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Lycopene Contain in Solanum Seaforthianum Andr., Citrus sinensis Osbeck., Tamarindus Indica Linn., Syzygium Malaccense, Ananas Comosus and Malus Domestica

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Abstract

The aim of this study was analyzed lycopene contain in *Solanum seaforthianum Andr., Citrus sinensis Osbeck., Tamarindus indica Linn., Syzygium malaccense, Ananas comosus and Malus domestica* . The method of detection lycopene contain in fresh fruits samples were extracted using hexane:ethanol:acetone (2:1:1). Using fresh fruits samples (0.001 g) were dissolved in 1ml of distilled water and vortexed, add 8.0 ml of hexance : ethanol : acetone. Caped and vortexed the tube immediately then incubate out of bright light, after at least 10 minutes, or as long as many hours later, add 1.0 ml water to each sample and vortexed again. Let samples stand 10 minutes to allow phase to separate and all air bubbles to disappear, finally determined samples at 503 nm. The results found that lycopene contain in *Solanum seaforthianum* Andr., *Citrus sinensis* Osbeck., *Tamarindus indica Linn.*, Syzygium malaccense, *Ananas comosus* and *Malus domestica* were 136.85± 0.001, 15.801 ± 0.000, 1.099± 0.000, 0.2061± 0.001, 0.65± 0.001 and 6.183± 0.000 mg/kg, respectively. The conclusion found that the highest of lycopene was *Solanum seaforthianum* Andr. The lowest of lycopen was *Syzygium malaccense*.

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Keywords— Lycopene, Fruits, Antioxidant

Introduction

Fruits and vegetables that are high in lycopene include gac, tomatoes, watermelon, pink guava, red bell pepper. Lycopene, the predominant carotenoid in tomatoes, exhibits the highest antioxidant activity and singlet oxygen quenching ability of all dietary carotenoids. Lycopene is a brilliant red carotenoid pigment and phytochemical found in watermelon tomatoes and other red fruits. Processing of tomatoes increases the biovailability of lycopene.

(Liana Maria Alda Gogoasa et al., 2009) Lycopene is a caroteniod; has antioxidant properties and imparts the red pigment in red fruits and vegetables. Lycopene is a fat soluble carotenoid and a precursor of b-carotene and has atleast twice the antioxidant capacity of b-carotene. Epidemiological studies have indicated positive health benefits in consumption of diets high in lycopene. Since lycopene has value as a phytonutrient, many breeders want to maximize lycopene content in their breeding lines, and growers want to utilize production methods to increase lycopene content. Thus, simple and inexpensive assays to quantify lycopene are desirable prerequisites to developing produce with higher levels of this phytonutrient (Angela R. Davis, Wayne W. Fish and Penelope Perkins-Veazie, 2003).

Lycopene; a member of caroteniod family; is a lipid soluble antioxidant synthesized by many plants and microorganisms but not by animals and humans where it serves as an accessory light- gathering pigment (Komd et al., 2011). Carotenoids signify a big class of natural pigments, generally of yellow, orange or red colour, derived by the enzymatic polymerisation and branching of eight C5-isoprene units to form a carbon skeleton of 40 atoms. (Caterina D'Ambrosio, Giovanni Giorio, Ivana Marino, Alessandro Merendino, Angelo Petrozza, Leonarda Salfi, Adriana L. Stigliani and Francesco Cellini, 2004) The antioxidant activity property of lycopene is high lighted by its singlet oxygen quenching property and its ability to trap peroxyl radicals (Amany M. Basuny, Ahmed M. Gaafar and Shaker M. Arafat, 2009)

This study evaluates the lycopene contents of fresh fruits, including *Solanum seaforthianum Andr., Citrus sinensis Osbeck., Tamarindus indica Linn., Syzygium malaccense,* Vitis vinifera *L., Ananas comosus* and *Malus domestica* from Kalasin fresh food market, Thailand.

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