SITHFAB204
Prepare and serve espresso coffee

Learner guide
Version 1

Training and Education Support
Industry Skills Unit
Meadowbank

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Table of contents

Introduction ................................................................................................. 7

Topic 1: The Barista ................................................................................ 11
  1.1 Responsibilities of the barista ....................................................... 11
  1.2 Work, health and safety ............................................................... 12

Topic 2: Coffee beans ........................................................................ 14
  2.1 Species of coffee – Arabica and Robusta ..................................... 16
  2.2 De-caffeinated coffee ................................................................. 16
  2.3 Coffee roasting ............................................................................ 18
  2.4 Coffee Blending ........................................................................... 19
  2.5 Sensory analysis of coffee .......................................................... 19
  2.6 Storing the coffee ........................................................................ 21

Topic 3: The Espresso Machine ........................................................... 24
  3.1 Espresso machine main parts ...................................................... 25
  3.2 Espresso machine start-up procedures ....................................... 27
  3.3 Espresso machine care ................................................................. 27
  3.4 Cleaning and maintenance ........................................................... 28

Topic 4: The Coffee Grinder ................................................................. 31
  4.1 Coffee grinder – main parts ......................................................... 32
  4.2 Grinding coffee ............................................................................ 33
  4.3 Cleaning and maintenance ........................................................... 34

Topic 5: Prepare the coffee workplace area for service ................... 37

Topic 6: Preparation for an espresso .................................................. 42
  6.1 The importance of crema .............................................................. 42
  6.2 The coffee menu .......................................................................... 45
  6.3 Variations ..................................................................................... 47
  6.4 Hot chocolate .............................................................................. 47

Topic 7: Texturing milk ...................................................................... 50
  7.1 Types of milk .............................................................................. 50
  7.2 Pouring techniques ..................................................................... 51

Topic 8: Customer service ................................................................. 56
8.1 Customer Ordering ................................................................. 56

Topic 9: Trouble shooting .......................................................... 59

Useful hints ................................................................................ 62

Glossary of coffee terms ............................................................. 64

Resource evaluation form ......................................................... 67
**Topic 1: The Barista**

“Barista” is the generally accepted term for an espresso machine operator. In Italian it translates to “barman”, but in Australia it is the term applied to any individual who professionally operates an espresso machine within a food and beverage operation.

Exceptional espresso coffee is the outcome of a good working relationship between the barista, the coffee and the espresso equipment. In Italy, the profession is highly respected, and in most regions, a barista is only allowed at the controls of the espresso machine after an apprenticeship of 3-4 years.

### 1.1 Responsibilities of the barista

Responsibilities of the barista include the ability to:

- greet customers and take accurate orders
- provide and advise information on coffee bean and beverage choice to customers and make recommendations that satisfy their customers’ preference
- identify regular customers’ preferred coffee styles and requirements
- use the correct equipment and accompaniments to prepare espresso coffee beverages
- check water and steam pressure of espresso machine
- adjust grinder as per order for the preferred coffee extraction
- produce high quality, consistent espresso coffee
- work efficiently and consistently when preparing espresso coffee
- restock, monitor and control stock to ensure freshness
- organise and maintain a clean and effective espresso machine, grinder and coffee making area
- follow and implement safe work, health and safety procedures
- maintain personal cleanliness and appearance in accordance with enterprise standards.
1.2 Work, health and safety

Factors to consider:

- **Position** – all equipment must be located in such a manner that it is easily and comfortably reached and operated by the barista (i.e. the height of the espresso machine and its location in relation to the knockout tube, grinder and other equipment).

- **Burns** – care must be taken, along with the correct procedures, when using the group handle, steam wand and the hot water outlet.

- **Electrocution** – there are several electrical appliances operating on the workstation (espresso machine, grinder, blender, refrigerator, light sources etc). Care must be taken that electrical cords are not frayed or loose and that all liquid spillages are immediately cleaned up.

- **Slippery surfaces** – wet floors and spills on bench surfaces can cause slips and need to be cleaned up immediately to avoid injury in the workplace.

- **Speed of service** – an organised workflow when working in a team will ensure that customers are served quickly and efficiently.

- **Spillage** – spilt sugar, coffee, grounds and liquids may contaminate other ingredients, cause cross contamination and accidents. Effective and efficient cleaning and waste disposal are essential.

- **Material Safety Data Sheet (MSDS) for cleaning chemicals** – access to MSDS instructions and personnel protective equipment (PPE) for all cleaning chemicals used when preparing and serving espresso coffees (the coffee machine, grinder, coffee preparing equipment and crockery, work surfaces and floors) to prevent a hazards or accidents occurring.
# Topic 1 review – The Barista

List six (6) responsibilities of the barista?

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of service</td>
<td></td>
</tr>
<tr>
<td>Burns</td>
<td></td>
</tr>
<tr>
<td>MSDS (Material Safety Data Sheets)</td>
<td></td>
</tr>
<tr>
<td>Spillage</td>
<td></td>
</tr>
</tbody>
</table>

Explain what you need to consider about the four (4) work, health and safety factors below when preparing and serving coffee.

- **Burns:**
- **Speed of service:**
- **MSDS (Material Safety Data Sheets):**
- **Spillage:**
Topic 2: Coffee beans

Coffee is one of the world's most popular beverages – it is the second largest traded commodity in the world after oil.

The coffee bean comes from the cherry of the evergreen shrub: family Rubiceae; genus Coffea. Coffee plants grow in subtropical and tropical climates all around the world. Coffee originated in Yemen/Ethiopia and was discovered nearly 1000 years ago. Major growing regions today include South America, Africa, Central America, Papua New Guinea, Timor, Asia, India and Indonesia.

Coffee cherries ripe for picking. The beans grow inside the cherries.

Coffee, like wine, develops distinct flavour characteristics according to the region in which it is grown. Characteristics may be determined by the species of coffee, the growing conditions (rainfall/temperature/soil), picking conditions and processing methods.

Coffee cherries (fruit) are picked from the coffee tree by hand or mechanically stripped. Ripe cherries are red and unripe cherries are green. Red berries have a higher aromatic oil and lower organic acid content, are more fragrant, smooth and mellow. Green berries, or a mix of green and red berries, are used to produce a cheaper mass consumer coffee bean, which are characterised by a displeasingly bitter/astringent flavour and a sharp odour. The picking of coffee therefore is one of the most important stages in coffee production.

Processing of the cherries is where the beans are removed after picking. There are two major processing methods used with coffee beans, wet processing and dry processing.
Wet process

The cherry fruit covering the coffee beans or seeds are immersed in water to enable the cherries to be sorted. Bad or unripe fruit will float and the good ripe fruit will sink. By immersing in water this allows the cherry pulp to be removed from the skin and fermenting begins. Removal of the cherry pulp can also occur through mechanical scrubbing of the cherry fruit. What is left is the bean with two layers of ‘skin’: the silver skin and the parchment skin.

The beans must then be dried to a water content of 10% before they are stable. The beans can be dried in direct sunlight and raked every six (6) hours to promote even drying or by using a drying machine. The drying process assists the hulling process, the removal of the parchment skin or "pergamino" of the coffee bean. This process leaves a raw coffee bean which is lighter in body and with cleaner fruity flavours.

Dry process

The dry process, also known as unwashed or natural coffee, is the oldest method of processing coffee. The cherry fruit are picked, sorted and cleaned by ‘winnowing’, that is, by hand using a large sieve. The ripe fruit is then either spread out in the sun to dry on tables or in thin layers on patios and raked every six (6) hours to ensure even drying or they may be mechanically dried.

It may take up to four (4) weeks before the cherries are dried to the optimum moisture content. This drying operation is critical as it affects the final quality of the green coffee. Cherries that are over dried will become brittle causing the beans to break when hulled. Broken beans are considered defective beans. Cherries that are not dried sufficiently will be too moist and prone to mildew. This drying process leaves a raw coffee bean that is heavy in body with earthy spicy aroma.

Dried cherries are then stored in silos until sent for milling (hulling, sorting, grading and bagging). The milling process strips the dried cherries of its outer layers leaving the small, raw, green and hard coffee bean.

Coffee Bean Taste

Each processing method produces a different taste in the coffee. Wet processing, because of the water washing process, removes some of the sugar, producing a mild, softer coffee. Dry processing, as it turns the coffee cherries into dry raisins, produces a bolder, earthy coffee.

Once processed, the raw coffee bean is sorted and graded by size and quality before being packed into bags for shipping.

- Brazil is the world’s largest producer of raw coffee. In Australia, coffee is mostly grown from the Northern Rivers to the Atherton Tablelands in Queensland. Australian coffee is slowly developing a better international
reputation for its unique taste and quality. On the international scale, Australia is a relatively small raw coffee producer.

2.1 Species of coffee – Arabica and Robusta

There are two major species of coffee that are grown for commercial use: Coffea Robusta and Coffea Arabica.

Robusta grows at lower elevations, has a higher yield per plant, and is more disease resistant than its Arabica relative. Robusta beans are noteworthy for their harsh, dirty flavour and higher levels of caffeine. Robusta is approximately 30% cheaper than Arabica. Robusta is commonly used in instant coffee.

Arabica beans grow best at higher elevations (800-2000 metres) and Arabica is the source of most of the world’s great coffees. About 75 per cent of the world’s total production is Arabica coffee and approximately 10 per cent of that is actually of ‘speciality’ quality. Specialty grade coffee is of the highest quality and consistency when sorted and graded as raw coffee.

<table>
<thead>
<tr>
<th>ARABICA</th>
<th>ROBUSTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>75% of the world’s production</td>
<td>More harsh, robust flavour than Arabica</td>
</tr>
<tr>
<td>Mostly used for espresso coffee</td>
<td>Mostly used for instant coffee</td>
</tr>
<tr>
<td>Lower caffeine content than Robusta</td>
<td>Higher caffeine content than Arabica</td>
</tr>
<tr>
<td>More delicate flavour than Robusta</td>
<td>Can be blended with Arabica to strengthen various coffee blends</td>
</tr>
<tr>
<td>More susceptible to disease</td>
<td>More disease resistant</td>
</tr>
<tr>
<td>Lower production yield</td>
<td>Higher yield and cheaper to grow</td>
</tr>
<tr>
<td>Grows at a higher altitude</td>
<td>Grows easily at lower altitudes</td>
</tr>
</tbody>
</table>

2.2 De-caffeinated coffee

Caffeine is one of the most commonly-consumed drugs in the world. ‘De-caffeinating’ refers to the process whereby a majority of the caffeine is removed from the coffee beans.