中国化学工程学报 2004 12 (6): 818-821 ISSN: 1004-616x CN: 44-1063/R

THE 13th IDS

高温油炸薄薯片过程中油的吸收和水分流失间的特性关系

Christopher, R.Southern, ,陈晓东, ,MohammedM.Farid

Department of Chemical and Materials Engineering, TheUniversity of Auckland, Private Bag 92019, Auckland, New Zealand

收稿日期 修回日期 网络版发布日期 接受日期

摘要 Thin potato crisps (2mm) were fried at 170℃, 180℃ and 190℃ for various times from 10s to 180s inclusive. It was found that definite oil uptake, moisture loss trends exist during the frying process. No significant difference in the oil uptake or moisture loss rates between flat-cut and ridge-cut crisps exists. Also found in this study was that an increased oil temperature promoted higher moisture loss rates. In turn, the higher moisture loss rates contributed to a higher oil uptake rate. It was found, based on the volumetric plots of oil content vs. water content, that the oil uptake rate was proportional to the moisture loss rate. As a result, it has been shown that there is a possibility of having a characteristic curve of oil uptake against moisture content.

关键词 高温油炸; 薄薯片; 油; 吸收率; 水分流失; 特性关系; 工程软理;

分类号

DOI:

The Characteristic Relationship Between Oil Uptake and Moisture Content during the High Temperature Immersion Frying of Thin Potato Crisps

Christopher, R.Southern, ; 陈晓东, , MohammedM.Farid

Department of Chemical and Materials Engineering, TheUniversity of Auckland, Private Bag 92019, Auckland, New Zealand

Received Revised Online Accepted

Abstract Thin potato crisps (2mm) were fried at 170℃, 180℃ and 190℃ for various times from 10s to 180s inclusive. It was found that definite oil uptake, moisture loss trends exist during the frying process. No significant difference in the oil uptake or moisture loss rates between flat-cut and ridge-cut crisps exists. Also found in this study was that an increased oil temperature promoted higher moisture loss rates. In turn, the higher moisture loss rates contributed to a higher oil uptake rate. It was found, based on the volumetric plots of oil content vs. water content, that the oil uptake rate was proportional to the moisture loss rate. As a result, it has been shown that there is a possibility of having a characteristic curve of oil uptake against moisture content.

Key words oil uptake; moisture content; frying process; thin potato crisps;

通讯作者:
ChristopherR
作者个人主页: Christopher; R.Southern; 陈晓东; MohammedM.Farid

扩展功能
本文信息
Supporting info
PDF(1521KB)
[HTML全文](0KB)
推荐文章
服务与反馈
把本文推荐给朋友
加入我的书架
加入引用管理器
引用本文
Email Alert
文章反馈
浏览全部信息
相关信息
在刊中 包含"高温油炸"的 相关文章
本文作者相关文章
Christopher
R.Southern
陈晓东
王贵生
yiqiao
MohammedM.Farid