the growth of lactic acid bacteria.

5.3. Hydroxytyrosol has anti-inflammatory effect, vasodilator and antibacterial effect, can prevent atherosclerosis, and can reduce the incidence of certain cancers (such as breast, prostate, endometrium, digestive tract);Because hydroxytyrosol has a strong antioxidant activity and a role in reducing the incidence of cancer, it has great prospects for medical effects. Various extracts in olive have certain bacteriostatic properties. Through comparison, it was found that low concentration of hydroxytyrosol can significantly inhibit gram-negative bacteria. It is because hydroxytyrosol can penetrate the bacterial cell mucosa, decompose bacterial mucopeptide and cause damage to the bacterial mucosa, and oleuropein is significantly less bacteriostatic than hydroxytyrosol. It may be because the glycoside structure of oleuropein is connected to the hydroxyl structure of hydroxytyrosol, making it difficult to penetrate the bacterial mucosa and showing weak bacteriostatic properties.

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6. Conclusion

Hydroxytyrosol in car perfumes can stimulate human nerves to ensure that the brain is awake during driving and that it has certain oxidizing effects on human skin tissue.Car perfume is also conducive to driving safety. Due to the small space, the air in the car is generally turbid, which is likely to cause irritability, which is extremely detrimental to driving safety. However, car perfume can create a pleasant and pleasant air environment in the car. Car perfume has the functions of sobering the mind, anti-depression and calming and soothing, and can reduce the occurrence of traffic accidents.

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