

D-异抗坏血酸钠的合成,可以应用于工业化大生产中。

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## Study on Application of Phage-resistant Strain *Pseudomonas fluorescens* A46 in the Industrial Production of Sodium D-isoascorbate

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**ABSTRACT** *Pseudomonas fluorescens* A46 was a phage-resistant strain obtained from the mutation of the strain K1005 by using U. V. light as a mutagen. In the presence of phages, 2-keto-D-gluconic acid fermentation by *Pseudomonas fluorescens* A46 and its parent in 50 kL fermentor was studied. The results showed that *Pseudomonas fluorescens* A46 was indeed a phage-resistant strain and the resistance was stable, with shorter fermentation period and higher fermentation conversion rate than its parent. After 17 generation, its resistance against phages and 2-keto-D-gluconic acid producing ability had not changed. The fermentation product of *Pseudomonas fluorescens* A46 could be used in the synthesis of sodium D-isoascorbate.

**Key words** 2-keto-D-gluconic acid, *Pseudomonas fluorescens*, phage, phage-resistant strain, sodium D-isoascorbate

### 信 息 窗

#### 日本利用豆腐渣制保健豆腐

日本将豆腐渣经处理或未经处理制保健型豆腐并已商品化。方法有:(1)豆腐渣经机械粉碎、微粉化,于 100℃加热杀菌 20 min,冷却、调 pH 4~6,温度 40~60℃,加入果胶酶、纤维素酶、半纤维素酶混合分解豆渣,制得呈浆状豆渣,用碳酸钠调整 pH 至 6.5,冷冻保存,制豆腐时,加到豆乳汁中与豆乳一起混匀,加凝固剂硫酸钙与葡萄糖酸内酯混合,充填入包装容器,加热冷却成保健豆腐,含植物蛋白、油酸、维生素

E、异黄酮、植物固醇、低分子食物纤维、多种糖,具有防癌、防骨质疏松等功效。(2)将大豆脱皮、粉碎到粒径 40 μm(最好 20 μm)加水混合,加消泡剂,加热、冷却,加凝固剂充填,加热、凝固、杀菌、冷却,充填豆腐。此法不分离豆渣。在制豆渣豆腐时,如果豆渣用 4~5 种酶分解后再与豆乳一起制豆腐,不仅口感好,还能使豆腐增产。

#### 从稻叶、茎中提取抗衰老成分用于功能食品

日本新潟县农业食品研究中心从青的稻叶及茎中提取出抗衰老成分并申请专利及进入商品化。青稻叶与茎中含有防止细胞氧化、消除活性氧的酶,能防止人体受活性氧损害导致老化和各种疾病发生。这次开发的防老化成分的产品是绿色提取液,也可加

工成粉末,作功能食品添加剂加入到糕点、米团子等大米加工食品中,以及运动员饮料等中。由于该产品无味,应用范围广,产品原料价廉,开发应用于功能食品中潜力巨大。