DAIRY COVERAGE IN FSTA®

Trusted by researchers, scientists, students and government bodies in over 150 countries across the globe, FSTA is the definitive way to search over fifty years of historic and emerging research in the sciences of food and health.

Covering a wide range of interdisciplinary material, FSTA includes a wealth of international dairy content, including:

Dairy products (all aspects of any edible dairy product)

- Market milk
- Cream, butter, ghee and butteroil
- All types of cheeses
- Cultured milk products including yoghurts, buttermilk and kefir
- Ice-cream and other dairy desserts
- Flavoured milks
- Whiteners and creamers
- Dairy-spreads
- Lactose-free products
- Milk-infant formulas

Dairy technology

- All aspects of food processing technologies, including thermal and non-thermal processes, fermentation, cheesemaking, buttermaking
- Addition and properties of starter cultures
- Dairies and dairy industry equipment
- Smart manufacturing and industry 4.0
- Disposal and revalorization of dairy wastes

Properties of milk and other dairy products

- Composition (macro- and micronutrient composition, casein micelles)
- Physical properties and processing properties (Density, Redox properties, Colligative properties, Rheological behaviour, Colour etc.)
- Sensory properties
- Microbiological quality and shelf life
- Nutrient bioavailability

Quality/safety control from the farm through to the product

- Impact of animal feed, health, husbandry practices, lactation and welfare on the composition, quality, processing properties and safety of milk and other dairy products
  - Antibiotic use in farming practices
  - Livestock hygiene practices and monitoring of infection risk
  - Mastitis and somatic cell count
  - Automated milking vs conventional milking systems
  - Feed contamination and milk safety
- Storage and transport of raw milk
- Processing (thermal and non-thermal processes)
- Use of innovative packaging technology
- Storage procedures and shelf-life extension practices

Packaging, distribution and retail

- Novels packs, packaging materials and design
- Nutritional labelling and health and nutrition claims
- Refrigerated transport and distribution
- Supply chains
- Retail display and storage

Economics and marketing trends

- Global dairy trade
- Consumption patterns
- Factors influencing consumer decisions and purchasing patterns
- Sustainability
- Profitability of dairy farms

Association between dairy intake and all aspects of nutrition, health and disease

- Bone and dental health
- Mental health
- Reduced risk of certain cancers
- Sarcopenia
- Benefits of fortified dairy products
- Prebiotics and probiotics
- Allergy and intolerance

Dairy alternatives

- All aspects of dairy alternatives, from manufacture through to retail, consumer trends and demand, and health impact
- Plant-based milks and their derivatives
- Lab milk
- Milk, butter and cheese substitutes
- Imitation dairy products
- Dairy-free ingredients and processed foods

USING FSTA FOR YOUR DAIRY RESEARCH

Example search questions

- Can milk powder be used in the 3D printing of foods? *(Sample record on following page)*
- What are benefits of whey as an ingredient in sports beverages?
- How might synbiotics be used in the treatment of lactose intolerance?
- What impact, if any, does first calving age have on dairy production milk fat and protein content?
- What are benefits of legume-based beverages as non-dairy alternatives?
- What techniques can be employed to optimise processing of fermented walnut milk?

SOURCE EXAMPLES

Dairy content is drawn from a wide variety of sources including journals, patents, books, reports and more. Here are just some of the many dairy focused journals included within FSTA, chosen to illustrate the diversity and breadth of content:

- Bulletin of the International Dairy Federation
- China Dairy Industry
- Egyptian Journal of Dairy Science
- European Dairy Magazine
- International Dairy Journal
- International Journal of Dairy Technology
- Journal of Dairy Research
- Journal of Dairy Science
- Molochnaya Promyshlennost

SAMPLE FSTA RECORD FOCUSED ON DAIRY

Assessment of 3D printability of composite dairy matrix by correlating with its rheological properties.

Author: Sukirti Joshi; Jatindra K. Sahu; Mohammed A. Bareen; Sangeeta Prakash; Bhesh Bhandari; Nitya Sharma; Naik, S. N.
Correspondence Address: Jatindra K. Sahu, Food Customization Research Lab, Centre for Rural Development and Technology, Indian Institute of Technology Delhi, New Delhi, 110016, India.
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Abstract: In this study, the potential of heat desiccated milk powder (HDMP) in a composite dairy matrix with semi skimmed milk powder (SSMP) was assessed for hot melt extrusion-based 3D printing. The rheological characteristics of formulations at three stages i.e., pre-printing, printing, and post-printing were investigated. The shear thinning with rapid shear recovery and thermoresponsive behavior of the formulations were analyzed to mimic the prevailing conditions of pre-processing, processing, and post-processing of formulations to understand the temperature induced variations in their rheological characteristics during each stage. The rheological properties were correlated with printability through assessment of the consistency of straight lines (1D), average area of lattice scaffolds (2D), and dimensional stability of the 3D printed constructs. Results demonstrated that an increase in the level of incorporation of SSMP and a decrease in the proportion of HDMP increased the shear thinning behavior, viscosity (eta), yield stress (tau), storage modulus (G') and a decline in the shear recoverability of the formulations. The thermoresponsive behavior of the formulations was established with gelation temperature ranging from 28.1 to 29.4°C. The formulation SSMP (35): HDMP (25) resulted in sagging of the printed constructs, whereas the formulation SSMP (55): HDMP (5.0) exhibited the highest dimensional stability and shape retention post printing, owing to its maximum tau (1211.8 Pa) and G' (7026.4 Pa). The results obtained could provide insight into improving the performance of an HME based 3D printing in the dairy and food industries.

Keywords: CONSISTENCY; DRIED FOODS; GELATION; INSTANT FOODS; MILK; PHYSICAL PROPERTIES; PROCESSING; RHEOLOGICAL PROPERTIES; SHAPE; SHEAR; SKIM MILK POWDERS; STABILITY; STRESS; TEMP.; TEMPERATURE; VISCOSITY; YIELD STRESS

FURTHER INFORMATION

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