by means of the active packaging technique. This will be described in the following section

1.2. Product screening

A Pass/Fail screening technique was used to select the IMF product most suitable to study within this work. Five criteria were employed in the screening process, which includes the occurrence of fungi on the product, regulation to import the product into New Zealand, suitability for preservation using the combined modified atmosphere and volatile essential oil active packaging technique, high end marketing product value and range of water activity (between 0.65 to 0.90). Results obtained are shown in Table 10. The pass/fail screening technique was capable of separating five potential products out of 136 IMF products from the survey which were cake, bread, ham, bacon and cheese. The comparison of the preservation potential of five selected products is shown in Table 11.

By using this information and information from scientific journals and marketing reports, cake was justified to be the highest potential product to be investigated within this work in comparison with other four screened products for three main reasons.

Firstly, consumers are increasingly demanding minimally-processed food products that offer fresh-like qualities without a heavy reliance on chemical or thermal preservation such as cake, but they still expect food to be safe and convenient, which often implies a relatively long shelf life (Nielsen and Rios, 2000; Guynot *et al.*, 2003). Cake products are also widely consumed around the world. Mould and yeast are the most common causes of spoilage for these products which decreases the product shelf life (Legan, 1993; Vytasová *et al*., 2002; Nielsen, 2004). Shelf life of cake products without any preservatives is often very short at only 2-3 days.