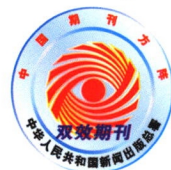


食品科学[®]

2023 4



中国出版政府奖期刊提名奖



ISSN1002-6630
CN11-2206/TS

FOOD SCIENCE

2023年第44卷 第4期

半月刊

2023年2月25日出版



QK2253205

花椒油树脂

天然色香味 风味标准化

- 超临界CO₂萃取,原香高麻度
- 麻味数据化,科学控制风味
- 降低成本,生产更简便



ISSN 1002-6630



仲景股份有限公司 / 0377-69680626



目次

食品

2023年 第44卷

食品化学

- pH值偏移大豆油体-姜黄素复合乳液的物理特性及稳定性……康梦雪, 孙禹凡, 宋晗钰, 钟明明, 王 帅, 齐宝坤*(1)
- 活性氧激活缺氧诱导因子-1 α 加速宰后成熟初期牛肉能量代谢……………郭雨轩, 陈 骋*, 师希雄, 郭兆斌,
马国源, 马纪兵, 余群力(9)
- 糖基化联合磷酸化降低鲢鱼小清蛋白致敏性的机制……………陈文美, 周厚泽, 邵艳红, 刘 俊*, 涂宗财(17)
- 小麦淀粉和谷蛋白互作对油炸外裹糊鲢鱼鱼糜块油脂分布的影响……………冯佳奇, 陈季旺*, 袁子珺,
廖 鄂, 彭利娟, 夏文水(24)
- 等离子体协同白藜芦醇改性香蕉淀粉及其性质……………孙 颖, 郑丽丽, 郑晓燕, 杨 旸,
校 导, 艾斌凌, 张正科*, 盛占武*(32)
- 牡丹花蕊蛋白对面团和面筋蛋白特性的影响……………罗 磊, 夏迎利, 杨浩昆, 赵一帆, 李瀚姝, 马 潇(42)
- 凉粉草多糖对鱼肌球蛋白理化性质和结构特征的影响……………周昕仪, 游 刚*, 高可安, 董诗瑜,
马舒恬, 陈尚里, 刘小玲*(48)
- 碱性pH值提取对大豆油脂体稳定性及消化特性的影响……………宋晗钰, 钟明明, 康梦雪, 满 慧, 王震霄, 齐宝坤*(57)
- 罗望子种仁球蛋白-EGCG共价复合物的制备及其在乳化香肠中的应用……杨 杨, 王梦桔, 王 悦, 边 鑫, 范 婧,
马春敏, 石彦国, 李笑梅, 张 娜*(64)
- 基于组织蛋白酶催化的不冻液冻结中华管鞭虾中肌原纤维蛋白氧化分析……………许 丹, 韩 悦, 郑 斌,
邓尚贵, 陈雪昌, 张小军*(71)
- 再制干酪乳化过程中理化、功能特性及微观结构的变化……………李红娟, 李梦凡, 袁玉京, 陈紫阳,
朱广潮, 李 丹, 李洪波, 于景华*(78)
- 脱乙酰基魔芋葡甘聚糖理化性质及其对凉皮质构和体外消化的影响……………葛珍珍, 许明月, 靳学远,
高珊珊, 赵光远, 纵 伟*(85)
- 大豆蛋白-黄芩素的结合机制及蛋白构象和功能变化……………闫馨月, 贾亦佳, 孙诗艳, 张东蒙, 耿梦洁, 杨晋杰,
Stanislav SUKHIKH, Olga BABICH, 齐宝坤*, 李 杨*(91)
- 部分酸水解对桃胶多糖结构和乳化功能的影响……………张宏媛, 钱佳俊, 李哲远, 张沈栋,
杨晓辰, 艾连中, 赖凤羲, 张 汇*(99)
- 滁菊粉对面团特性和面包风味及其抗氧化活性的影响……………鲍雨婷, 孙 玥, 李雪玲, 梁 进*(107)
- 糜子直链淀粉、蛋白质含量对其外观品质及食味品质的影响……………李冬梅, 王洪露, 龚 瑶,
曹梓微, 李佳雨, 冯佰利*(115)
- 基于改善脱水白萝卜复水特性的黑木耳多糖组分筛选及结构鉴定……………苏 鑫, 王贲香, 焦 璇,
张 弛, 文连奎*, 贺 阳*(122)
- 米糠多糖-乳清分离蛋白美拉德反应及其产物表征……………吴 爽, 王 涵, 王 展, 沈汪洋, 胡中泽, 周 坚, 黄文晶*(131)
- 薏米淀粉纳米颗粒的制备及理化特性……………曾木花, 黄敏丽, 陈雯净, 贾 茹, 廖 珺,
姚诗涵, 李 进, 郑宝东, 郭泽镔*(139)
- 过氧化氢和活性炭脱色对百蕊草多糖结构及应用特性影响的比较分析……邵丽君, 琚飞龙, 钟 杨, 周颖娣, 李贝贝,
凌依凡, 孙 玥, 梁 进, 李雪玲*(146)
- 从水分迁移角度阐释压延间距对小麦鲜面品质的影响……………刘 玲, 马鑫鑫, 史赵建, 胡新中*(152)
- 橙皮苷、柚皮苷与酪蛋白相互作用机制比较分析……………刘雪梅, 王华敏, 赵 利, 白春清*(162)

生物工程

- 发酵方式对玉米粉品质和风味特性的影响……………韩翠萍, 段佳玉, 曹 晨, 李 戈, 杨 雪, 江连洲*, 于殿宇*(171)

科 学

目 次



第04期 总第689期

- 贝莱斯芽孢杆菌1-3产表面活性素的纯化、鉴定及表征张 军, 张 良, 汤 伟, 孙晓雯,
唐 涛, 乔晓妮, 梁 萌, 何增国*(177)
- 剁椒姜丝后熟阶段微生物与挥发性风味物质的相关性田叶新, 母应春*, 苏 伟, 尹学东(185)
- 面筋蛋白咸味肽的分离纯化及结构鉴定温青玉, 张 雨, 李天齐, 张康逸*(194)
- 常压室温等离子体诱变与微生物微液滴培养选育谷胱甘肽高产菌株凌思雨, 王 洲, 张会敏, 李 闯,
刘庆涛, 刘 艳, 薛正莲*(200)
- 鹰嘴豆抗氧化肽的分离纯化、鉴定及其抗氧化活性梁雪荣, 路振康, 毛晓英*, 吴庆智, 张 建(209)

成分分析

- 基于感官导向的香莱兰特征风味物质分析及重构李瑞丽, 田 数, 郭春生, 李力群, 陈 康, 梁 淼, 张峻松*(217)
- 暂养净化及无水保活中太平洋牡蛎活力品质与呈味物质分析林恒宗, 高加龙, 梁志源, 秦小明*,
范秀萍, 林海生, 曹文红, 黄艳平(224)
- 基于电子鼻与HS-SPME-GC-MS技术对不同
产地黄观音乌龙茶香气差异分析邵淑贤, 徐梦婷, 林燕萍, 陈潇敏, 方德音,
蔡捷英, 王金焕, 金 珊*, 叶乃兴*(232)
- 不同熬制工艺对“佛跳墙”营养成分及风味物质的影响林瑞榕, 袁红飞, 钟小清, 唐胜春, 吴娟娟, 郭泽宾*(240)
- 基于顶空气相离子迁移色谱对鸭肉腥味特征物质的鉴定赵改名, 王 森, 祝超智*, 孙灵霞,
王壮壮, 王兴辉, 谢 伟(247)
- 在线固相萃取-高效液相色谱-高分辨质谱法测定植物中11种水溶性有机酸战 楠, 孙 青, 郝瑞霞, 郭 峰*(256)

安全检测

- 基于微波空间反射法的蔬菜含水率及贮藏时间无损检测李陈孝, 任 圆, 赵晨宇, 何 贤, 于小庭, 徐艳蕾*(265)
- 油茶果自然霉变程度的可见/近红外与中短波近红外光谱检测姜洪喆, 杨雪松, 李兴鹏, 蒋雪松, 周宏平*, 施明宏(272)
- 氨基酸同时消除甲醛和乙二醛的机理及消减产物的细胞毒性林佳钰, 黄才欢, 郑 洁, 刘 付,
欧隽滢, 周 华, 胡嘉漫, 欧仕益*(278)
- 牛、羊乳粉的DSC热学性质比较及掺假分析张昊阳, 肖 宇, 乔春艳, 郝 果, 李 妍, 刘永峰*(286)
- 基于方波伏安法的聚多巴胺@纳米银修饰玻碳电极测定畜禽肉中氯丙嗪邹玉婷, 段宁馨, 古飞燕, 黄泓凯,
赵晓娟*, 刘功良, 罗忠润(292)
- 基于多重连接探针扩增技术的食品中六重过敏原成分检测王鸣秋, 刘 艳, 李诗瑶, 董婉婷,
张 涛, 林 津, 朱必婷, 张 莉*(300)
- 基于Cu,Fe-N-C氧化酶活性构建邻苯二甲酸酯荧光检测探针李 宏, 史 巧, 陈骏飞, 王馨蕊,
汤回花, 李秋兰, 杨德志, 杨亚玲*(306)
- Fe³⁺掺杂聚多巴胺纳米球荧光适配体传感器对
小麦中脱氧雪腐镰刀菌烯醇的检测路 念, 马 骥, 成军虎, 孙大文*(313)
- 基于香气指纹图谱和多元化学计量法对黄金茶2号等级的判别分析巢 瑾, 周令欣, 银飞燕, 罗 茜, 赵萌萌,
袁 勇, 吴浩人, 李 跑, 蒋立文*(321)
- 超高效液相色谱-串联质谱法检测食品中腰果过敏原宁亚维, 杨 正, 马俊美, 刘 茁, 陈 佳*, 李 强*(329)
- 铂壳金核纳米酶介导的磁弛豫免疫传感器快速检测食源性沙门氏菌董永贞, 陈 瑞, 吴紫荆,
陈翊平*, 潘 晖, 刘明军(337)



Food Chemistry

- Physical Characteristics and Stability of pH-Shifted Soybean Oil Body-Curcumin Composite EmulsionKANG Mengxue, SUN Yufan, SONG Hanyu, ZHONG Mingming, WANG Shuai, QI Baokun* (1)
- Reactive Oxygen Species Accelerates Energy Metabolism by Activating Hypoxia-Inducible Factor-1 α in Bovine Muscle at the Initial Stage of Postmortem AgingGUO Yuxuan, CHEN Cheng*, SHI Xixiong, GUO Zhaobin, MA Guoyuan, MA Jibing, YU Qunli (9)
- Mechanism of Reduction of Allergenicity of Silver Carp Parvalbumin by Glycation Combined with PhosphorylationCHEN Wenmei, ZHOU Houze, SHAO Yanhong, LIU Jun*, TU Zongcai (17)
- Effect of the Interaction between Wheat Starch and Gluten on Oil Distribution in Deep-Fried Battered and Breaded Fish Nuggets from Silver Carp SurimiFENG Jiaqi, CHEN Jiwang*, YUAN Zijun, LIAO E, PENG Lijuan, XIA Wenshui (24)
- Effects of Combined Plasma and Polyphenol Modification on Properties of Banana Starch SUN Ying, ZHENG Lili, ZHENG Xiaoyan, YANG Yang, XIAO Dao, AI Binling, ZHANG Zhengke*, SHENG Zhanwu* (32)
- Effect of Peony Stamen Protein on Dough and Gluten Protein Properties LUO Lei, XIA Yingli, YANG Haokun, ZHAO Yifan, LI Hanshu, MA Xiao (42)
- Effects of *Mesona chinensis* Benth Polysaccharide on the Physicochemical Properties and Structural Characteristics of MyosinZHOU Xinyi, YOU Gang*, GAO Ke'an, DONG Shiyu, MA Shutian, CHEN Shangli, LIU Xiaoling* (48)
- Effect of Alkaline pH Extraction on the Stability and Digestive Properties of Soybean Oil BodiesSONG Hanyu, ZHONG Mingming, KANG Mengxue, MAN Hui, WANG Zhenxiao, QI Baokun* (57)
- Preparation of Tamarind Seed Globulin-EGCG Covalent Complex and Its Application in Emulsified SausagesYANG Yang, WANG Mengju, WANG Yue, BIAN Xin, FAN Jing, MA Chunmin, SHI Yanguo, LI Xiaomei, ZHANG Na* (64)
- Myofibrillar Protein Oxidation in Immersion-Frozen Red Shrimp (*Solenocera crassicornis*) during Frozen Storage: Analysis Based on Changes of Endogenous Enzyme Activity XU Dan, HAN Yue, ZHENG Bin, DENG Shanggui, CHEN Xuechang, ZHANG Xiaojun* (71)
- Physicochemical, Functional and Microstructural Changes during the Emulsification Process of Processed CheeseLI Hongjuan, LI Mengfan, YUAN Yujing, CHEN Ziyang, ZHU Guangchao, LI Dan, LI Hongbo, YU Jinghua* (78)
- Physicochemical Properties of Deacetylated Konjac Glucomannan and Its Effects on the Quality and *in Vitro* Digestion Characteristics of Cold NoodlesGE Zhenzhen, XU Mingyue, JIN Xueyuan, GAO Shanshan, ZHAO Guangyuan, ZONG Wei* (85)
- Binding Mechanism and Conformation and Functional Changes of Soybean Protein-Baicalein ComplexesYAN Xinyue, JIA Yijia, SUN Shiyan, ZHANG Dongmeng, GENG Mengjie, YANG Jinjie, Stanislav SUKHIKH, Olga BABICH, QI Baokun*, LI Yang* (91)
- Effect of Partial Acid Hydrolysis on the Structure and Emulsifying Function of Peach Gum PolysaccharideZHANG Hongyuan, QIAN Jiajun, LI Zheyuan, ZHANG Shendong, YANG Xiaochen, AI Lianzhong, LAI Fengxi, ZHANG Hui* (99)
- Effect of Chuzhou Chrysanthemum Powder on Dough Properties and Flavor and Antioxidant Activity of BreadBAO Yuting, SUN Yue, LI Xueling, LIANG Jin* (107)
- Effects of Amylose and Protein Contents on Visual Appearance and Eating Quality of Proso Millet LI Dongmei, WANG Honglu, GONG Yao, CAO Ziwei, LI Jiayu, FENG Baili* (115)
- Screening and Structural Characterization of *Auricularia auricula* Polysaccharides for Their Ability to Improve Rehydration Characteristics of Dehydrated White Radish SU Xin, WANG Bixiang, JIAO Xuan, ZHANG Chi, WEN Liankui*, HE Yang* (122)
- Maillard Reaction between Rice Bran Polysaccharide and Whey Protein Isolate and Characterization of the Reaction Product WU Shuang, WANG Han, WANG Zhan, SHEN Wangyang, HU Zhongze, ZHOU Jian, HUANG Wenjing* (131)
- Preparation and Physicochemical Properties of Coix Seed Starch NanoparticlesZENG Muhua, HUANG Minli, CHEN Wenjing, JIA Ru, LIAO Jun, YAO Shihan, LI Jin, ZHENG Baodong, GUO Zebin* (139)
- Effect of Activated Carbon or Hydrogen Peroxide Decolorization on the Structure and Application Properties of Polysaccharides from *Thesium chinense* Turcz.SHAO Lijun, JU Feilong, ZHONG Yang, ZHOU Yingdi, LI Beibei, LING Yifan, SUN Yue, LIANG Jin, LI Xueling* (146)
- Influence of Sheeting Gap on the Quality of Fresh Wheat Noodles from the Perspective of Water MigrationLIU Ling, MA Xinxin, SHI Zhaojian, HU Xinzhong* (152)
- Comparative Studies on Interaction Mechanism of Hesperidin and Naringin with CaseinLIU Xuemei, WANG Huamin, ZHAO Li, BAI Chunqing* (162)

Bioengineering

- Effect of Fermentation Method on Quality and Flavor Characteristics of Maize FlourHAN Cuiping, DUAN Jiayu, CAO Chen, LI Ge, YANG Xue, JIANG Lianzhou*, YU Dianyu* (171)



- Purification, Identification, and Characterization of Surfactin from *Bacillus velezensis* 1-3 ZHANG Jun, ZHANG Liang, TANG Wei, SUN Xiaowen, TANG Tao, QIAO Xiaoni, LIANG Meng, HE Zengguo* (177)
- Correlation between Microorganisms and Volatile Flavor Compounds Stage of Chopped Pepper with Ginger Shreds during Post-Ripening TIAN Yexin, MU Yingchun*, SU Wei, YIN Xuedong (185)
- Isolation, Purification and Structure Identification of Salty Peptides from Wheat Gluten WEN Qingyu, ZHANG Yu, Li Tianqi, ZHANG Kangyi* (194)
- Breeding of a High-Yield Glutathione-Producing Strain by Atmospheric and Room Temperature Plasma Mutagenesis and Microbial Microdroplet Culture System LING Siyu, WANG Zhou, ZHANG Huimin, LI Chuang, LIU Qingtao, LIU Yan, XUE Zhenglian* (200)
- Purification, Identification and Antioxidant Activity of Antioxidant Peptides from Chickpea Protein Hydrolysate LIANG Xuerong, LU Zhenkang, MAO Xiaoying*, WU Qingzhi, ZHANG Jian (209)

Composition Analysis

- Sensory-Guided Analysis and Recombination of Characteristic Flavor Compounds in *Vanilla planifolia* Andrews LI Ruiqi, TIAN Shu, GUO Chunsheng, LI Liqun, CHEN Kang, LIANG Miao, ZHANG Junsong* (217)
- Changes in Viability and Taste Compounds of *Crassostrea gigas* during Depuration and Waterless Live Storage LIN Hengzong, GAO Jialong, LIANG Zhiyuan, QIN Xiaoming*, FAN Xiuping, LIN Haisheng, CAO Wenhong, HUANG Yanping (224)
- Differential Analysis of Aroma Components of Huangguanyin Oolong Tea from Different Geographical Origins Using Electronic Nose and Headspace Solid-Phase Microextraction-Gas Chromatography-Mass Spectrometry SHAO Shuxian, XU Mengting, LIN Yanping, CHEN Xiaomin, FANG Deyin, CAI Jieying, WANG Jinhuan, JIN Shan*, YE Naixing* (232)
- Effects of Different Cooking Processes on Nutrients and Flavor Substances of Fotiaoqi, Steamed Abalone with Shark's Fin and Fish Maw in Broth LIN Ruirong, YUAN Hongfei, ZHONG Xiaoqing, TANG Shengchun, WU Juanjuan, GUO Zebin* (240)
- Identification of Characteristic Odorants in Duck Meat by Headspace-Gas Chromatography-Ion Mobility Spectrometry ZHAO Gaiming, WANG Sen, ZHU Chaozhi*, SUN Lingxia, WANG Zhuangzhuang, WANG Xinghui, XIE Wei (247)
- Determination of 11 Water-Soluble Organic Acids in Plants by Online Solid-Phase Extraction Coupled with High Performance Liquid Chromatography-High Resolution Mass Spectrometry ZHAN Nan, SUN Qing, HAO Ruixia, GUO Feng* (256)

Safety Detection

- Nondestructive Detection of Vegetable Moisture Content and Storage Time Using Microwave Free-Space Reflection Method LI Chenxiao, REN Yuan, ZHAO Chenyu, HE Xian, YU Xiaoting, XU Yanlei* (265)
- Detection of the Degree of Natural Mildew of *Camellia oleifera* Fruit Using Visible/Near Infrared, Mid- and Short-Wave Near Infrared Spectroscopy JIANG Hongzhe, YANG Xuesong, LI Xingpeng, JIANG Xuesong, ZHOU Hongping*, SHI Minghong (272)
- Mechanisms for Simultaneous Removal of Formaldehyde and Glyoxal by Amino Acids and Cytotoxicity of Their Products LIN Jiayu, HUANG Caihuan, ZHENG Jie, LIU Fu, OU Juanying, ZHOU Hua, HU Jiaman, OU Shiya* (278)
- Comparative Differential Scanning Calorimetric Analysis of Thermal Properties of Bovine and Goat Milk Powder and Identification of Goat Milk Powder Adulteration with Bovine Milk Powder ZHANG Haoyang, XIAO Yu, QIAO Chunyan, HAO Guo, LI Yan, LIU Yongfeng* (286)
- Determination of Chlorpromazine in Livestock and Poultry Meat by Polydopamine@Nanosilver Modified Glassy Carbon Electrode Based on Square Wave Voltammetry ZOU Yuting, DUAN Ningxin, GU Feiyan, HUANG Hongkai, ZHAO Xiaojuan*, LIU Gongliang, LUO Zhongrun (292)
- Multiplex Ligation-Dependent Probe Amplification for Simultaneous Detection of Six Allergenic Ingredients in Foods WANG Mingqiu, LIU Yan, LI Shiyao, DONG Wanting, ZHANG Tao, LIN Jin, ZHU Biting, ZHANG Li* (300)
- A Fluorescent Probe Based on Cu,Fe-N-C Nanozyme with Oxidase-like Activity for Detection of Phthalate Esters LI Hong, SHI Qiao, CHEN Junfei, WANG Xinrui, TANG Huihua, LI Qiulan, YANG Dezhi, YANG Yaling* (306)
- A Fluorescent Aptasensor Based on Fe³⁺ Doped Polydopamine Nanospheres for Detection of Deoxynivalenol in Wheat LU Nian, MA Ji, CHENG Junhu, SUN Da-wen* (313)
- Grade Identification of Huangjinchai Tea 2 by Aroma Fingerprinting Combined with Multivariate Chemometric Analysis CHAO Jin, ZHOU Lingxin, YIN Feiyan, LUO Qian, ZHAO Mengmeng, YUAN Yong, WU Haoren, LI Pao, JIANG Liwen* (321)
- Detection of Cashew Allergens in Foods by Ultra-high Performance Liquid Chromatography-Tandem Mass Spectrometry NING Yawei, YANG Zheng, MA Junmei, LIU Zhuo, CHEN Jia*, LI Qiang* (329)
- Gold Core@Platinum Shell-Nanozyme-Mediated Magnetic Relaxation Immunosensor for the Rapid Detection of Foodborne *Salmonella* DONG Yongzhen, CHEN Rui, WU Zijing, CHEN Yiping*, PAN Hui, LIU Mingjun (337)

YE肽鲜系列

立体鲜味

肽。

分子量小于2000D
的食源性呈味肽

鲜。

富含多种鲜味物质
多维度鲜味



技术直播 免费申样

核心鲜味料 XIAN100

主要呈鲜物质为呈味肽、氨基酸，鲜味表达
主要在满口感、回味及滞留感。

复合鲜味料 XIAN10

涵盖了大部分的鲜味物质，提供直冲、饱满、
均衡的鲜味，最高十倍鲜味。