

**STABILITY OF TOTAL PHENOLIC CONTENT IN
VITIS VINIFERA L. AT DIFFERENT TEMPERATURE
AND STORAGE TIME**

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ABSTRACT

STABILITY OF TOTAL PHENOLIC CONTENT IN *VITIS VINIFERA L.* AT DIFFERENT TEMPERATURE AND STORAGE TIME

In this study, Redglobe grape (*Vitis vinifera L.*) was extracted using ethanol for two days at room temperature which was stored at different temperature and storage time. The total phenolic content was determined by using Folin-Ciocalteu reagent and measured using UV-visible spectrophotometer at 765nm. The result was expressed in gallic acid equivalent, GAE (mg/g). The result which shown highest amount of total phenolic content was 25.13 mg/g stored at -20°C for 4 days and the percent degradation was 8.27%. Meanwhile, the lowest amount of total phenolic content was 10.13mg/g stored at 60°C for 6 days and the percent degradation was 63.01%. The increase percent degradation of total phenolic content was due to enhance of storage temperature and time.

CHAPTER 1

INTRODUCTION

1.1 Background of study

Vitis vinifera L. cv Redglobe grape (Figure 1.1) comes from family Vitaceae and native at Mediterranean and central Asia. There are several cultivated species of grapes but more than 90% of those grapes are from *vinifera* species. The minority of several other species come from the America continent (Poudel, et al., 2008). Redglobe grapes are primary used as table grapes and belongs to the red group as it has red skin. It is almost round which similar to a globe and hence the name was given for this grape species. France, Italy, Spain, Turkey and USA are consistently among the few top countries leading in the production of grapes but China is the top producer of table grapes especially Redglobe grapes. This grape species is one of the most important fruit commodities as an economic plant with good agricultural characteristics. It is mainly processed as juice, jam, wine or raisins and cultivated largely for the wine industry (Yassa, et al., 2008).