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BEVERAGE PREPARATION AND METHOD OF MAKING THE SAME

Frank H. Lyons, Memphis, Tenn., assignor to Clyde Collins Incorporated, Memphis, Tenn., a corporation of Tennessee

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This invention relates to improvements in beverage preparations of the fruit acid type and to methods of making the same. More particularly the invention relates to beverage preparations of the type described which are adapted to be prepared and marketed in a substantially dry powdered state and are capable of being dissolved or dispersed in water at the time of consumption to provide a palatable and easily prepared beverage.

In the past, beverage mixtures of the above type have been made by mixing a fruit acid, such as tartaric acid, with anhydrous sugar and suitable flavoring and/or coloring matter. The resulting mixtures were usually packaged and sold in small paper envelopes, generally containing only enough of the beverage mixture for the preparation of one or two quarts of beverage, primarily because this method of packaging is inexpensive, involves low shipping costs, and is very convenient for the consumer. However, dry packaged mixtures such as the above have enjoyed only a very limited use on a commercial scale, as they tend to deteriorate quickly, particularly in hot or humid climates. Thus, they tend to become hard and caked and not only are difficult to remove from the package, but render the package unsightly and in general unsalable.

It is accordingly a primary object of the present invention to provide a substantially dry beverage preparation of the character indicated which may be readily packaged for distribution in small quantities and is sufficiently stable not to deteriorate during storage or the normal necessary period for distribution and sale.

Other objects and advantages of the invention will appear from the following description and appended claims.

The objects of the invention are in general attained by admixing with the fruit acid constituting the acidulating ingredient of the beverage a suitable amount of an edible, essentially non-hygroscopic and relatively water-insoluble acid phosphate, such as monocalcium phosphate. The acid phosphate may be added in widely differing proportions with an entirely satisfactory effect. For example, it is possible to add anywhere from about .5 to 2.5 parts by weight of acid phosphate for each part by weight of fruit acid. However, it is preferable to use at least 1.75 parts by weight of the phosphate for each part by weight of fruit acid, particularly when the mixture is to be packaged in small quantities.

The fruit acids which may be used or treated

in accordance with this invention include such acids as tartaric, citric, and malic acids, or mixtures of these acids. However, it is possible to employ any water-soluble edible fruit acid, or the acid salts of such acids. These acids and salts are generally very hygroscopic, and tend to cause undesirable caking and hardening in ordinary beverage preparations containing them. However, when they are mixed with acid phosphates of the type described herein, an entirely stable drink mixture is obtained which is readily soluble or dispersible in water to furnish a palatable and tasty drink.

Small proportions of coloring and flavoring substances may be added to the beverage mixtures, if desired. Moreover, it is frequently desirable to mix a small amount of mineral oil with the fruit acid prior to admixing the acid phosphate, as this speeds up the mixing time and produces a desirable cloud in the beverage prepared from the resulting mixture. The addition of mineral oil is not essential, however, as thoroughly stable products of satisfactory appearance and taste can be obtained either with or without its use.

In preparing the beverage preparations of this invention a variety of methods may be used. For example, when mineral oil is used, it is usually preferable to first mix the fruit acid therewith, thereby forming a coating or film of oil upon the acid particles. This initial coating of oil facilitates the mixing of the fruit acid and the acid phosphate, which is subsequently added, i. e. facilitates the coating of the fruit acid particles with the acid phosphate particles. It is also frequently desirable, whether mineral oil is used or not, to supply the acid phosphate in both powdered and granulated or spray dried form, and to first mix a portion of powdered phosphate with the acid, after which a portion of granulated phosphate is added. By proceeding in this way, it is possible to more readily subdivide the mass into small portions suitable for packaging, and the mechanical handling in general of the mixture is greatly facilitated. It should be understood, however, that the beneficial effects of this invention are not dependent upon the above methods of mixing, and that entirely satisfactory results may be obtained by mixing the various ingredients in any order, simultaneously, or in any other suitable manner.

A more complete understanding of the invention will be obtained from the following examples of mixtures and methods of mixing the same: