

ensure the integrity of the end product. When selecting the appropriate chocolate to work with, consideration should be given to the desired quality of the end result. The freshness and make up of ingredients will have a direct impact on the shelf life and the durability of flavour and quality. For example the use of fresh fruit flavours can create an outstanding product that is best consumed fresh, whilst the ingredients can be preserved to achieve a safe longer life, the quality of the flavour in a longer shelf life product may be compromised. Choice of flavours and quality of ingredients will depend upon the desired shelf life, price point and perceptions of quality, which must be effectively communicated through the sales environment, packaging presentation and shop staff prior to the chocolate being consumed.

18.4.2 Equipment

Equipment for manufacturing can be costly and requires space and storage room. A machine that can be used to temper chocolate in batches of 3–15 kg can be useful for any chocolatier needing to save time and aid an effective production process, but this does not remove the need to fully understand how to successfully crystallise chocolate. Unless additional machinery is purchased, hand-tempering techniques are still necessary to enable working with different chocolate types. The following is intended to be a helpful list of equipment for anyone starting out initially in working with chocolate:

- Marble chopping board;
- Plastic mixing bowls;
- Flat scrapers;
- Plastic spatula;
- Dipping forks;
- Angled pallet knife;
- Chocolate thermometer;
- Heat gun or small hair-dryer;
- Variety of chocolate moulds for pralines, bars and novelty shapes.

18.4.3 Working environment

The working environment plays an important role in being able to successfully work with chocolate. Any professional environment should be free from temperature fluctuations and should ideally be around 20 °C and free from excessive humidity. Kitchen environments that have a large amount of heat sources such as boilers, ovens and fryers may not be suitable for attempting to work with chocolate.

18.4.4 Shelf life

Hand-made chocolates can last from a few days kept refrigerated in the case of fresh cream-based ganache recipes to up to 18 months for solid or hollow moulded chocolate products with no added ingredients (see also Chapter 23). Typically the longer the shelf life requirement for filled chocolates the more

sugar, fat and flavourings are required to extend quality as well as shelf life. Decisions around the appropriate shelf life will impact upon the types of products that can be made. Products in a small café with limited space may benefit from quality ingredients made with small product runs with a short shelf life that can be consumed quickly. Products that are for wholesale distribution are likely to require a longer shelf life and have a lower profit margin. It is also important to be able to make these consistently on a large scale. Business plans must involve scale of production and product shelf life and should also include likely volume of sales and turnover.

18.4.5 Storage

Chocolate should be kept at a constant temperature between 12 and 20 °C and not in the fridge. Chocolate is sensitive to humidity, condensation, odour, air, light as well as being fragile. Care should be taken to ensure that ingredients and finished product are safely protected with the appropriate packaging to ensure product quality.

18.4.6 Packaging

Packaging plays an important role in the presentation, preservation and perception of products (see also Chapter 26). It is important to select appropriate packaging that fulfils the needs of these wider influences. Customers eat with their eyes before they enjoy a product, it is important to consider how the chocolate will look on the shelf or be protected prior to consumption. It must at least protect it from chemical, physical or biological contamination until it is consumed. The quality of packaging can play an important role in positioning the product in the market, and chocolates at a high price with unique ingredients should have packaging that is reflective of that value. Packaging solutions that come in direct contact with food products must be of food grade quality. It is not necessary as an initial entry to the market to consider that packaging solutions must deliver full labelling requirements, as this can be fulfilled through signage, inserts, labels or attached tags where appropriate. Consideration should also be given to the durability requirements of packaging, especially when planning on-line ordering and product transport.

18.4.7 Labelling

Regulations and requirements for the labelling of food and chocolate products are subject to localised legislation. Information about products for sale should be clearly labelled or be available to inform customers of the content of their purchase. Should there be an issue with a product it is good practice to be able to trace the time, staff, location, ingredients and any other essential variables involved in the creation of that product. A product identification code should relate back to production records maintained by the producer. At present there is no requirement regarding the specific origin of ingredients, however it is