

## ABSTRACT

### **Prospect of Red Passion Fruits (*Passiflora edulis* Sims) as A Source of Phenol Tolerant Multistrains Probiotics**

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Probiotics are food supplements in the form of living microorganisms given in sufficient quantities to provide health effects, including inhibiting the growth of pathogenic bacteria in the digestive tract. Multistrain probiotics increase the efficacy of the performance of probiotics in the gastrointestinal tract. To find out whether a strain can be combined with another strain to be a multistrain probiotics product, it is necessary to do a compatibility test. Probiotics can be isolated from various sources; one of them is red passion fruit. Red passion fruit is potential local source of multistrain probiotics because of its available abundance in Indonesia. Besides, red passion fruit also rich in flavonoids, alkaloids, provitamin A, vitamin C, niacin, and riboflavin. Bacteria that have been isolated from their natural sources must meet several characteristics of probiotics that have been determined by the World Health Organization. Other literature also mentions other characteristics that must be met, namely tolerance to phenols at certain concentrations. Phenol is a bactericidal compound formed in the intestine by bacteria that deaminates some aromatic amino acids derived from food or endogenous proteins. This literature review aims to estimate the range of phenol concentrations that can be tolerated by multistrain probiotics isolated from red passion fruit. The authors compared seven studies that conducted phenol tests at different concentrations. The results of this review show that of the 58 strains from various sources compared, 43 of them can tolerate phenols in the concentration range of 0.1-0.4%.

**Keywords:** *Passiflora edulis* Sims., multistrains probiotics characterizations, phenol.