

性研究[J]. 微生物学报, 1995, 35(2):121~129

2 Toeda K, Kurane R. Microbial flocculant from *Alcaligenes cupidus* KT201 [J]. Agric Biol Chem, 1991, 55:2793~2799

3 Kurane R, Nohata. Microbial flocculation of waste liquids and oil emulsion by a bioflocculant from *Alcaligenes latus* [J]. Agric Biol Chem, 1991, 55:1127~1129

4 Takeda M Koizumi. Factors affecting the activity of a protein bioflocculant produced by *Nocardia amarae* [J]. Ferment Bioeng, 1992, 74:408~409

5 Jun Ji Nakamura, Shigeyoshi Miyashiro, Yoshio Hirose. Condition for production of microbial cell flocculant by *Asperillus sojae* AJ7002 [J]. Agri Biol Chem, 1976, 40(7):1341~1347

6 Takeda M Kurane. A protein bioflocculant produced by *Rhodococcus erythropolis* [J]. Agric Biol Chem, 1991, 55:2663~2664

7 Kurane R, Takeda K, Suzuki T. Screening for and characteristics of microbial flocculants [J]. Agric Biol Chem, 1986, 50:2301~2307

8 何宁, 李寅, 陈坚等. 营养和环境条件对生物絮凝剂合成的影响 [J]. 应用与环境生物学报, 2002, 5(7):483~488

9 Levy N. Physio-chemical aspects in flocculation of bentonite suspensions by a *Cyanobacterial bioflocculant* [J]. Water Research, 1992, 26(2):249~254

10 Salehizadeh H, Vossoughi M Aalenzadehi. Some investigations on bio-flocculant producing bacteria [J]. Biochemical Engineering Journal, 2000, 5:39~44

The Screening of a Flocculant-producing Bacterium NX-2 and Its Characteristics

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ABSTRACT A flocculant-producing bacterium strain NX-2 was screened and identified to *Bacillus subtilis*. A medium containing glutamic acid was indispensable to the production of flocculant by NX-2. The highly flocculating activity in kaolin and active carbon suspension was obtained using glucose and yeast extract as carbon and nitrogen sources. Ammonium salts was a suitable and economical nitrogen source. The flocculating activity was released mostly in the supernatant of culture broth. The flocculant purified from supernatant using ethanol precipitation was determined to be poly- γ -glutamic acid using amino acid analyzer and NMR.

Key words microbial flocculant, *Bacillus subtilis*, flocculating, screening

信息窗

科学家从食品废料中提取营养物质获成功

澳大利亚科学家成功从食品加工废料中提取追加价值产品应用到药品和保健增补剂当中。研究员处理的可循环废料中的乳清主要来自奶酪制造商,这一副产品通常被转化为低价值乳糖、乳清粉或作为废料丢弃。

关于食品废料的提取过程涉及4个阶段离子交换、毫微过滤、套色版和结晶化。通过这一技术,公司可以开辟全球功能性食品和营养市场,价值900亿美元,而且还在持续增长。该技术可以为从食糖、葡萄酒、水果和蔬菜加工废料中提取有价值物质如缩氨酸、低聚果糖、天然香料、色素、抗菌蛋白、酚抗氧化剂、食糖、有机酸和矿盐扫清道路。目前工作小组正在寻求伙伴来拓展研究,探寻潜力。

日本出现瓶装咖啡

日本近几年的经济不景气,为了扩大星巴克的销售,星巴克公司决定在日本推出瓶装咖啡。已在美国食品店及便利店上市的瓶装咖啡被星巴克公司看好,受可口可乐的启发,他们认为这种产品在日本应有广阔的前景。目前,星巴克公司已联合在当地有较大销售网络的企业将共同推出新品——瓶装咖啡。新品上市后将率先在星巴克的咖啡店及零售店出售,一段时间后才会投放到自动售货机上。