(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/10/2026
(21) Application No.202631120747 A
(43) Publication Date : 16/10/2026

(54) Title of the invention : Process for producing a liner-free beverage article from potato-peel feedstock

(51) International classification	:A47G 21/18, A23L 2/52, C08L 3/02, A23L 29/231, A23L 29/20
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Swami Vivekananda University
Address of Applicant :Swami Vivekananda University, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, Kolkata, WestBengal – 700121, India. West Bengal India
(72)**Name of Inventor :**
1)Dr. Priyajit Banerjee
2)Dr. Suranjana Sarkar
3)Mr. Piyas Ghosh
4)Mr. Ananyo Mazumdar
5)Dr. Nimai Chandra Saha
6)Mr. Saurabh Adhikari

(57) Abstract :
A liner-free beverage article is produced from potato peel waste by recovering starch from a starch-containing filtrate and converting cellulose from the fibrous residue of the same peel batch into cellulose nanomaterial. The recovered starch is gelatinised with pectin, glycerol and citric acid, after which the peel-derived cellulose nanomaterial and chopped basalt fibre are dispersed to provide nanoscale and microscale reinforcement. The reinforced mass is shaped, pre-dried to 8-15% moisture and thermally cured at 120-140 °C. During curing, citric acid forms ester cross-links within the starch/pectin network while the article geometry is consolidated. The resulting cup or drinking straw has a unitary reinforced wall without a separate polymeric liner, laminate or adhesive seam. The process uses water as the processing medium and converts a single potato-peel waste stream into both matrix starch and cellulose reinforcement.

No. of Pages : 22 No. of Claims : 6