Method 9.0

Alcohol Extract

Purpose: To determine the amount of alcohol soluble materials in spices. (Note 1)

A. Apparatus:

1. Erlenmeyer flask 250 mL capacity with ground glass stopper.

2. Porcelain Dish, evaporating, flat-bottomed, light weight, 75-100 mL capacity.

3. Desiccator, containing an efficient desiccant.

4. Oven, preferably circulating air type.

5. Pipettes, 50 and 100 mL, TD.

6. Steam bath.

7. Filter paper, Whatman No. 2 or equivalent.

B. Reagents:

1. Ethyl alcohol, 95% ACS grade.

2. Methyl alcohol, ACS grade, Isopropyl alcohol ACS grade 70/30 v/v (for use with ginger). (Note 2)

3. Isopropyl alcohol ACS grade (for celery seed). (Note 2)

C. Preparation of Sample:

1. As directed in Method 1.0.

D. Procedure:

1. Weigh 2 g to the nearest 0.01 g of sample prepared as directed in Method 1.0 and transfer to the Erlenmeyer Flask.

2. Add 100 mL of 95% ethyl alcohol, stopper, and swirl to mix.

3. Allow to stand overnight or 16 hours at $25° \pm 2°C$.

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4. Filter extract through a dry filter paper, Whatman No. 2 or equivalent, discard the first 10 mL.

5. Pipette 50 mL of the filtrate into a flat-bottomed evaporating dish and evaporate to dryness on a steam bath.

6. Place the dish with alcohol extract in an air oven at $110^\circ \pm 2^\circ$ C. and hold at this temperature until minimum weight is obtained. The difference between the two final weighings taken at half-hour intervals should not be more than 1mg. The residue is alcohol extract.

E. Calculation:

$$\text{Alcohol extract, \%} = \frac{\text{Wt. of residue x 2}}{\text{Wt. of sample}} \times 100$$

F. Statistics:

TBD

G. Notes:

1. The AOAC revision of this method (43.1.09) has been declared surplus in 1989 and is not in use.

2. A solution containing 70 parts by volume of methyl alcohol and 30 parts by volume of isopropyl alcohol may be used for extracting ginger. Isopropyl alcohol alone may be used for extracting celery seed.

H. References:

N/A