

农产品辐照研究·食品科学

混配比例及加工方式对“降糖稻1号” 稻米产品抗性淀粉含量的影响

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摘要:

以高抗性淀粉含量功能性粳稻品系“降糖稻1号”稻米为主要材料,研究其与不同比例稻米混配后经蒸煮、膨化、制作米粉及发酵加工后,对稻米产品直链淀粉含量和抗性淀粉(RS)含量的影响。结果表明,稻米中RS含量随加工温度和加工压力的提高而大大降低,表明“降糖稻1号”不宜高温高压蒸煮、膨化、加工米粉和发酵食品。“降糖稻1号”与“金丰”稻米按不同比例混合蒸煮后,其直链淀粉含量、RS含量及蒸煮品质有明显改善,“降糖稻1号”与“金丰”稻米以2:1混配,不仅明显改善米饭的食味,而且RS含量能保持较高的水平。

关键词: “降糖稻1号” 混配 加工 抗性淀粉(RS)

EFFECTS OF MIXING RATIO AND PROCESSING METHODS ON RESISTANT STARCH CONTENT OF PRODUCTS OF RICE ‘JIANGTANGDAO 1’

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Abstract:

The high resistant-starch-content rice ‘Jiangtangdao 1’ was mixed with rice “Jinfeng” and glutinous rice, and the effects of processing treatments including steaming, puffing, making rice noodle and fermentation on the resistant starch (RS) content of the mixed rice were studied. The results showed that: (1) RS content of rice was significantly reduced with the increase of processing temperature and pressure, which indicated that the processing methods of steaming, puffing, making rice noodle and fermentation were not the suitable processing treatments of ‘Jiangtangdao 1’. (2) While the rice ‘Jiangtangdao 1’ were mixed with rice ‘Jinfeng’ in different ratios, the contents of amylase and RS, and the steaming quality were all improved significantly. While the ratio of rice ‘Jiangtangdao 1’ and ‘jinfeng’ was 2:1, both the sensory quality and RS content would be satisfied.

Keywords: rice ‘Jiangtangdao 1’ mixture processing treatment resistant starch (RS)

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