

中国机械工程学会 合肥通用机械研究院有限公司主办  
中国机械工程学会包装与食品工程分会会刊  
中文核心期刊 · 中国科技核心期刊



国机集团  
SINOMACH  
ISSN 1005-1295  
CN 34-1120/TS

# 包装与食品机械

PACKAGING AND FOOD MACHINERY

## 麦汁低热负荷煮沸技术与装备研究

戴晓勇,徐 庆,吴 畏,张 帆,王浩宇,李占勇



ISSN 1005-1295



02>  
9 771005 129232

《包装与食品机械》公众号



“中国邮政”微信订阅



1  
第 1 期  
2023年2月 第41卷

## 目 次

### 试验研究

- 大豆种皮纤维素薄膜的制备及性能研究 ..... 蔡文琪,李泽坤,翟佳乐,陈 宇,唐 旭,李晓钰,杨立娜(1)  
基于 EDEM 的螺旋输送机输送效率和能耗分析 ..... 张昊晨,张 超,曹宪周(8)  
杀菌条件对藜麦乳饮料贮藏稳定性的影响 ..... 刘勇勇,管 骁,黄 凯,李 森,张 好(14)  
不同包装形式对低温冷鲜牛肉贮藏品质影响的研究 ..... 王洪江,范晓禹,赵楚萍,陈洪生(19)  
基于偏最小二乘回归模型的鱼露理化成分与抗氧化活性关系研究  
..... 刘瑛楠,栾宏伟,步 营,朱文慧,励建荣,李学鹏,周小敏,王明丽,季广仁(25)  
熟制小龙虾软包装体系灭菌过程中的传热模型研究 ..... 王 茜,王利强(32)  
基于模糊数学评价的黑蒜鸡油菌香辣酱制备及其抗氧化性能的研究 ..... 贾庆超(39)  
果箱包装结构对苹果损伤特性的影响 ..... 王 佳,李绍波,陈春皓,李建平,王瑞祥,乜石旺,郭江鹏(48)  
基于滑槽试验的小麦粉静电积累特性研究 ..... 尚 坤,李永祥,孟坤鹏,王 依(55)

### 技术综述

- 麦汁低热负荷煮沸技术与装备研究 ..... 戴晓勇,徐 庆,吴 畏,张 帆,王浩宇,李占勇(60)

### 设计计算

- 基于图像识别技术的草莓采摘机设计 ..... 李 昭,张耀艺,耿宇航,谢颖佳,孙建明(70)  
吹瓶机开合模凸轮机构的导轨设计 ..... 陶仁杰,冯志华,郑中顺(75)  
烟用滤棒上下料机构设计及有限元分析 ..... 田 原,钟 飞,杨小俊,周宏娣(80)  
一种改进型高精度定量称重系统的设计 ..... 孙春虎,方愿捷(86)  
基于 PLC 控制的大枣切片机设计与分析 ..... 卢 娜(91)  
大型秸秆打捆机液压系统的节能优化研究 ..... 王永刚(97)  
无人机物流系统的自动卸货装置设计 ..... 马凤仪,张志强,徐 静(102)  
柚子调向机滑道机构的运动仿真与分析 ..... 梁梦瑶,黄兴元(107)

## CONTENTS

- Study on preparation and properties of cellulose film of soy hulls ..... CAI Wenqi, LI Zekun, ZHAI Jiale, CHEN Yu, TANG Xu, LI Xiaoyu, YANG Lina ( 1 )
- Analysis of conveying efficiency and energy consumption of screw conveyor based on EDEM ..... ZHANG Haochen, ZHANG Chao, CAO Xianzhou ( 8 )
- Effect of sterilizing conditions on the storage quality of quinoa milk beverage ..... LIU Yongyong, GUAN Xiao, HUANG Kai, LI Sen, ZHANG Yu ( 14 )
- Effects of different packaging forms on preservation quality of chilled beef ..... WANG Hongjiang, FAN Xiaoyu, ZHAO Chuping, CHEN Hongsheng ( 19 )
- Study on the relationship between the physicochemical components and antioxidant activity of fish sauce based on partial least squares regression model ..... LIU Yingnan, LUAN Hongwei, BU Ying, ZHU Wenhui, LI Jianrong, LI Xuepeng, ZHOU Xiaomin, WANG Mingli, JI Guangren ( 25 )
- Study on heat transfer model for sterilization process of cooked crayfish flexible packaging system ..... WANG Xi, WANG Liqiang ( 32 )
- Study on preparation and antioxidant activity of black garlic chanterelle spicy sauce based on fuzzy mathematics evaluation ..... JIA Qingchao ( 39 )
- Effects of packing structure of fruit box on damage characteristics of apples ..... WANG Jia, LI Shaobo, CHEN Chunhao, LI Jianping, WANG Ruixiang, NIE Shiwang, GUO Jiangpeng ( 48 )
- Study on electrostatic accumulation characteristics of wheat flour based on chute experiment ..... SHANG Kun, LI Yongxiang, MENG Kunpeng, WANG Yi ( 55 )
- Research on wort boiling technology and equipment with low thermal stress ..... DAI Xiaoyong, XU Qing, WU Wei, ZHANG Fan, WANG Haoyu, LI Zhanyong ( 60 )
- Design of strawberry harvester based on image recognition technology ..... LI Zhao, ZHANG Yaoyi, GENG Yuhang, XIE Yingjia, SUN Jianming ( 70 )
- The design of opening and closing mold cam mechanism of bottle blowing machine ..... TAO Renjie, FENG Zhihua, ZHENG Zhongshun ( 75 )
- Design and finite element analysis of cigarette filter rod loading and unloading mechanism ..... TIAN Yuan, ZHONG Fei, YANG Xiaojun, ZHOU Hongdi ( 80 )
- Design of an improved high-precision quantitative weighing system ..... SUN Chunhu, FANG Yuanjie ( 86 )
- Design and analysis of Jujube slicer based on PLC control ..... LU Na ( 91 )
- Study on energy saving optimization of hydraulic system of large straw baler ..... WANG Yonggang ( 97 )
- Design of automatic unloading device for UAV logistics system ..... MA Fengyi, ZHANG Zhiqiang, XU Jing ( 102 )
- Motion and simulation analysis of the slide mechanism in a grapefruit reorientation ..... LIANG Mengyao, HUANG Xingyuan ( 107 )