

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
11 November 2021 (11.11.2021)



(10) International Publication Number
WO 2021/222976 A1

- (51) International Patent Classification:
A23J 3/14 (2006.01)
- (21) International Application Number:
PCT/AU2021/050409
- (22) International Filing Date:
04 May 2021 (04.05.2021)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2020901406 04 May 2020 (04.05.2020) AU
- (71) Applicant: CURTIN UNIVERSITY OF TECHNOLOGY [AU/AU]; Kent Street, Bentley, Western Australia 6102 (AU).
- (72) Inventors: JOHNSON, Stuart; 9 Ronneby Road, Lesmurdie, Victoria 6076 (AU). AL-ALI, Hayder Abdulzahra
- Abdumabdi; c-/ Curtin University, Kent Street, Bentley, Western Australia 6102 (AU).
- (74) Agent: PATERSON IP; Level 1, 168 Stirling Highway, Nedlands, Western Australia 6009 (AU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,

(54) Title: MODIFIED LUPIN PROTEIN

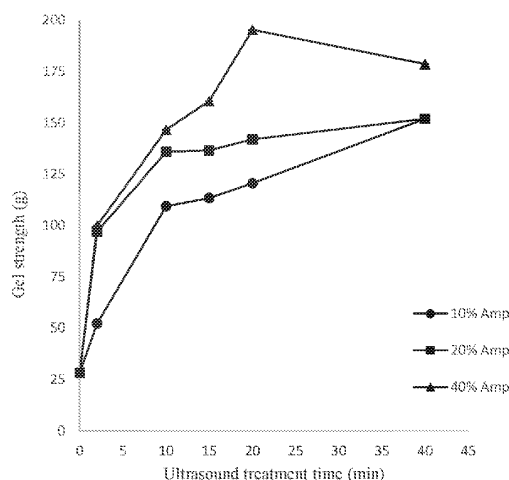


Figure 2

(57) Abstract: This disclosure relates generally to lupin protein, and more specifically to modifying lupin protein to improve its use as a protein feedstock, for example in food processing. Provided herein is a method of forming a protein feedstock comprising modified lupin protein that has a decreased thermal stability compared to unmodified lupin protein, the method comprising providing a solution of lupin protein, passing ultrasound waves through the solution of lupin protein in a manner to form the modified lupin protein and collecting the modified lupin protein. Also provided is a protein feedstock comprising modified lupin protein, the modified lupin protein having a decreased thermal stability compared to unmodified lupin protein, wherein the modified lupin protein is formed by subjecting unmodified lupin protein to ultrasound waves, as well as compositions and food products comprising the protein feedstock.

[Continued on next page]

UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*