

〈一般論文〉

## トマト搾汁液のメラニン産生抑制作用に関する活性成分の探索

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### Melanogenesis Inhibitors from Lycopene-Free Tomato Juice

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#### Abstract

The tomato is one of the most important crop plants world-wide. The tomato contains a carotenoid, lycopene, which is a superior antioxidant with anti-cancer activity. Recently, naringenin chalcone from the tomato pericarp was found to have anti-allergic activity. It is now widely accepted that eating tomatoes is beneficial for health. Tomatoes are being intensively studied for other activities, as well, such as the inhibition of melanogenesis. In the present study, we investigated the effects of tomato juice, which does not contain lycopene. Tomato juice inhibited melanogenesis in B16 melanoma cells. Two main active ingredients are present in tomato juice, and we studied their potential involvement in this effect. One is polyphenol, which inhibits tyrosinase activity, and the other is an oligosaccharide derived from pectin, which decreases cell tyrosinase enzyme levels. Our results indicated that melanogenesis inhibitors are generated in tomato juice during the manufacturing process and preservation period.

**Key words:** tomato, oligosaccharide, melanogenesis, polyphenol, pectin.