

# CONTENTS

食品工业科技

2010年第10期，总234期

## 前瞻 *Prospect*

### 专家导航 Guideline

16 雄关漫道从头越

——谈中国坚果炒货行业现状、面临的挑战及应对措施

### 热点追踪 Focus Tracing

18 创新引领行业转型与突围

——第十届中国面制品大会在京召开

22 京城九月秋风爽，各路英华聚国展

——2010中国国际啤酒、饮料制造技术及设备展览会震撼登场

### 安全视角 Food safety

24 治理一次性发泡塑料餐具问题，保障餐饮业健康安全

## 实战 *Application*

### 营销管理 Sales Management

30 警惕节日促销的陷阱

### 法律案例 Legal Cases

32 劳动合同非本人签字，员工诉求双倍工资被驳

## 互动 *Communication*

### 企业联办 Co-sponsored with Enterprise

36 食品包装材料的发展趋势(浙江银象专栏)

37 用酶制剂应对高粮价(丹尼斯克专栏)

### 企业报道 Enterprise Report

38 激发啤酒酿造新灵感

——对话诺维信啤酒和食用酒精工业北美区域市场经理

Soren Lund和亚太区域市场经理崔剑峰

40 无穷的创意，无尽的精彩

——访帝斯曼食品配料部亚太区销售总监Ken Hazzard,

荷兰总部啤酒和酒精饮料产品应用开发专家Kjeld Olesen

和中国工业销售经理李晓毅

42 新资源食品——酵母葡聚糖应用前景广阔

44 播撒美味，香飘四海

——访远东食品配料(石家庄)有限公司董事长李山锁

46 达意隆——为饮料工厂提供全面解决方案

48 为了食品的卫生，人类的健康，我们一直在努力

——访中天昊宇科技股份有限公司副总裁张亮

## 信息 *Information*

52 展会风景 *iExhibition View*

54 资讯动态 *News & Trends*



食品检测 高效便捷



HF5系列  
高精度温湿度变送器

- 温度、湿度和露点测量
- 高精度
- 高稳定性



HygroLog NT  
温湿度记录器

- 高精度、稳定
- 使用和维护简单
- 海量存储

地址：北京市海淀区上地信息路30号上地大厦4021室

电话：010-82600241/0/2/3

010-62964497

传真：010-82600355

# CONTENTS

2010年第10期，总234期

## 研究与探讨

- 65 不同芯材的海藻酸-壳聚糖微球的体外模拟释放.....占英英等  
*Simulated release of the different core materials in alginate-chitosan microcapsules in vitro.....ZHAN Ying-ying et al*
- 68 酶解方式对黄油酶解物风味物质的影响.....刘志东等  
*Effect of enzyme hydrolysis on flavor of the hydrolysates of butter.....LIU Zhi-dong et al*
- 72 娑罗子多糖的提取、含量测定及生物学活性研究.....边静静等  
*Study on the extraction, determination and biological activity of Semen Aesuli polysaccharide.....BIAN Jing-jing et al*
- 75 豆渣的功能性研究.....卓秀英等  
*Study on functional properties of soybean residue.....ZHUO Xiu-ying et al*
- 78 鲜切苹果致病霉菌的分离鉴定.....吴晓彬等  
*Isolation and identification of pathogenic molds from fresh-cut apple.....WU Xiao-bin et al*
- 82 甘蔗天然活性高级醇的柱层析纯化制备与分析.....陈赶林等  
*Column chromatography purification preparation and analysis of natural active higher alcohols of sugarcane.....CHEN Gan-Lin et al*
- 85 羟基自由基氧化对乳清蛋白氨基酸含量的影响.....崔旭海等  
*Effect of protein oxidation on content of amino acids of whey protein isolate by a free radical-generating system.....CUI Xu-hai et al*
- 89 几种植物天然提取液的抑菌作用研究.....舒友菊等  
*Study on antibacterial activity of natural extract from some plants.....SHU You-ju et al*
- 92 不同淀粉对肌纤维蛋白流变学性质和凝胶持水性的影响.....吴满刚等  
*Effects of starch characteristics on the rheology and water holding capacity of myofibrillar protein gels.....WU Man-gang et al*
- 95 辛烯基琥珀酸淀粉酯在乳化辣根精油中的应用.....孙默雷等  
*Application of starch octenylsuccinate in emulsified horseradish essential oil.....SUN Mo-lei et al*
- 98 真空包装烧鸡中腐败细菌的分离、初步鉴定与菌相变化分析.....刘勤华等  
*Isolation and identification of the spoilage bacteria of vacuum-packaged roasted chicken and analysis on changes of microflora composition.....LIU Qin-hua et al*
- 101 三种吸附剂对芡实多酚的吸附特性研究.....张余等  
*Study on adsorption characteristics of three adsorbents to polyphenol in gargon nut (*Euryale Ferro Sails.*).....ZHANG Cuan et al*
- 105 菊粉对鲤鱼肌原纤维蛋白凝胶特性的影响.....李明清等  
*Influence of inulin on the characteristics of Common Carp (*Cyprinus carpio*) myofibrillar protein gel.....LI Ming-qing et al*
- 109 唐古特白刺果浆中原花青素提取工艺及抗氧化性研究.....高海宁等  
*Study on extracting technology and antioxidation activity of the proanthocyanidins in *Nitraria tangutorum* Bobr.....GAO Hai-ning et al*
- 113 PEG/(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>双水相相图制作新方法的研究.....马伟超等  
*A novel method on establishment of PEG/(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> aqueous two-phase system phase diagram.....MA Wei-chao et al*

October, 2010(No. 234)

- 116 阴离子交换树脂的粒径和吸附时间对植酸吸附容量的影响.....戴传波等  
*Effect of particle diameter and adsorption time of anion exchanges resin on the adsorption capacity of phytin acid.....DAI Chuan-bo et al*
- 118 榨菜挥发性风味成分的分析.....刘明春等  
*Analysis of volatile flavor compounds of pickled mustard tuber.....LIU Ming-chun et al*
- 121 蝇虫草固体发酵培养基多糖的分离纯化及组分分析.....任大明等  
*Purification and composition analysis of polysaccharides from *Cordyceps militaris* solid fermentation medium.....REN Da-ming et al*
- 124 TiO<sub>2</sub>光催化降解乳酸反应动力学研究.....梁欣泉等  
*Study on kinetics of photocatalytic degradation of lactic acid by TiO<sub>2</sub>.....LIANG Xin-quan et al*
- 126 丁香叶黄酮的抑菌作用研究.....常丽新等  
*Study on antimicrobial effect of flavonoids from lilac leaves.....CHANG Li-xin et al*
- 129 花生红衣中多酚类物质清除DPPH自由基能力和抑菌性能的研究.....赵萍等  
*Study on capability of scavenging DPPH and bacteriostatic activity of polyphenols from peanut testsa.....ZHAO Ping et al*
- 132 泡茶方式对其微量元素的影响.....包婷婷等  
*Effect of way of infusing tea on elements in tea.....BAO Ting-ting et al*
- 136 采后厚朴提取物处理对桃果实抗病性的影响.....张莉等  
*Effect of Cortex Magnolia Officinalis extract treatment on disease resistance of harvested peach fruit.....ZHANG Li et al*
- 139 硫酸酯化亚麻胶的制备与分析.....张泽生等  
*Study on preparation and analysis of sulfated flaxseed gum.....ZHANG Ze-sheng et al*
- 142 甘露寡糖对罗非鱼肠道菌群的影响.....汪立平等  
*Effect of mannan oligosaccharides on intestinal microflora of tilapia.....WANG Li-ping et al*
- 146 功能性鸡肉蛋白食品加工性能研究.....李作为等  
*Study on food processing properties of functional chicken protein.....LI Zuo-wei et al*
- 149 大豆发芽过程中酶的含量变化及营养变化研究.....李新华等  
*Study on changes of enzyme and nutrition during the processing of soybean germination.....LI Xin-hua et al*
- 152 紫花松果菊挥发油抗氧化作用研究.....袁彩红等  
*Study on the antioxidant effect of volatile oil of *Echinacea purpurea* L.....YUAN Cai-hong et al*
- 154 如皋火腿加工过程中脂肪降解和氧化研究.....张新亮等  
*Study on lipolysis and lipid oxidation of Ruga Ham during processing.....ZHANG Xin-liang et al*
- 158 柿子酒中非花色苷酚物质的提取及组分分析.....贾翠英等  
*Extraction and analysis of non-anthocyanin phenolics in persimmon wine.....JIA Cui-ying et al*
- 161 茅台红葡萄酒风味物质超临界萃取GC-MS分析研究.....王道平等  
*Extraction of the flavor volatiles from Moutai red wine with supercritical fluid extraction and its component analysis....WANG Dao-ping et al*
- ## 生物工程
- 163 黄河三角洲耐高渗碱性纤维素酶产生菌YRD-19的诱变育种和产酶条件优化.....桂春燕等  
*Study on the screening and fermentation of osmophilic of alkaline cellulase higher production strain *Bacillus sp.* YRD-19.....GUI Chun-yan et al*

# CONTENTS

2010年第10期，总234期

- 168 平菇产木聚糖酶固态发酵条件优化和酶学性质研究..... 吴萍等  
*Study on enzymatic characteristics and solid-phase fermentation condition of xylanase from Pleurotus ostreatus*..... WU Ping et al
- 173 花生Ara h6基因的克隆、表达以及免疫活性鉴定..... 闫浩等  
*Cloning, expression and characterization of peanut allergen Ara h6*..... YAN Hao et al
- 176 白地霉发酵苹果渣的产香特点研究..... 朱静等  
*Study on production of volatile aroma by solid-state fermentation of Geotrichum candidum in apple pomace*..... ZHU Jing et al
- 182 大蒜果聚糖对乳杆菌的体外增殖作用研究..... 魏华琳等  
*Study on evaluation of prebiotic effects of three garlic fructans in vitro*..... WEI Hua-lin et al
- 186 直投式干酪乳杆菌鼠李糖亚种冻干粉的研制..... 刘冬梅等  
*Preparation of DVS starter culture of the freeze-dried Lactobacillus casei subsp. rhamnosus 719*..... LIU Dong-mei et al
- 190 一株具高木二糖和木三糖形成活力木聚糖酶链霉菌的鉴定..... 余元莉等  
*Identification of a xylanase producing strain of Streptomyces sp. F0107 with the high formation ability of xylobiose and xylotriose*..... SHE Yuan-li et al
- 194 从自然发酵风干肠中分离出的葡萄球菌生产性能的研究..... 赵俊仁等  
*Study on fermentation properties of five strains of Staphylococcus isolated from the Chinese-style naturally dry fermented sausages*..... ZHAO Jun-ren et al
- 197 高温甲壳素降解酶产生菌筛选及其酶学性质研究..... 戴德慧等  
*Study on screening of high temperature chitinase-producing microorganism and analysis of its enzymatic properties*..... DAI De-hui et al
- 200 米曲霉外切 $\beta$ -D-氨基葡萄糖苷酶活性部位研究..... 李冬霞等  
*Study on active site of exo- $\beta$ -D-glucosaminidase from Aspergillus Oryzae*..... LI Dong-xia et al
- 203 微波与纤维素酶协同水解杨木制备还原糖的研究..... 余先纯等  
*Preparation of reducing sugars with synergistic hydrolysis of microwave irradiation and cellulase from poplar*..... YU Xian-chun et al
- 206 谷氨酰胺转氨酶对小麦中非麦谷蛋白组分的作用..... 张若愚等  
*Effect of transglutaminase on the interaction among the non-glutenin protein compounds in wheat*..... ZHANG Ruoyu et al
- 210 产环糊精葡萄糖基转移酶菌株的筛选、鉴定与应用研究..... 孙涛等  
*Screening, identification and applications of a cyclodextrin glucanotransferase-producing microbial strain*..... SUN Tao et al
- 213 酶法制备家蝇幼虫抗氧化肽条件的优化..... 王丽媛等  
*Optimization of enzymatic producing of musca domestica larvae antioxidant peptide*..... WANG Li-yuan et al
- 216 培养条件对细脚拟青霉抑制金黄色葡萄球菌的影响..... 桂琳等  
*Effects of liquid culture conditions on inhibition of Paecilomyces tenuipes against Staphylococcus aureus*..... GOU Lin et al
- 219 柿酒发酵过程中酚类物质的变化规律研究..... 郭敏等  
*Study on change regulation of phenolic compounds during persimmon wine fermentation*..... GUO Min et al
- 223 羊肚菌菌丝体液体发酵醋的研制..... 江洁等  
*Preparation of Morchella esculenta mycelium liquid fermentation vinegar*..... GANG Jie et al
- 226 优质白酒立体发酵模式的研究..... 李丽等  
*Study on high-quality liquor through three-dimensional fermentation patterns*..... LI Li et al
- 229 蚕豆根尖微核实验阳性结果判断标准研究..... 李红等  
*Study on judgment criterion of positive result in Vicia Faba root tips micronucleus test*..... LI Hong et al
- 232 维生素C对发酵白菜中亚硝酸盐含量的影响..... 燕平梅等  
*Effects of vitamin C on the content of nitrite in fermented cabbage*..... YAN Ping-mei et al
- 235 高温碱性果胶酶产生菌的筛选及部分酶学特性研究..... 刘连成等  
*Isolation of alkaline pectinase-producing strain and its enzymatic properties*..... LIU Lian-cheng et al
- 239 一株放线菌产棕色素初探及其16S rDNA序列分析..... 施思等  
*Preliminary study on an actinomycete producing brown-pigment and its 16S rDNA sequence analysis*..... SHI Si et al
- 241 不同方法观察单增李斯特菌生物膜的比较研究..... 李燕杰等  
*Comparative research on Listeria monocytogenes biofilm with various observation methods*..... LI Yan-jie et al
- ## 工艺技术
- 243 硫酸酯化修饰米糠多糖的研究..... 王莉等  
*Study on sulfation technology of rice bran polysaccharide*..... WANG Li et al
- 247 银杏肉脯加工技术研究..... 姚芳等  
*Study on processing technology of gingko-dried pork slice*..... YAO Fang et al
- 251 响应曲面法优化中空纤维膜澄清保健酒工艺的研究..... 熊璞等  
*Optimization of clarification technology of healthy wine through hollow fiber membrane by response surface methodology*..... XIONG Pu et al
- 255 葱白多糖提取工艺优化及体外抗氧化活性研究..... 张英等  
*Study on the optimization of extraction technology and antioxidation activity of Fistular onion stalk (Allium schoenoprasum L.) polysaccharides*..... ZHANG Ying et al
- 259 芒麻叶中黄酮类化合物的提取工艺研究..... 贺波等  
*Study on extraction of flavonoids from leaves of ramie*..... HE Bo et al
- 263 糖玻璃化抗坏血酸胶囊制备的挤压工艺研究..... 常大伟等  
*Study on extrusion technology of encapsulating ascorbic acid in a glassy carbohydrate*..... CHANG Da-wei et al
- 266 酒精酵母中海藻糖提取液的精制..... 高梅莹等  
*Study on refinement of extracting solution of trehalose from alcohol yeast*..... GAO Mei-ying et al
- 269 复合酶法制取笋头水溶性膳食纤维的研究..... 李月华等  
*Study on preparation of water-soluble dietary fiber by cellulase compound enzymolysis method*..... LI Yue-hua et al
- 272 合浦珠母贝壳制备碳酸钙、丙酸钙的工艺研究..... 尚军等  
*Study on the technology of preparation of calcium carbonate and calcium propionate from Pinctada martensii shell*..... SHANG Jun et al
- 276 枸杞中色素的超声辅助提取工艺研究..... 史高峰等  
*Study on extraction process of pigment from *Lyceum barbarum* L. with ultrasonic-assisted*..... SHI Gao-feng et al
- 280 绿茶橙汁酸奶的研制..... 王卫等  
*Study on development of yogurt beverage with green tea and orange juice*..... WANG Wei et al

# CONTENTS

2010年第10期，总234期

- 283 利用苹果醋双歧杆菌发酵液制备活性饮料的研究.....安红娟等  
*Study on development of active drink with apple vinegar and bifidobacteria fermented liquid.....AN Hong-juan et al*

- 285 响应面法优化闪式提取陈皮中橙皮苷工艺的研究.....谢捷等  
*Optimization for homogenate extraction of hesperidin from pericarpium citri reticulatae by using response surface methodology.....XIE Jie et al*

- 289 双歧杆菌发酵西红柿生产功能保健饮料.....齐帅等  
*Development of functional health beverage of tomato fermented by Bifidobacteria.....QI Shuai et al*

- 291 微波辅助提取花生粕中植酸的研究.....余安等  
*Study on microwave-assisted extraction of phytic acid from peanut residue.....YU An et al*

- 294 分子蒸馏技术纯化花椒籽油中 $\alpha$ -亚麻酸的研究.....谢静等  
*Study on purification of  $\alpha$ -linolenic acid from Chinese pricklyash seed oil.....XIE Jing et al*

- 297 水溶性叶黄素功能饮料的研制.....赵丛丛等  
*Development of water-soluble lutein functional drink.....ZHAO Cong-cong et al*

- 300 水溶性叶黄素两亲性共聚物纳米胶束的研究.....张泽生等  
*Study on water-soluble nano-micelle formulation of lutein loaded in amphiphilic block copolymer.....ZHANG Ze-sheng et al*

- 303 酸角果肉多糖的提取工艺优化研究.....涂宗财等  
*Study on optimizing technology of extracting polysaccharide from Tamarind indica Linn pulp.....TU Zong-cai et al*

- 306 研磨法制备 $\beta$ -胡萝卜素水性分散体系工艺研究.....刘玉洁等  
*Study on process conditions of  $\beta$ -carotene dispersions prepared by milling method.....LIU Yu-jie et al*

- 310 低脂发酵香肠的工艺研究.....孙彩玉等  
*Study on technology of low-fat formula fermented sausage.....SUN Cai-yu et al*

- 313 牛蒡叶中蛋白和多糖提取工艺研究.....孟岩等  
*Study on extraction of protein and polysaccharide from the leaves of Arctium lappa.....MENG Yan et al*

- 316 超临界 $CO_2$ 萃取牡蛎中多不饱和脂肪酸的工艺研究.....刘程惠等  
*Study on extraction of polyunsaturated fatty acids from oyster by supercritical fluid  $CO_2$ .....LIU Cheng-hui et al*

- 319 纤维素酶法提取黑豆皮色素的工艺研究.....孙晓侠等  
*Study on extraction of pigment from black soybean hulls with cellulase.....SUN Xiao-xia et al*

## 包装与机械

- 322 木薯氧化淀粉-壳聚糖复合膜的成膜特性研究.....高凌云等  
*Study on film forming characteristics of oxidized cassava starch-chitosan blend film.....GAO Ling-yun et al*

- 325 关于提高TPG调味料喷雾干燥机科技含量的设想.....徐剑等  
*Assumption of improving the scientific and technological content of TPG flavoring spray dryer.....XU Jian et al*

## 食品添加剂

- 328 新型抗氧化剂芝麻酚的合成研究.....李江平等  
*Study on synthesis of sesamol from catechol.....LI Jiang-ping et al*

- 331 酶法合成麦芽糖肉豆蔻酸酯.....孙平等  
*Study on lipase-catalyzed synthesis of the maltose myristate.....SUN Ping et al*

October, 2010(No. 234)

## 食品安全

- 334 肉羊屠宰加工阶段溯源指标优化.....王兆丹等  
*Optimization of traceability index in sheep slaughter-process phase.....WANG Zhao-dan et al*

## 贮运保鲜

- 338 1-MCP、 $ClO_2$ 对兰州百合贮藏保鲜效果的影响.....巩慧玲等  
*Effect of 1-MCP or chlorine dioxide on the storage and fresh-keeping of Lanzhou lily.....GONG Hui-ling et al*

- 340 涂膜处理对板栗仁保鲜影响的研究.....李亚新等  
*Study on effect of coating treatments on the preservation of chestnut kernel.....LI Ya-xin et al*

- 344 茄子冷冻过程热湿迁移数值模拟研究.....陈天及等  
*Numerical simulation on heat and moisture movement of eggplant during freezing.....CHEN Tian-ji et al*

## 营养与保健

- 347 野生藜蒿提取物毒理安全性研究.....范青生等  
*Toxicological safety assessment on extraction of Artemisia selengensis Turcz. in wildness.....FAN Qing-sheng et al*

- 352 模拟中国母乳配制的婴儿配方奶粉对幼龄动物生长影响的实验研究.....陆翔等  
*Influence of a new infant formula simulated Chinese breast milk on the growth of young animals.....LU Xiang et al*

- 356 不同基因型树莓营养成分比较的研究.....袁艺等  
*Comparative study on nutrient components in different genotypes of raspberry.....YUAN Yi et al*

- 359 不同剂量蔗果低聚糖对小鼠免疫调节的研究.....杭锋等  
*Study on the immunomodulatory effects of fructooligosaccharides on mouse.....HANG Feng et al*

## 分析检测

- 364 用于有机磷农药检测的植物酯酶生物传感器的研究.....姜彬等  
*Study on biosensor based on plant esterase for determination of organophosphorus pesticide.....JIANG Bin et al*

- 367 GC-MS测定软包装饮料中光引发剂2-异丙基硫杂蒽酮的残留量.....张耀海等  
*Determination of 2-isopropylthioxanthone residue in packaged beverages by gas chromatography with mass spectrometry detection.....ZHANG Yao-hai et al*

- 370 葡萄糖酸法和3,5-二硝基水杨酸法测定杜仲水提液多糖含量.....李强等  
*Determination of polysaccharide in water extraction from Eucommia ulmoides Oliver by 3,5-dinitrosalicylic acid(DNS) method and anthrone-sulfuric method.....LI Qiang et al*

- 372 花椒总黄酮测定方法研究.....吴亮亮等  
*Study on the determination method of total flavonoids content in Zanthoxylum by spectrophotometry.....WU Liang-liang et al*

- 375 气相色谱质谱联用法检测牛奶及奶粉中肌醇.....姜瑞清等  
*Determination of myo-inositol in milk and milk power by gas chromatography and mass spectrometry.....JIANG Rui-qing et al*

- 377 基于近红外的蔬菜农残快速定性检测技术研究.....吴静珠等  
*Study on rapid qualitative analysis of pesticide residue in vegetable based on near infrared spectroscopy.....WU Jing-zhu et al*

- 380 葡萄球菌A型肠毒素检测竞争ELISA方法的建立.....徐丹丹等  
*An Indirect competitive ELISA method for quantitative analysis of Staphylococcal Enterotoxin A.....XU Dan-dan et al*

# CONTENTS

2010年第10期, 总234期

## 淋水式杀菌釜

- 新式杀菌釜理念
- 一个满足多种要求的系统
- 专为新式包装而设计
- 灵活多样的短时灭菌和消毒
- 生产控制
- 采用 PLC 全自动触摸屏控制



## 全水浸式杀菌釜

- 升温和降温速度快, 迅速达到杀菌效果
- 多种容器
- 灵活多样
- 生产控制
- 采用 PLC 全自动触摸屏控制



## 实验型杀菌釜

- 满足静止淋水和回转淋水
- 全程温度压力自动记录
- 全不锈钢制成, 符合食品卫生要求



## 回转式杀菌锅

- 适用于瓶装、罐装食品二次灭菌
- 热传递更迅速均匀
- 高温短时杀菌



## 中试杀菌釜

- 专业中试产品
- 满足大批量产品测试和小型生产需要
- 模拟程度高
- 与大批量生产状况完全相同
- 使用范围广
- 满足静止淋水和回转淋水
- 自动化精度高
- 全程温度压力自动记录
- 材质
- 全不锈钢制成 符合食品卫生要求



南京乐惠轻工装备制造有限公司  
锐托杀菌事业部

地址: 南京江宁开发区将军南路 600 号 P.C.: 211151  
电话: 025-52733617 传真: 025-52733700  
E-mail: retort.sales@lehui.com  
www.retort.com.cn  
www.lehui.com

- 383 超高效液相色谱-串联质谱法测定苹果中的赤霉素、脱落酸、甲荼威、多效唑和烯效唑残的残留量 ..... 张慧等  
*Determination of gibberellin, abscisic acid, carbaryl, paclobutrazol and uniconazole in apples by ultra performance liquid chromatography-tandem mass spectrometry..... ZHANG Hui et al*

- 386 云南文山野生金线莲中微量元素研究 .. 李洪潮等  
*Study on the microelements of wild Anoectochilus roxburghii in Wenshan of Yunnan Province..... LI Hong-chao et al*

- 388 食品中低聚异麦芽糖高效液相色谱检测方法研究 .. 傅博强等  
*Study on determination of isomaltooligosaccharides in foods by high performance liquid chromatography method..... FU Bo-qiang et al*

- 392 低聚半乳糖混合物的分离与检测 ..... 罗倩等  
*Detection and separation of galactooligosaccharide..... LUO Qian et al*

- 396 食品模拟物中邻苯二酚、间苯二酚、对苯二酚的测定 ..... 郭启雷等  
*Determination of 1,2-dihydroxybenzene, 1,3-dihydroxybenzene and 1,4-dihydroxybenzene in food simulants..... GUO Qi-lei et al*

## 专题综述

- 398 裂殖壶菌发酵生产DHA研究进展 ..... 魏萍等  
*Research progress on DHA production by Schizochytrium..... WEI Ping et al*

- 402 传统发酵食品——浆水研究概况及发展前景展望 ..... 孟宪刚等  
*Research and developing prospects of traditional fermentative food —Jiangshui..... MENG Xian-gang et al*

- 405 抗癌大豆多肽Lunasin的研究现状 ..... 季国等  
*Research status of the cancer-preventive peptide of Lunasin..... JI Guo et al*

- 408 L-缬氨酸生物合成的基础研究和菌种选育的进展 ..... 刘焕民等  
*Progresses of basic research on L-valine biosynthesis and the breeding of L-valine hyper-producer..... LIU Huan-min et al*

- 413 肉蛋白中衍生的生物活性肽的研究进展 ..... 李星云等  
*Research progress of bioactive peptides derived from meat proteins..... LI Xing-yun et al*

- 415 电化学酶免疫传感器在食品安全检测中的研究进展 ..... 丁建英等  
*Research progress of electrochemical enzyme-linked immunosensor in detection of food safety..... DING Jian-ying et al*

- 418 壳聚糖的功能性质及其在微胶囊技术中的应用 .. 李春杰等  
*The function of chitosan and its application in microencapsulation..... LI Chun-jie et al*

- 421 近红外光谱、中红外光谱、拉曼光谱无损检测技术在食用油脂分析中的研究进展 ..... 张菊华等  
*Review on application of near-infrared spectroscopy, mid-infrared spectroscopy and Raman spectroscopy in analysis of edible oil..... ZHANG Ju-hua et al*

- 426 修饰麦芽糊精在食品工业中的应用 ..... 张晶等  
*Application of modified maltodextrin in food industry..... ZHANG Jing et al*

- 429 马铃薯病毒研究新进展 ..... 马雪青等  
*Research advances of potato virus..... MA Xue-qing et al*

- 435 鸡蛋涂膜保鲜技术研究 ..... 李宁等  
*Study on the fresh-keeping effect of egg coating..... LI Ning et al*