

CHAPTER 6

PHYSICOCHEMICAL AND ANTIOXIDANT PROPERTIES OF FERMENTING *NEPHELIUM LAPPACEUM* (RAMBUTAN) FRUIT MOCKTAIL VINEGARS

Liew Yen Ling, Noor Hafizoh Saidan and Seri Intan Mokhtar

INTRODUCTION

Natural fermented fruit vinegars are mainly made from fruit during microbial fermentation. Previous study has determined that vinegar has potential therapeutic properties including antibacterial activity, antioxidant activity and improvement of digestive system (Budak et al., 2014). Most of the fruit vinegar has contributed for health benefits and provided colour, aroma and good taste to consumers. Furthermore, research showed that natural fermentation could enhance the antioxidant properties (Sahu et al., 2013) on fruit vinegar, especially the increase of total phenolic content and total flavonoid content in the fruit (Kongkiattikajorn, 2014).

When consumers set their expectation on a taste and flavour of a food, the first thing that came to mind was probably colour since colour is one of the important product-intrinsic sensory cues (Spence, 2015). Some examples of existing coloured fruit vinegars in the market are pomegranate vinegar, persimmon vinegar, mulberry vinegar and plum vinegar.

The aim of this study was to fulfil the market preferences on coloured Rambutan (*Nephelium lappaceum*) vinegar having high total phenolic content and total flavonoid content by addition of natural colourant extracts containing colour pigment such as anthocyanin in roselle and mulberry (Suh et al., 2004; Satue'-Gracia et al., 1997) and red dragon fruit to produce fruit mocktail vinegars.