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METHOD FOR PREPARING A THERAPEUTICALLY EFFICACIOUS PRODUCT FROM FOODSTUFFS AND ARTICLES OF CONSUMPTION CAPABLE OF BEING ROASTED

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Among the substances serving as foodstuffs and articles of consumption there are such which, before being consumed, are roasted to a degree as will satisfy the taste. These substances include coffee and the great number of its surrogates. Till now it has not been ascertained whether a considerable physiological influence is due to this roasting. The detection of certain physiologically active substances, such as histidin and histamine, indicates that the roasting of these foodstuffs and articles of consumption produces more than a mere effect of taste.

Now, the surprising fact has been observed that the mentioned substances may be transformed into physiologically highly effective bodies, if the roasting is continued beyond the degree hitherto practised with these foodstuffs or articles of consumption.

The substances, to which the highly physiological effect of the products prepared by such overroasting or partly carbonizing is due, have not been clearly defined, but there are found principally two groups of such substances, viz. reducing substances behaving chemically like ascorbin acid and otherwise like histidin and histamine, hereinafter called histo-bases.

For detecting the mentioned highly reducing substances from the redox-potential of the ascorbin acid, the products prepared according to the invention are extracted with solutions of metaphosphoric acid, then purifying them by precipitation with mercury acetate and removing the superfluous mercury with hydrogen sulphide. In the solution freed from the hydrogen sulphide, the reducing substances may be estimated by means of 2.6 dichlorphenol-indophenol.

The histo-bases are estimated by diazotizing with p-nitraniline after having removed the disturbing attendant substances from the aqueous extracts by means of methyl alcohol.

In addition to these physiologically active substances there is, of course, the adsorbing effect of the roasted product according to the invention. Thus, it is possible, for suiting the respective therapeutical purpose desired, by choosing the moment at which the overroasting is interrupted, to adapt the preparations according to the invention to one another so as to obtain, corresponding to the desired therapeutical purpose, an optimum contents of effective substances together with a high adsorptive power, at the same time retaining as much as possible of any other therapeutically, effective substances present, for example the caffeine in coffee.

The overroasting may, for example, be interrupted when a maximum of reducing substances is reached. At the same time, there is obtained a high value with respect to the adsorptive power and to the histamine and histidin bases.

According to the experience made up to now, the process may be applied to coffee and to the residues of coffee after being used as a beverage, as well as to coffee surrogates such as barley, rye, figs. turnip-shreds, peas, chicory roots, potatoes, etc., furthermore to substances such as linseed, goat's horn clover, and wheat germs.

The moment of interrupting the roasting towards carbonization depends, as mentioned, upon the desired therapeutical purpose to be reached, and its determination is suitably effected by chemical or biological estimation, for example, of the histo-bases produced or of the reducing substances. After this determination, the reaching of the desired optimum state in the practical application of this method can be ascertained by watching occurrences indicating this state, such as decolouring of the treated material, emergence of certain ingredients, such as fat, from inside, and the like.

As regards the therapeutical effect attainable, the products prepared may, for example, be used for treating disturbances of the stomach and the intestines, in which case the adsorptive effect is accompanied by the stimulating effect of the histo-bases upon the peristaltic movement of the intestines.

Examples of application

1. 30 kgs. of coffee are roasted under constant movement at temperatures beginning with 175° and rising to 225° until the product has a contents of 80 mg % of water-soluble histo-bases, in which state the product still contains about 0.7 to 0.8% of caffeine.

2. 10 kgs. of barley are subjected under constant agitation to a roasting heat treatment at temperatures beginning with 175° until the outside of the product has a black-brown colour and contains 120 mg% of free histo-bases.

3. 10 kgs. of rice are subjected to a roasting heat treatment at a temperature of 200° until a dark-brown product is obtained, having a reducing power corresponding to 300 mg % of apparent ascorbin acid per 100 g of the roasted product.

The products prepared in this manner differ from the known carbonization products from vegetable substances inasmuch as they have, apart from a certain adsorptive power, a contents of several physiologically effective substances which are destroyed by complete carbonization. The product prepared according to the invention, for example, from coffee, still contains 75% of the caffeine contents of the raw coffee.

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