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**摘要:** 胡萝卜素(carotene)在超临界二氧化碳中有良好的饱和溶解度。因此,超临界二氧化碳可被用来萃取番茄果实组织中的胡萝卜素,主要为番茄红素(Lycopene)。但类胡萝卜素总量萃取回收率较低,是有机溶剂提取法的26%。干燥的番茄果实组织经有机试剂处理后,超临界二氧化碳便可有效地萃取其中的胡萝卜素。经此处理,类胡萝卜素总量的萃取回收率可高过有机溶剂法31%。

**关键词:**

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### Extraction of Mainly $\psi, \psi$ -Carotene (Lycopene) from the Fruits of Tomato by Supercritical Carbon Dioxide

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**Abstract:** Supercritical CO<sub>2</sub> can be used to extract carotene, mainly  $\psi, \psi$ -carotene (Lycopene), from the fruits of tomato because carotene has a good solubility in supercritical CO<sub>2</sub>. The preliminary extraction of carotene from tomato fruits took a long time and consumed a large amount of CO<sub>2</sub>. The recovery of carotene by supercritical CO<sub>2</sub> was only  $26 \pm 2.2\%$  comparing with that by conventional solvent extraction. An attempt to improve the extraction efficiency was made in this study. After the pretreatment of the tissu

**Key words:**

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