

全国中文核心期刊
中国科技核心期刊
中国农业核心期刊
RCCSE中国核心学术期刊
中国科学引文数据库 (CSCD) 期刊
CAB International 收录期刊
美国《生物学文摘》收录期刊
美国《化学文摘》(CA) 收录期刊

首页 (/) 期刊介绍 编委会 投稿须知 期刊订阅 广告合作 联系我们 返回主站
(/Corp/10.aspx) (/Corp/3600.aspx) (/Corp/5006.aspx) (/Corp/50.aspx) (http://www.haasep.cn/)

«上一篇 (DArticle.aspx?type=view&id=201201025)
下一篇 (DArticle.aspx?type=view&id=201201027)



PDF下载 (pdfdown.aspx?Sid=201201026)

+分享
(http://www.jiathis.com/share?uid=1541069)



微信公众号: 大豆科学

[1]欧杰, 李晓蓓, 胡洁云, 等. 传统豆制品白干与薄百叶中优势腐败菌的分离与初步鉴定[J]. 大豆科学, 2012, 31(01): 119-123. [doi:10.3969/j.issn.1000-9841.2012.01.027]
OU Jie, LI Xiao-bei, HU Jie-yun, et al. Isolation and Preliminary Identification of Specific Spoilage Organisms from Traditional Soybean Products White Bean Curd and Bean Curd[J]. Soybean Science, 2012, 31(01): 119-123. [doi:10.3969/j.issn.1000-9841.2012.01.027]

点击复制

传统豆制品白干与薄百叶中优势腐败菌的分离与初步鉴定

《大豆科学》 [ISSN:1000-9841 /CN:23-1227/S] 卷: 第31卷 期数: 2012年01期 页码: 119-123 栏目:
出版日期: 2012-02-25

Title: Isolation and Preliminary Identification of Specific Spoilage Organisms from Traditional Soybean Products White Bean Curd and Bean Curd

文章编号: 1000-9841 (2012) 01-0119-05

作者: 欧杰¹ (KeySearch.aspx?type=Name&Sel=欧杰); 李晓蓓¹ (KeySearch.aspx?type=Name&Sel=李晓蓓); 胡洁云² (KeySearch.aspx?type=Name&Sel=胡洁云); 陈平² (KeySearch.aspx?type=Name&Sel=陈平); 林露² (KeySearch.aspx?type=Name&Sel=林露); 严维凌² (KeySearch.aspx?type=Name&Sel=严维凌)

1. 上海海洋大学 食品学院, 上海 201306;
2. 上海市食品研究所, 上海 200235

Author(s): OU Jie¹ (KeySearch.aspx?type=Name&Sel=OU Jie); LI Xiao-bei¹ (KeySearch.aspx?type=Name&Sel=LI Xiao-bei); HU Jie-yun² (KeySearch.aspx?type=Name&Sel=HU Jie-yun); CHEN Ping² (KeySearch.aspx?type=Name&Sel=CHEN Ping); LIN Lu² (KeySearch.aspx?type=Name&Sel=LIN Lu); YAN Wei-ling² (KeySearch.aspx?type=Name&Sel=YAN Wei-ling)

1. College of Food Science and Technology, Shanghai Ocean University, Shanghai 201306;
2. Shanghai Food Research Institute, Shanghai 200235, China

关键词: 传统豆制品 (KeySearch.aspx?type=KeyWord&Sel=传统豆制品); 优势腐败菌 (KeySearch.aspx?type=KeyWord&Sel=优势腐败菌); 16S rDNA (KeySearch.aspx?type=KeyWord&Sel=16S rDNA); 26S rDNA (KeySearch.aspx?type=KeyWord&Sel=26S rDNA); 分离与鉴定 (KeySearch.aspx?type=KeyWord&Sel=分离与鉴定)

Keywords: Traditional soybean products (KeySearch.aspx?type=KeyWord&Sel=Traditional soybean products); Specific spoilage organism (KeySearch.aspx?type=KeyWord&Sel=Specific spoilage organism); 16S rDNA (KeySearch.aspx?type=KeyWord&Sel=16S rDNA); 26S rDNA (KeySearch.aspx?type=KeyWord&Sel=26S rDNA); Isolation and identification (KeySearch.aspx?type=KeyWord&Sel=Isolation and identification)

分类号: TS201.30

DOI: 10.3969/j.issn.1000-9841.2012.01.027 (http://dx.doi.org/10.3969/j.issn.1000-9841.2012.01.027)

文献标志码: A

摘要: 以传统豆制品白干和薄百叶为材料, 对贮藏过程中主要腐败微生物进行分离鉴定。利用纯培养的方法共筛选出菌落形态差别比较明显的菌株19株。对细菌菌株进行形态观察、革兰氏染色和生理生化鉴定, 同时对细菌和酵母菌纯培养物提取DNA, 分别进行16S rDNA和26S rDNA PCR扩增, PCR产物经测序后与NCBI中已知序列进行比对和鉴定, 确定各细菌和酵母菌菌株的种属; 霉菌纯培养物染色后观察孢子繁殖形态, 最终确定这些菌株的种属。结果表明: 白干和薄百叶中共有的优势腐败菌是溶酪葡萄球菌, 枯草芽孢杆菌, 约翰逊不动杆菌, 戊糖片球菌, 季也蒙毕赤酵母, 皮状丝孢酵母; 圆弧青霉和黄绿青霉。此外, 白干中还有谜沫假丝酵母; 薄百叶中有浅黄假单胞菌, 芸苔丝孢酵母。

Abstract: The spoilage organisms in white bean curd and bean curd during storage period were isolated and identified in this experiment. Nineteen strains obviously different in morphology were screened out, and the gram staining and their physical and chemical characteristic were identified using the method of pure culture. DNA were extracted from the pure culture of bacterium and yeast, and amplified the 16S rDNA and 26S rDNA; PCR products were sequenced and the results were identified and compared with the closest known sequences from NCBI to determine the various bacteria and yeast respective genus. The pure culture of mould were dyed to review the conidium morphology to identify the genus of the strains. Results indicated that the common dominant spoilage organisms in the white bean curd and bean curd were *Staphylococcus caseolyticus*, *Bacillus subtilis*, *Acinetobacter johnsonii*, *Pediococcus pentosaceus*; *Pichia guilliermondii*, *Trichosporon cutaneum*; *Penicillium cyclopium*, *Penicillium toxocarum* Miyake. In addition, *Candida zeylanoides* was specific organism in white bean curd, and *Pseudomonas luteola* and *Trichosporon cutaneum* in bean curd.

参考文献/References:

- [1] 石彦国, 任莉. 大豆制品工艺学[M]. 北京: 中国轻工业出版社, 1996: 13-25. (Shi Y G, Ren L. Soybean technology[M]. Beijing: China Light Industry Press, 1996: 13-25.)
[2] 汪立平, 张庆华, 赵勇. 变质豆浆中腐败微生物的分离与初步鉴定[J]. 微生物学通报, 2007, 34(4): 621-624. (Wang L P, Zhang Q H, Zhao Y. Separation and preliminary identification of spoilage organisms in transmutative soy milk[J]. Microbiology, 2007, 34(4): 621-624.)
[3] Fouad K E, Hegeman G D. Microbial spoilage of Tofu (soybean curd) [J]. Journal of Food Protection, 1993, 56(2): 157-164.

- [4]Tuitemwong K, Fung D Y C. Microbiological study of Tofu[J]. Journal of Food Protection. 1991, 54(13):212-216.
- [5]周先汉, 王亚东, 朱稀徽. 豆制品(茶干)中致腐菌的分离鉴定[J]. 安徽农业科学, 2009, 37(12):5379-5380. (Zhou X H, Wang Y D, Zhu X L. Isolation and identification of spoilage microorganisms in soybean products(dried bean curd)[J]. Anhui Agricultural Sciences, 2009, 37(12):5379-5380.)
- [6]王敏, 檀建新, 路玲, 等. 非发酵豆制品主要腐败菌的分离鉴定[J]. 中国酿造, 2006, 35(21):68-70. (Wang M, Tan J X, Lu L, et al. Isolation and identification of the spoilage microorganisms in non-fermented soybean products[J]. China Brewing, 2006, 35(21):68-70.)
- [7]孙森, 宋俊梅, 曲静然. 豆豉后发酵过程中微生物菌相的变化[J]. 中国食品添加剂, 2008(2):139-143. (Sun S, Song J M, Qu J R. The change of microorganisms in the later fermentation of Dou-Chi[J]. China Food Additives, 2008(2):139-143.)
- [8]沈萍, 范秀容, 李广武, 等. 微生物学实验[M]. 北京:高等教育出版社, 1999. (Shen P, Fan X R, Li G W, et al. Microbiology experiment[M]. Beijing:Higher Education Press, 1999.)
- [9]东秀珠, 蔡妙英. 常见细菌系统鉴定手册[M]. 北京:科学出版社, 2001. (Dong X Z, Cai M Y. Common bacterial identification manual[M]. Beijing:Science Press, 2001.)
- [10]魏春红, 李毅(译). 现代分子生物学实验技术[M]. 北京:高等教育出版社, 2006. (Wei C H, Li Y (Translated). Experimental techniques of modern molecular biology[M]. Beijing:Higher Education Press, 2006.)
- [11]中国科学院微生物研究所编写组. 常见与常用真菌[M]. 北京:科学出版社, 1973. (Chinese Academy of Sciences Institute of Microbiology Compilation Group. Common fungus[M]. Beijing:Science Press, 1973.)
- [12]符克皇, 李佐雄, 高代平, 等. 延长传统非发酵豆制品保质期的研究进展[J]. 保鲜与加工, 2011, 11(1):40-43. (Fu K H, Li Z X, Gao D P, et al. Research progress in extending the shelf-life of traditional and non-fermented soybean products[J]. Storage and Process, 2011, 11(1):40-43.)
- [13]王恒安, 秦磊, 成志恒, 等. 一株约翰逊不动杆菌的分离与鉴定[J]. 南京农业大学学报, 2004, 27(2):124-139. (Wang H A, Qin L, Cheng Z H, et al. Identification of an isolate of? Acinetobater johnsonii[J]. Journal of Nianjing Agricultural University, 2004, 27(2):124-139.)

备注/Memo 基金项目:上海市科学技术委员会应用技术开发专项资金支撑项目(2010-119)。

第一作者简介:欧杰(1964-),男,副教授,研究方向为食品生物技术。E-mail:jou@shou.edu.cn。通讯作者:严维凌(1967-),男,教授,高级工程师,研究方向为食品生物技术。E-mail:yanwling@hotmail.com。

更新日期/Last Update: 2014-08-15