10.1 Introduction

The term ‘balsamic vinegar’ is frequently applied to describe sauces, condiments and dressings with particular sweet taste. In Italy there are two types of balsamic vinegar: ‘balsamic vinegar of Modena’ and ‘traditional balsamic vinegar’. The first is a flavoured wine vinegar obtained by blending cooked must and wine vinegar and, in some cases, by adding a small amount of caramel. Traditional balsamic vinegar (TBV) is made in Modena and Reggio Emilia with cooked grape must, through a three-step process: conversion of sugars to ethanol by yeasts; oxidation of ethanol to acetic acid by acetic acid bacteria (AAB); and, finally, at least 12 years of ageing. The final product is a highly dense, dark-brown aged vinegar, having a sweet and sour taste, fruity and complex in flavour.

TBV acquires its special qualities during a long ageing performed with a ‘dynamic’ technology. Briefly, a set of barrels, generally from five to seven of different sizes and woods, are filled with cooked grape must, previously fermented and oxidized (Solieri et al., 2006). A small part of the vinegar is withdrawn every year from the smallest barrel, which is then refilled with the vinegar from the next sized barrel (Figure 10.1). This procedure, called ‘rinalzo’, is done for each barrel, with the last and biggest one receiving new cooked must to replace the vinegar withdrawn, lost by evaporation, and the vinegar transferred from barrel to barrel. Therefore, each barrel contains a blend of differently aged vinegars and the age increases from the largest barrel to the smallest one, depending on barrel volume and amount of vinegar transferred. From a legal point of view, TBV must be aged at least for 12 years.

TBV has recently been acknowledged as a ‘protected denomination of origin’ product (P.D.O.) by the European Union (Council Regulation (EC) No. 813/2000). It is produced under the supervision of different Consortia according to their Official Production Regulations (Disciplinare di produzione, 2000). Two of these are in Modena – ‘Consorzio Tutela Aceto Balsamico Tradizionale di Modena’ and...
‘Consorzio fra produttori di Aceto Balsamico Tradizionale di Modena’. Other two
Consortia are in Reggio Emilia – ‘Consorzio Produttori Aceto Balsamico
Tradizionale di Reggio Emilia’ and ‘Sindacato fra produttori di Aceto Balsamico
Tradizionale di Reggio Emilia’. TBV is marketed in special glass bottles of
defined shape and capacities, and the official labels and seals of the DO Consortia
are mandatory to ensure its origin (Figure 10.2). DO consortia perform a sensory
examination to assess the sensorial properties of products before marketing. On
the basis of this analysis, TBV is classified in different quality categories, com-
manding different prices.

Figure 10.1 Schematic representation of barrel set for traditional balsamic vinegar (TBV)
production and of refilling procedure. The numbers correspond to the barrel capacity

Figure 10.2 Bottles of traditional balsamic vinegar of Modena (a courtesy of Consorzio
Tutela Aceto Balsamico Tradizionale di Modena; b courtesy of Consorzio fra produttori di
Aceto Balsamico Tradizionale di Modena) and of Reggio Emilia (c courtesy of Consorzio
Produttori Aceto Balsamico Tradizionale di Reggio Emilia; d courtesy of Sindacato fra pro-
duttori di Aceto Balsamico Tradizionale di Reggio Emilia).