United States of America

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The Director

of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States

Patent

grants to the person(s) having title to this patent the right to exclude others from makin using, offering for sale, or selling the invention throughout the United States of America c importing the invention into the United States of America, and if the invention is a proces of the right to exclude others from using, offering for sale or selling throughout the Unite States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2 or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See th Maintenance Fee Notice on the inside of the cover.

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(12) **United States Patent**
Tark

(10) **Patent No.: US 10,702,457 B2**
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(54) **METHOD FOR PREPARING VEGETABLE OIL EMULSION BY ULTRASONICATION**

(71) Applicant: **ADHOME CO., LTD.**, Gyeonggi-do (KR)

(72) Inventor: **Jae Hwa Tark**, Seoul (KR)

(73) Assignee: **ADHOME CO., LTD.**, Gyeonggi-Do (KR)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 228 days.

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See application file for complete search history.

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Primary Examiner — Edward J Cain

(74) *Attorney, Agent, or Firm* — IPLA P.A.; James E. Bame

(57) **ABSTRACT**

Provided is a method for preparing a vegetable oil emulsion including mixing water with a vegetable oil to provide a first mixture (a), and applying ultrasonic waves with a frequency of 25 to 70 kHz to the first mixture to solubilize the first mixture (b). Through treatment of ultrasonic waves with a certain frequency, the method for preparing a vegetable oil emulsion according to the present invention has advantages of significantly easily converting various herbal oils into aqueous emulsions at a high yield, significantly preventing layer-separation between oils and water for a long time, and being widely applicable to a variety of herbal oils.

4 Claims, 7 Drawing Sheets