

# CHAPTER 7

## LACTIC ACID BACTERIA COUNT, LACTIC ACID CONTENT AND PHYSICO-CHEMICAL CHANGES OF *DURIO ZIBETHINUS* MURR. HYBRID AND KAMPUNG CULTIVAR PULP DURING TEMPOYAK FERMENTATION

*Nadiatul Sufi Norasem, Khomaizon Abdul Kadir Pahirul Zaman and  
Seri Intan Mokhtar*

### INTRODUCTION

In Malaysia, durian is not only eaten as a fresh fruit but also used as ingredients for ice cream, puddings, juices or various traditional foods. Durian is one of the fruit commodities that have an important economic value (Hariyati et al., 2013). Durian is the main ingredient in making tempoyak, a well-known Malaysian traditional food condiment prepared from the over-ripped or damaged durian pulp (Yuliana & Dizon, 2011). Usually, tempoyak is fermented by mixing durian pulp with salt and fermented under anaerobic condition at room temperature in a closed container.

The addition of salt is to enhance the microbial activity of Lactic Acid Bacteria (LAB) and reduce the growth of unfavourable bacteria (Widowati et al., 2013). Tempoyak production is affected by temperature, with the best temperature being at 27 °C while fermentation at 40 °C was not so favourable for the growth of LAB (Wasnin et al., 2012). Time is another factor whereby tempoyak can usually be eaten between days 4 and 6 when the acidity and sugar content has begun to stabilise. During the fermentation period, the texture of durian pulp changes from a solid to a semisolid consistency with acid odour and dominant taste (Yuliana & Dizon, 2011). The addition of 2% of salt to the tempoyak was shown to be preferred by consumers (Mat Amin et al., 2004).