

Accepted Manuscript

Title: Verification of Hybrid Mixture Theory Based Two-Scale Unsaturated Transport Processes Using Controlled Frying Experiments

Authors: Jaspreet Sandhu, Pawan S. Takhar

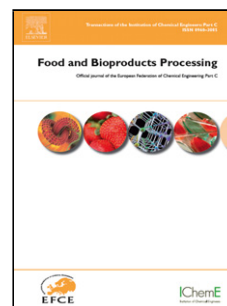
PII: S0960-3085(18)30216-5
DOI: <https://doi.org/10.1016/j.fbp.2018.04.004>
Reference: FBP 955

To appear in: *Food and Bioproducts Processing*

Received date: 12-11-2015
Revised date: 21-3-2018
Accepted date: 23-4-2018

Please cite this article as: Sandhu, Jaspreet, Takhar, Pawan S., Verification of Hybrid Mixture Theory Based Two-Scale Unsaturated Transport Processes Using Controlled Frying Experiments. *Food and Bioproducts Processing* <https://doi.org/10.1016/j.fbp.2018.04.004>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Verification of Hybrid Mixture Theory Based Two-Scale Unsaturated Transport Processes Using Controlled Frying Experiments

Jaspreet Sandhu and Pawan S. Takhar¹

Department of Food Science and Human Nutrition
University of Illinois at Urbana-Champaign,
Urbana, IL, 61801

¹ Corresponding author. E-mail: ptakhar@illinois.edu, Author has previously published as Pawan P. Singh

Highlights

- Unsaturated transport mechanisms were validated via controlled frying experiments.
- Frying experiments were controlled using a hollow Teflon disc and silicon glue.
- Hybrid mixture theory-based model was solved to describe the frying process.

Abstract

Involvement of unsaturated transport and high temperatures during frying of foods makes it a challenging process to study via experiments and computer simulations. The objective of this research is to validate the hybrid mixture based unsaturated transport theory of Takhar (2014) via controlled frying experiments. A hollow Teflon disc is used to insulate the edges of potato disc to ensure that frying is controlled, one-

Download English Version:

<https://daneshyari.com/en/article/6488328>

Download Persian Version:

<https://daneshyari.com/article/6488328>

[Daneshyari.com](https://daneshyari.com)