Ten-Days report from Herbanol Company

Introduction:

As we have explained in that, our company produce natural antioxidants from herbal essential oils. This process from the extraction of essential oils and determination of components until the end of process, have been done 3 times during the project implementation.
We are still working on new analysis methods to develop our design with new plants.

Execution stage:

This week we focused on selecting a new kind of Thyme, Zataria multiflora (scientific name), it is from the mint family that grows in southern Iran, Afghanestan and Pakestan and has medical and edible properties.



1-1 Dried Thyme

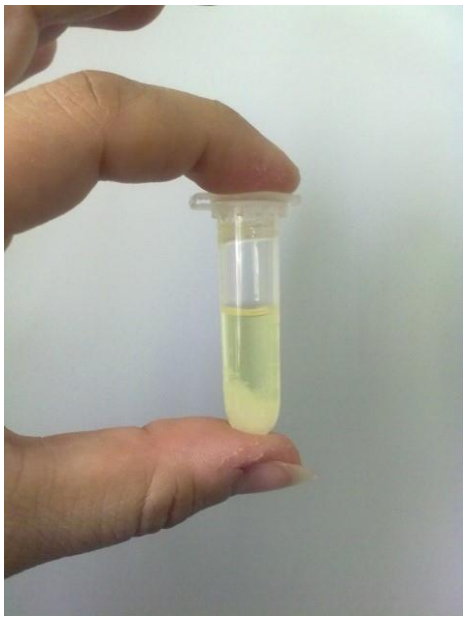
Laboratory process:

1-We added 200 grams of dried thyme leaves to a 1-liter round bottom flask and added sufficient distilled water. In this method, a special refrigerant (CLEVENGER APPARATUS) is used to separate the essential oils of plant.



2-2 extraction herbal essential oil by distilled water method

Each distillation process takes 3-hour times. Finally, the extracted essential oil is poured in to a close plastic container. To remove the water from essential oil, we added some Sodium Sulfate (without water) powder. The essential oil was stored at -25®C for later use.



1-3 Pure herbal essential oil

Edible oil preparation:

We used flaxseed oil as the sample of edible oil because it is full of unsaturated fatty acids. The oil was freshly prepared from flaxseed by cold press system. And after that the fresh oil poured in dark plastic container and was saved in refrigerator.



1-4 Flaxseed



1-5 Flaxseed in extraction oil funnel



1-6 Extracted flaxseed oil

The process of oil's test takes time at least 25 days after we add the certan concentration of herbal essential oils to flaxceed sample .10 sample of flaxseed oil is selected and added to dark glass tubes and we put them on an oven with 40 degrees centigrade for 20 days. Two concentration 50ppm and 500 ppm of essencial oil is chosen and one sample as control and another sample with synthetic antioxidant is selected.

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