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COFFEE EXTRACT ENRICHED WITH EXTRA FLAVOR

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This invention relates to an improved coffee extract in the form of a dry powder and to certain improved steps in a method of producing the same.

A principal object of the invention is to provide a coffee extract in the form of an improved dry product, for example a powder, enriched with additional flavoring and aromatic principles.

Another object is to provide an improved method of incorporating the additional flavoring substances in the coffee extract prior to the drying of the product, but in such manner that the major portion of the added flavor is retained in the dried product and thereafter liberated in the liquid beverage made by dissolving the dried extract in hot or cold water.

It has been proposed, heretofore, to enrich dried coffee extract by adding thereto additional flavoring to replace the flavoring substances which are lost or converted during the extraction of the water solubles from the coffee and during the subsequent concentration and drying of the liquid extract. The added flavoring is usually mixed with the dried product (applicant's prior Patent 2,350,903, dated June 6, 1944). In some instances the additional flavoring has been added to the extract prior to the drying of the product, but when this is done there is considerable loss of the flavoring substances by evaporation and conversion during the drying operation.

The present product and method of producing the same contemplates introducing into the product additional flavoring substances prior to the drying operation, but it is distinguished from the prior art in that a carrier, which is not necessarily soluble in water, is thoroughly impregnated with the flavoring oils and is introduced into the liquid extract before the drying operation, the carrier serving to protect and conserve the highly fugitive flavoring substances during the drying operation, but will liberate them in hot or cold water used to dissolve the product to form a liquid beverage.

The carrier body and the flavoring substance utilized in the present invention is composed of the foots normally flushed from the roasted coffee during the extraction of coffee oil therefrom.

When extracting coffee oil from roasted coffee beans the roasted coffee beans are first heated to approximately 150° Fahrenheit and thereafter subjected to high pressure and cutting action in a suitable machine for expressing the oil. The pressure applied to the coffee (approximately 25,000 to 30,000 pounds) ruptures the cellular structure of the coffee and expels the coffee oil

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therefrom. The expelled coffee oil carries with it some cellular particles and certain solids and semi-solid particles developed during the roasting of the coffee, all of which particles are referred to generally as "foots." The coffee oil, thus obtained, has many uses, but it is used principally as flavoring for coffee extract and confections. The foots have been heretofore regarded as a waste by-product and, therefore, have been filtered from the oil and discarded.

I have discovered that the foots contained in the oil extract from roasted coffee is more satisfactory for use as a flavoring substance than the pure oil, since the foots are highly impregnated with the coffee flavors developed during the roasting, whereas the pure coffee oil is somewhat sharp to the taste. The foots, before being used, are preferably ground until the particles thereof are sufficiently fine to remain in suspension in a relatively light solution. For example, a liquid beverage formed by dissolving the soluble coffee extract in water. I have also found that the said foots, when prepared in the manner hereinafter disclosed, can be incorporated in a liquid extract of coffee preliminary to the drying thereof and that when so incorporated and dried with the coffee solubles, will retain, after the drying operation, the highly flavored substances contained therein, whereby the flavor and aroma so contained in the foots will be liberated when the coffee extract is dissolved and add their flavor to the coffee beverage thus formed.

According to my improved method, the foots contained in the coffee oil extract from roasted coffee is preferably passed through a paint mill or other similar grinding machine to reduce the size of the particles so as to form a very smooth paste. This paste may be used to impart a coffee flavor to confections and other substances, but for the present invention it is utilized to add flavor to the water soluble extracts of coffee. In the present case it is mixed with a quantity of dried coffee extract and the total mixture is then thoroughly mixed with a heavy liquid extract of coffee. The thorough mixing of the paste-like flavoring substance with the liquid coffee extract is obtained preferably by homogenizing the mixture at suitable pressure. The homogenization of the mixture breaks up the fatty particles and also thoroughly mixes the fibers and semi-solid particles of the foots through the entire batch of coffee extract. The coffee extract with the added flavoring is then dried to form a dry powder product.

I have found that it is also practical to add to

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