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Re: Sample Patentability Search
Ultrafast Roasted Coffee
Express Search Sample Patentability Search

October 15, 2009

Dear Mr. Search,

In accordance with your e-mail received on October 02, 2009, a Sample Patentability Search was conducted at the U.S. Patent and Trademark Office for ultrafast roasted coffee.

Disclosed herein is a coffee product which when brewed is characterized by having a reduced bitterness and improved freshness retention or brew holding quality. The coffee product is produced by an ultrafast roasting process wherein a blend of green coffee beans is roasted to a specific color preferably using a fluidized bed roaster at temperatures of from about 550.degree. F. (288.degree. C.) to about 750.degree. F. (399.degree. C.) for 30 to 120 seconds. The roasted coffee is quenched with air or inert gas, and ground or flaked, in accordance with the disclosure provided.

The following Examiner was consulted regarding the field of search:

Examiner Becker in Art Unit 1794

The following classes and subclasses were searched:

Class 034 (Drying And Gas Or Vapor Contact With Solids)

Subs. 10, 360, 576, 606

Class 426 (Food Or Edible Material: Processes, Compositions, And Products)

Subs. 466, 467, 468, 595

The following IPC-8 class and subclasses were searched:

Class A23F (COFFEE; TEA; THEIR SUBSTITUTES; MANUFACTURE, PREPARATION, OR INFUSION THEREOF)

- 5/02 Coffee; Coffee substitutes; Preparations thereof; Treating green coffee; Preparations produced thereby
- 5/04 Coffee; Coffee substitutes; Preparations thereof; Methods of roasting coffee
- 5/24 Coffee; Coffee substitutes; Preparations thereof; Extraction of coffee ; Coffee extracts ; Making instant coffee

The following U.S. patents were uncovered in the search:

6,607,768	6,207,211	6,106,877	5,939,121	5,721,005	5,322,703
5,292,005	5,257,574	5,185,171	4,988,590	4,985,271	4,591,508
4,540,591	4,428,535	4,322,447			

The following foreign patents were also noted of interest:

JP 2007300937

EP 0405648

The following patents appear to be most relevant:

4,322,447 discloses a coffee roasting process for forming a low density roasted coffee having a yield of high soluble solids in which the green coffee beans are dry roasted by passage in a fluidized bed through a two-stage roaster. In the first stage, the beans are heated to a temperature of 550.degree. F. to 570.degree. F. by a roasting gas for partial roasting and expansion of their cellular structure. Then, in the second zone, the beans are contacted with an independent roasting gas stream at the same temperature and lower velocity to complete the roasting process (Figure 1, Column 2, Lines 22-64, Claim 1).

6,207,211 discloses a two stage coffee roasting process comprising a first stage, where green coffee beans are roasted for 5-15 minutes to a roast color of 30-50 Lu. In a second stage, the beans are further roasted for 1/2-3 1/2 minutes. The roasted beans have a reduced density in the range of 0.27-0.38, and a roast color of 4-19 Lu. Analysis of sulfur compounds in the coffee aroma reveals a high level of methylmercaptan, a key compound for the pleasant aroma of freshly roasted and ground coffee. Coffee beans roasted in accordance with the present invention have a generally high titratable acidity at a given density and roast color (Column 1, Lines 55-67, Claim 1).

5,721,005 discloses roast and ground or flaked coffee products which

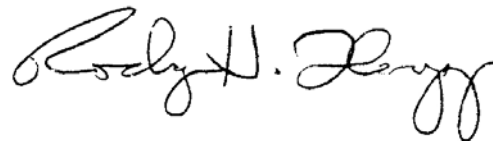
provide more brew strength and cup color at lower levels of brews solids. These coffee products contain darker roasted coffee that is predominantly high acidity-type coffee that provide, when brewed in appropriate conditions, a consumable coffee beverage having: (1) a brew solids level of from about 0.4 to about 0.6%; (2) a Titratable Acidity of at least about 1.52; (3) a brew absorbance of at least about 1.25, provided that when the Titratable Acidity is in the range of from about 1.52 to about 2.0, the brew absorbance is equal to or greater than the value defined by the equation: where TA is the Titratable Acidity (Column 2, Lines 65-67, Column 3, Lines 1-8, Claim 1).

5,185,171 discloses a roaster for coffee beans or the like, that admits the beans into a roasting air stream (31, 23, 32) at an air stream entrance (24). The air stream transports the beans from entrance (24) in an air stream path (26, 36) to an altitude (36) from where they are directed to return to entrance (24) by falling into a hopper having side wall (13, 14) and a constriction (22) which controls the rate of admission of the beans into the air stream. In preferred embodiments the beans are admitted into a horizontal air stream with a component of velocity in the air flow direction and roasting air is also admitted to the hopper directly (46) or indirectly (44, 45) via wall perforations (19, 20) (Column 1, Lines 61-68, Column 2, Lines 1-5, Claim 1).

6,106,877 discloses bulk material formed by a multiplicity of individual moving particles. The material is heat-treated by directing a light beam into an observation volume of the material to generate light reflections off at least one particle in the observation volume. A characteristic of the light reflections is indicative of a desired extent to which the material is to be heat-treated, and the material is subjected to a heated environment. The light reflections are monitored for the characteristic, and subjecting the material to the heated environment is ended in response to detecting the characteristic of the light reflections (Column 2, Lines 26-45, Claim 5).

These patents are representative of the prior art searched. Copies of the cited prior art are enclosed for your further review. For additional information on the cited prior art, please see the patent family, located on the CD results, for related patents and the legal status of cited patents. Please do not hesitate to contact me with any questions regarding this search.

Best Regards,
EXPRESS SEARCH



Rodger H. Flagg
President

RHF
Enclosure: 17 Patents
Ref: E00-93018