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(54) Title: A METHOD FOR THE MANUFACTURE OF A FOAMING COFFEE POWDER AND COFFEE POWDER RESULTING THEREFROM

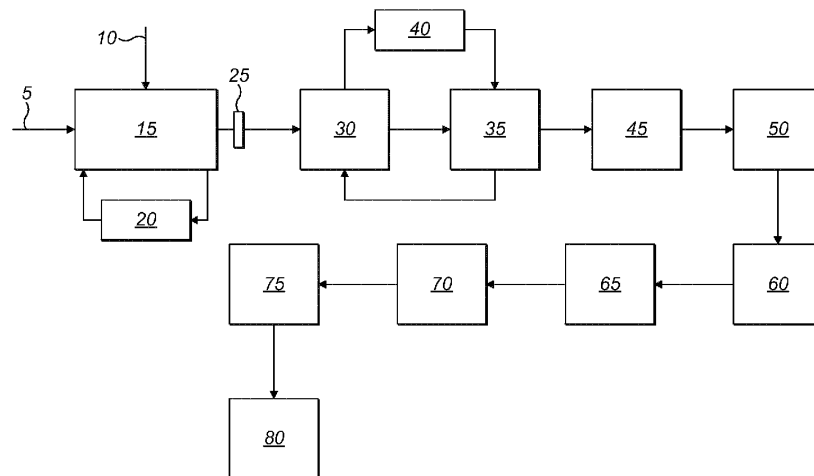


FIG. 1

(57) Abstract: The present invention relates to a method for the manufacture of a freeze-dried coffee powder, the method comprising: (a) providing a coffee extract having from 40wt% to 55wt% solids; (b) high-shear mixing the coffee extract in a rotor/stator aerator with added gas to form a foamed coffee extract, the gas being added in an amount of from 1NL/kg to 5NL/kg of coffee extract, wherein the rotor/stator aerator is maintained at a pressure of less than 2 bar and is configured to subject the coffee extract to a shear of from 7,500 to 20,000 s^{-1} in a single pass having a residency time of at least 1 second, (c) cooling the foamed coffee extract to below $-40^{\circ}C$ without shear, or with low shear, to form a frozen coffee extract, (d) grinding the frozen coffee extract to a powder; and (e) drying the powder, wherein the step (c) of cooling the foamed coffee extract to below $-40^{\circ}C$

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comprises: (i) cooling the foamed coffee extract to a first temperature; (ii) cooling the foamed coffee extract from the first temperature to a second temperature lower than the first temperature; and (iii) cooling the foamed coffee extract from the second temperature to below -40°C, wherein the first temperature is 1°C above a freezing point of the foamed coffee extract and wherein the second temperature is 3°C below the freezing point, wherein step (ii) has a duration of from 30 minutes to 5 hours, preferably 1 to 4 hours, and wherein the foamed coffee extract obtained in step (b) is maintained at a pressure of less than 2 bar until the frozen coffee extract is formed in step (c).