Identification of volatile flavor compounds in Luzhou flavor sunflower oil

Sunflower seed oil, rich in unsaturated fatty acids such as oleic acid, linoleic acid and vitamin E, is a healthy edible oil. Luzhou flavor sunflower oil is rich in aroma and unique flavor, and is well received by domestic consumers.

At present, the research on sunflower seed oil mainly focuses on the microwave heating equipment, supercritical extraction method, sunflower seed oil press and other new extraction methods. The research on volatile flavor substances of sunflower seed oil is relatively good. Sunflower seed oil press is an advanced screw press. The automatic combined oil press

The existing literature deals with the degree of oil oxidation and the formation mechanism of volatile flavor substances in sunflower seed oil during storage. There is no report to analyze and identify the flavor characteristic substances of Luzhou-fragrant sunflower seed oil. However, the flavor substances of sunflower seed oil are one of the important quality indicators. It is necessary to understand its flavor characteristic substances.

Traditional extraction methods of volatile substances include solvent-assisted evaporation, solvent extraction, simultaneous distillation and extraction. These methods provide ideas for the extraction of oil flavor, but there are some drawbacks in varying degrees: complex equipment of solvent-assisted evaporation; large amount of sample used in solvent extraction, and extraction of volatile components with low boiling point. The chromatographic peaks of volatiles with low boiling point are easily concealed by solvent peaks, and the thermal degradation reactions such as oxidation and hydrolysis are easily induced by heat treatment in distillation-extraction process. Compared with other methods, headspace solid-phase microextraction (HSSPME) can be used to identify volatile flavor substances in liquor, fruit beverage, olive oil, peanut oil and almond oil.