



Office de la Propriété
Intellectuelle
du Canada

Un organisme
d'Industrie Canada

Canadian
Intellectual Property
Office

An agency of
Industry Canada

CA 2884183 C 2017/03/21

(11)(21) **2 884 183**

(12) **BREVET CANADIEN
CANADIAN PATENT**

(13) **C**

(86) Date de dépôt PCT/PCT Filing Date: 2013/09/16
(87) Date publication PCT/PCT Publication Date: 2014/04/03
(45) Date de délivrance/Issue Date: 2017/03/21
(85) Entrée phase nationale/National Entry: 2015/03/05
(86) N° demande PCT/PCT Application No.: US 2013/059862
(87) N° publication PCT/PCT Publication No.: 2014/052056
(30) Priorité/Priority: 2012/09/27 (US13/628,194)

(51) Cl.Int./Int.Cl. *A23L 33/155* (2016.01),
A23K 20/174 (2016.01), *A23L 31/00* (2016.01),
A23L 33/10 (2016.01), *A23L 5/30* (2016.01),
A23P 10/40 (2016.01), *A23P 30/00* (2016.01),
A61K 31/59 (2006.01), *A61P 3/02* (2006.01)
(72) Inventeurs/Inventors:
CHALUPA, WILLIAM F., US;
SCHROEDER, GARY M., US
(73) Propriétaire/Owner:
OAKSHIRE HOLDINGS, INC., US
(74) Agent: GOWLING WLG (CANADA) LLP

(54) Titre : PROCÉDE ET APPAREIL POUR RENFORCER LA VITAMINE D DANS LES CHAMPIGNONS
(54) Title: METHOD AND APPARATUS FOR VITAMIN D ENHANCEMENT IN MUSHROOMS

(57) Abrégé/Abstract:

An apparatus (10, 10A) and method for increasing Vitamin D content in mushrooms is disclosed. A mushroom slurry of comminuted or pulverized mushrooms or mushroom parts and liquid, such as water, is passed under a UV-B light source (30) and subjected to one or more pulses of UV light. The slurry may be conveyed to the UV-B light source (30) by a vibrating conveyor (18). After UV-B light exposure, the treated slurry may be dried and ground into a powder, or the treated slurry may be filtered and the insoluble portion may be dried and ground into a powder. The irradiated mushroom powder has a mass fraction of Vitamin-D2 of at least 2500 IU/gram of powder, and more preferably at least 20,000 IU/gram of powder. Irradiated mushroom powder may be incorporated into consumable food products for humans or animals, and/or may be incorporated into topical preparations for cosmetic use.

