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SALAD OIL AND METHOD OF MAKING SAME

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5 Claims. (Cl. 99—163)

This invention relates to an improvement in salad oils.

One of the objects of the invention is to provide a salad oil having an improved cold test.

Another object of the invention is to provide a method for improving the cold test of salad oil.

It will be understood that the terms "salad oil" as used in this specification and in the claims which follow is restricted to winterized cottonseed oil.

The presence of stearine crystals which seed out of cottonseed oil at temperatures below the crystallization of stearine is objectionable. Not only do stearine crystals in the oil adversely affect the appearance of the oil but cottonseed oil containing an appreciable amount of stearine is unsatisfactory for use in the preparation of such emulsions as mayonnaise because at low temperatures the stearine crystals seed out in the emulsion tending to break the emulsion and separate the oil.

This has been obviated to some extent by the usual winterizing process which is designed to remove the excess amount of the harder portion of the cottonseed oil consisting of tri-stearine, tri-palmitin and the like. These substances crystallize within the oil droplets of the emulsion when the product is used in salad dressings after the emulsion is held or stored at low temperature and the crystals thus formed pierce the protective film around the droplets of oil causing the emulsion to break down and separate into its respective phases.

In the conventional winterizing process the cottonseed oil is held at a low temperature for a definite period of time until a portion of the harder constituents of the oil has had an opportunity to crystallize after which the oil is passed through a filter to remove the crystallized fat. The soft portion which passes through the filter is deodorized and used for salad oil.

The conventional winterizing process is, at best, expensive because of the equipment and space which it requires, since it is necessary to hold the oil at a low temperature for several days to allow sufficient crystallization to produce the best salad oil. It is known that a longer period in seeding tanks permits more complete separation of the stearine, and gives a product which has less tendency to seed out or solidify after having been worked into an emulsion. It is the common practice, therefore, to seed cottonseed oil long enough, and at a sufficiently low temperature, to produce a soft oil fraction which will withstand temperatures of 32° F. for at least ten hours. For the best product to be used in commercial emulsions, requiring handling in winter temperatures, it is desirable to have an oil which will withstand the cold test at 32° F. for longer than ten hours, and by seeding for an exceptionally long time, which involves, of course, additional expense, the cold test can be lengthened to fifteen or twenty hours, and in the case of some oils, to a slightly longer period.

The present invention retards the crystallization of solid fatty glycerides and produces a winterized cottonseed oil for salad oil purposes which will withstand the cold test at 32° Fahrenheit for a much longer period of time than the known winterizing process permits.

The present invention also permits the production of a winterized cottonseed oil without the additional outlay of time and equipment required for winterizing for excessively long periods of time.

The present invention contemplates the usual winterizing of cottonseed oil followed by the addition of a small amount of lecithin which I have discovered is effective in retarding the formation of crystals of solid fatty glycerides present in cottonseed oil.

The present invention is of peculiar applicability in the treatment of winterized cottonseed oil.

Examples of the effect of lecithin on winter pressed cottonseed oil are noted in the following table. The lecithin used in each instance was soya lecithin.

Sample	Time immersion in ice water to become cloudy
	Hours
Winterized cottonseed oil	8
Same—containing .01% lecithin	64
Same—containing 1% lecithin	130
Same—containing 10% lecithin	240

It will be understood that the present invention is not concerned with the question of stability or durability of the oils but relates specifically to the discovery that the crystallization of solid fatty glycerides in salad oils and similar oils may be retarded by the addition of lecthin, a very small fraction of one per per cent of lecthin being sufficient to appreciably affect the characteristics of the oil as oil or as the oil phase of an emulsion such as mayonnaise.

I claim:

1. As an article of commerce an edible oil prod-

uct consisting of a large percentage of winterized cottonseed oil and a complement of lecithin added to inhibit crystallization.

2. As an article of commerce an edible oil product consisting of substantially 90% to 99.99% winterized cottonseed oil and a complement of lecithin added to inhibit crystallization.

3. The method of retarding the crystallization of solid fatty glycerides in winterized cottonseed oil which consists in adding thereto a small percentage of lecithin to inhibit crystallization.

4. The method of manufacturing salad oil which consists in first refining crude cottonseed oil, then winterizing the refined oil by seeding, removing crystals of solid fatty glyceride and then adding a small percentage of lecithin to retard further crystallization of solid fatty glycerides.

5. The method of manufacturing a salad oil which consists in adding a small amount of lecithin to winterized cottonseed oil to inhibit crystallization.

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