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STABILIZATION OF OLEO OIL

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12 Claims. (Cl. 87-12)

This invention relates to an improved process of treating edible fats and oils and more particularly to a process of stabilizing such products as oleo oil against rancidity.

One of the objects of the present invention is to provide a method for stabilizing edible fats and oils such as lard, beef fat, hydrogenated cottonseed oil, oleo oil, and other similar vegetable and animal fats and oils against rancidity.

Another object of the invention is to provide as an article of commerce an improved edible oil and fat product stabilized against rancidity.

Another object of the invention is to provide an improved method of stabilizing oleo oil.

In the copending application of Donald P. Grettie, entitled Stabilization of shortening, Serial No. 95,632, it is disclosed that hydrogenated refined soya bean oil is an effective antioxidant for edible fats and oils.

It is also well known that lecithin has antioxidant effects when employed with edible fats and oils.

The present invention is based upon the discovery that a combination of hydrogenated soya bean oil and lecithin provides surprising antioxidant effects entirely unpredictable from the mere knowledge of the antioxidant effects of hydrogenated soya bean oil and lecithin separately.

The present invention is particularly adapted to the stabilization of oleo oil whether unrefined or refined.

The following table sets out data on actual tests carried out to demonstrate the value of the present invention in the stabilization of oleo oil. The oleo oil employed in carrying out the tests was oleo oil of ordinary commercial grade. The refined oleo oil has been refined to remove free fatty acid.

	Active oxygen (peroxide) keeping test	Incubation test at 70° C. (hours to become rancid)
	Hours	
Oleo oil.....	1	24
Oleo oil plus 5% hydrogenated soya bean oil.....	5	70
Oleo oil plus 0.1% lecithin.....	6	100
Oleo oil plus 5% hydrogenated soya bean oil and 0.1% lecithin.....	46	336
Refined oleo oil.....	5	48
Refined oleo oil plus 5% hydrogenated soya bean oil.....	41	175
Refined oleo oil plus 0.1% lecithin.....	9	100
Refined oleo oil plus 5% hydrogenated soya bean oil and 0.1% lecithin.....	50	312

markable antioxidant effects of the combination of hydrogenated soya bean oil and lecithin and the result of the combined action of the two substances are so much greater than the effect of either of the substances separately that it is unpredictable from the antioxidant effects of either hydrogenated soya bean oil or lecithin.

The word "oil" as used in the claims which follow is used in the broad sense to include fats.

I have found in practice that effective stabilization may be secured with varying amounts of hydrogenated soya bean oil and lecithin in combination. However, in most instances it is sufficient to incorporate from 1% to 10% of hydrogenated refined soya bean oil, together with from 0.05% to 0.2% of lecithin. It will be understood, of course, that some stabilization is secured with smaller amounts and that the effect is progressive as the amount is increased.

I claim:

1. The method of stabilizing oil which comprises adding thereto and thoroughly incorporating therewith a quantity of hydrogenated refined soya bean oil and lecithin.

2. The method of stabilizing oil which comprises adding thereto and thoroughly incorporating therewith from one percent to ten percent hydrogenated refined soya bean oil and 0.05 percent to 0.2 percent lecithin.

3. As an article of commerce, oil stabilized against rancidity consisting of ninety to ninety-eight percent oil and a complement of the combination of hydrogenated soya bean oil and lecithin.

4. As an article of commerce, an oil stabilized against rancidity consisting of a large proportion of oil and a complement of hydrogenated refined soya bean oil and lecithin.

5. The method of stabilizing oleo oil which comprises adding thereto and thoroughly incorporating therewith a quantity of hydrogenated refined soya bean oil and lecithin.

6. The method of stabilizing oleo oil which comprises adding thereto and thoroughly incorporating therewith from one percent to ten percent hydrogenated refined soya bean oil and 0.05 percent to 0.2 percent lecithin.

7. As an article of commerce, oleo oil stabilized against rancidity consisting of ninety to ninety-eight percent oleo oil and a complement of the combination of hydrogenated soya bean oil and lecithin.

8. As an article of commerce, oleo oil stabilized against rancidity consisting of a large proportion of oleo oil and a complement of hydrogenated refined soya bean oil and lecithin.

It is clear from the foregoing tests that the re-

9. The method of stabilizing refined oleo oil which comprises adding thereto and thoroughly incorporating therewith a quantity of hydrogenated refined soya bean oil and lecithin.

5 10. The method of stabilizing refined oleo oil which comprises adding thereto and thoroughly incorporating therewith from one percent to ten percent hydrogenated refined soya bean oil and 0.05 percent to 0.2 percent lecithin.

10 11. As an article of commerce, refined oleo oil

stabilized against rancidity consisting of ninety to ninety-eight percent refined oleo oil and a complement of the combination of hydrogenated soya bean oil and lecithin.

12. As an article of commerce, refined oleo oil 5 stabilized against rancidity consisting of a large proportion of refined oleo oil and a complement of hydrogenated refined soya bean oil and lecithin.

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