Frequently Asked Questions about Extra Virgin Olive Oil

What is Extra Virgin Olive Oil?

It's simple really. **Extra virgin (EV) olive oil is the oil extracted from fresh olives using a mechanical process without the use of excessive heat or any form of additives or solvents.**

Provided that the olives are free from disease and they are processed into oil without delay using a clean mill they should produce an olive oil that has an aroma and flavour that is free of taste defects and as such is extra virgin.

It should be noted that EV oils can be legitimately made without using a press. In fact most EV olive oils made in commercial relevant quantities are not made by pressing but instead by centrifugation. What pressing and centrifugation have in common is that they are both mechanical processes and neither involves the use of any chemical agents.

The heat bit is more of a technical issue. You can extract more oil out of an olive if you heat it up. However, the quality of the oil will suffer as a result. The application of some heat is necessary in order to extract a commercially viable amount of oil. Hence the condition of "excessive heat" rather than no heat. There is no formal definition of what excessive heat means, but greater than 32 degrees celcius is at the upper end of the temperature range used by most producers interested in quality.

What is the difference between extra virgin olive and 'pure' or 'light' olive oil?

Extra virgin olive oil is essentially the naturally extracted juice from fresh olives. The olives are crushed into a paste, and the oil is physically extracted from this paste without the use of chemicals or excessive heat. Extra virgin olive oil has a distinctive olive fruity aroma and flavour and it contains natural antioxidants. The aroma and flavour, of olive oil adds complementary flavours to a wide variety of dishes.

'Pure' and 'light' olive oils are olive oils that have been refined. Refining is a complex process that involves the use of acids, alkalis, steam and other agents. The refining process removes most of the aroma and flavour substances out of olive including its natural antioxidants. As such, unlike extra virgin olive oil, 'Pure' and 'Lite' olive oil lack the aroma, flavour and any form of bitterness and pepperyness. In fact the word 'light' only refers to the light colour, aroma and flavour of these oils.

Is it true that ‘light’ olive oil contains fewer calories than extra virgin oil?

Absolutely not. All olive oils (and indeed all edible oils) have very similar energy values. The word ‘light’ is made in the context of them having light aroma, flavour and colour.

Should I only buy 'first cold pressed' oil?

The question is not particularly relevant in light of the way extra virgin olive oil is made today. The vast majority of extra virgin olive oil produced throughout the world is done so without using a traditional olive oil press. Nearly all extra virgin olive oil is made using high speed centrifuges which spin the lighter olive oil away from the other heavier components of the olive such as water and pulp. As such, the term as it was first coined has little relevance today. Don’t believe me? 90% of mills in Spain use centrifuges and Spain is easily the worlds largest producer (even of oils labeled as being Italian) and a centrifuge can process many times the amount of paste per hour than can a press. Do the math.

Are olive oils made using the traditional method of mat pressing better than those made using the modern continuous (centrifuge) process?

Absolutely not. Here is one case where ‘traditional’ is far from being the best. Most experts would agree that the modern continuous system favoured by most of the world's olive producers result in more consistent defect free oils with as good or better aroma and flavour.

The reason is simple. By their nature, the mats used in traditional presses are very absorbent and therefore retain oil after being used. As cleaning the mats to a near new 'spotless' standard is impractical in most commercial environments, most mats will eventually contain oil that is either rancid or has a fermented taste character. All subsequent oil produced from those same will also display these undesirable taste defects. Having said that some traditional mat producers do maintain impeccable standards, and as such the oils that they produce have pristine flavours.

Secondly the modern methods expose the olive paste and oil to less oxygen. This helps preserve the natural healthful antioxidants found in extra virgin olive oil.

For reasons of oil quality and consistency and mill efficiencies, in most of Europe and in the “new world”, the continuous (centrifuge) method of extracting oil has now become standard practice.

But the label says “cold pressed”. Surely this means that the oil has been made with a press?

Despite what the label says, it probably hasn’t. As over 99% of the worlds commercial oils are made with a centrifuge the EV olive oil you purchase is likely to have been made with a centrifuge. While centrifugation is the best way to make high quality healthy olive oil, the widespread acceptance of the term “cold pressed” by the olive oil buying public means that most producers are very reluctant to discard the term in fear of losing sales. In short, removal of the words ‘cold pressed’ from an olive oil bottle is (currently) commercial suicide. A number processors are now using the more correct term ‘cold extracted’ to reflect the use of modern processing methods. There should be more of them, but martyrdom and business are like oil and water.

Aren't extra virgin olive oils supposed to be good for my health?

Most extra virgin olive oils contain higher levels of monounsaturated fats and antioxidants such as polyphenols and tocopherol. These attributes are sought after by the health conscious.

Does centrifugation produce oils that are less beneficial to your health?

No. Quite the contrary. The process of centrifugation is by nature, a rapid and enclosed process which protects the oil from oxygen during the separation process. This means that the naturally occurring antioxidants in the oil are conserved and end up in the olive oil bottle.

Does the term extra virgin necessarily imply that it is an outstanding oil?

You may find this surprising but the answer is no. Throughout the world, the term extra virgin implies that the oil is 100% made from olives, is free of unpleasant flavours and has some degree of fruitiness. That is, the label 'extra virgin' is simply a reasonable guarantee that the oils will add something positive to your food. Obviously within this broad specification there exist rather bland extra virgin oils right through to very complex oils with outstanding aroma and flavour.

Some producers state that their oils are robust or mild or fruity. What does this mean?

They are referring to the style of oil that is in the bottle. Robust oils, have strong bitterness and/or pungency (pepper), and as they are usually made from greener olives, typically display herbaceous aromas and flavours. Mild oils on the other hand by definition have low bitterness and pungency.

Mild oils are best used on delicately flavoured foods such as on white fish and mayonnaise, while robust oils better complement strongly flavoured foods such as roast meats and flavoursome soups. When it comes to bread dipping, either can be used, but most people have a personal preference for one style over another.

The term 'fruity' is more of a marketing rather than style term. That is, an oil can be fruity, but represent either a mild, medium or robust style.

What is the significance of a high monounsaturated fat level in olive oil?

Firstly, olive oils are typified by their high level of monounsaturated fats compared with nearly all other edible oils. Monounsaturates are preferred by the health conscious. Oils high in monounsaturates are also more resistant to oxidation and as such have a longer shelf lives. Incidentally, the major monounsaturated fat in olive oils is oleic acid. Extra virgin olive oils contain between 65% and 85% oleic acid.

Does the colour of the olive oil say anything about its quality?

Not quality, but it can tell you other things. The colour of an olive oil is related to the amount of chlorophyll it contains. Olives are picked early in the season tend to make green coloured oil as they contain higher levels of chlorphyll. Olives harvested late in the season will typically produce more golden coloured oils due to a higher level of natural occurring levels of carotene like substances. Both oils may be technically equivalent in quality but very different in style. There are also many examples of green coloured oils that taste remarkably ripe, and golden oils that have strong grassy herbal characters. To make matters more complex, many strongly green coloured oils will turn a more golden colour when stored. So don't place too much emphasis on colour.

Some labels make a point of saying that the olive oil was made within a short period of time after harvesting. What is the significance of this claim?

One of the most critical factors in making high quality olive oil is the time that elapses between harvesting the olive and extracting its oil. The greater the elapsed time, the higher the probability that the resultant oil will have an off flavour. The defects that can arise from delays in harvesting are called fusty, musty, and winey. Ideally, olives should be processed into oil within 24 hours after harvesting.

What do I look for in a retailer of extra virgin olive oil?

A good retailer knows the oils he or she stocks, and most importantly sees the use of olive oil as an important part of the entire European culinary experience. Good merchants should:

1. Be able to advise you on the right style of extra virgin olive oil for your intended use.
2. Be able to recommend good examples of that style.
3. Have a high turnover of olive oil.
4. And ideally, they only stock new seasons oils.

Not surprisingly, reputable oil producers like dealing with reputable merchants. This relationship often means that an oil producer will voluntarily replace last seasons stock with their new seasons oils to ensure that the customer gets the best produce available. Yes, it does happen.... but not in supermarkets!

There are so many extra virgin olive oils to choose from. What do I look for?

First and foremost, consider purchasing an extra virgin olive oil that is useful for the culinary purposes you have in mind.

Extra virgin olive oils can be intensely flavoured and can also be strongly bitter and pungent. Many 'early harvest' styles fit in this category. Others can be very fruity with only hints of bitterness and pepper, while 'late harvest' styles are typically mild with very ripe fruity flavours.

As a general rule, oils with a strong flavour suit strongly flavoured dishes, and mild oils are used in dishes which are delicately flavoured. This guide provides descriptions that emphasise oil style, so it should be of help when making your purchase decision. Alternatively, ask your merchant or the producer.

Secondly, choose to buy the current season oils as these will be the freshest. Not all will have the year of harvest clearly marked. However, reputable producers and retailers will direct you to their new seasons oils.

Finally if in any doubt, either consult this guide or speak to your merchant. Better still, why not contact the oil maker. Most are more than happy to help and answer questions regarding their oils, and olive oil in general.

Why are the European extra virgin olive oils found in the supermarket generally cheaper than most Australian and American oils.

Two reasons. Firstly, the European industry has greater economies of scale, but also the production of olive oil in Europe is subsidised by the European Union. Australian and American producers do not receive direct financial assistance from their government to produce olive oil.

The term extra virgin also only implies that the oil is free of defects and has an olive like fruitiness. So within this broad specification there is room for a wide range of qualities. So, a typical imported extra virgin oil bought in a supermarket costing $6 will in all probability be significantly lower in quality than a top $25 Australian or Californian olive oil. This is despite the fact that they both have legitimate extra virgin status.

How do I interpret the "best by" date on Australian and European oils?

Australian olive oil producers are now obliged to put a 'best by' date on their olive oils. However, it is left up to the discretion of the producer to specify the date. This decision should be based on historical knowledge of the longevity of oils, as well as on reasonable commercial considerations. It is far better to select oils that clearly state the year, and preferably month, of production. Provided the oil has been properly stored, it should be more than fit for its intended use for at least 12 months.

Incidentally, as European oils are bound the conventions of the International Olive Oil Council, they have different rules regarding 'best by' dates. These oils display 'best by' dates which are a maximum of two years after the date that the oil was packed. Remember, this may or may not mean that the oil was extracted from the olive two years before the 'best by' date, as the oil may have been in tank for some time before it was bottled.

What does Free Fatty Acidity (FFA) mean. Is it good or bad?

Free fatty acidity is chemical parameter of the oil which is a very broad indicator of its quality, or at least how sound the olives were and how carefully the olive were processed. For extra virgin olive oils, it ranges from 0 to 0.8%, with the **lower the percentage the better.** The average FFA of Australian oils in 2004 was around 0.19%, with very few being over 0.5%.

From a practical point of view, oils with lower FFA's begin to smoke at a higher temperature when heated. This property makes them a little more versatile in the kitchen. Lastly, whatever the acidity of the oil, it can't be tasted.

How can Australian and American oils be as good as the European ones given that the European producers have hundreds of years of experience on their side?

Not many people are aware that the continuous method of olive oil extraction used to produce the vast majority of the world's olive oil today has only been in widespread use since the early 1970's. Furthermore, the new and favoured 'two phase' technology has only been commercially available since 1992. As such, the experience gap between European and other new world producers is not as wide as some would think. Furthermore, the extraction of oil from olives is a relatively straightforward process involving only a couple of critical steps. These are very well known and understood. Most, if not all new world olive oil producers know that if you use undamaged olives, process them quickly after picking, employ the services of a spotlessly clean mill, and don't strive for excessive extraction then sound quality olive oil will result.

Try as many examples of each as you can, preferably without knowing what you are tasting. You can then make up your own mind about the relative qualities of New World and European oils.

Where is the best place to store the extra virgin olive oil?

A general principle here. Both light and heat are the enemies of olive oil As such, olive oils should be stored in a cool dark place. Most also refrigerate well. On the other side of the coin, the worst place to store olive oil is on top of the refrigerator or next to the oven where they may become heated, or even worse on a window sill. Olive oils will rapidly become rancid if stored in a warm, well lit environment. Exposure to light also hastens the loss of the health giving vitamin E like compound tocopherol.

Are extra virgin olive oils harmed by refrigerating them?

Not really, and as such should be seen as a valid way of prolonging the shelf life of the oil. Some may solidify due to their being a (naturally occurring) slightly higher proportion of saturated fats and/or waxes in their make-up. Even if this happens, they usually return to their normal state when they warm to room temperature. Occasionally, some may still remain a little turbid after coming back up to room temperature. If this occurs, warming the bottle using tepid water should clarify them. The aroma and flavour of the olive oil should not be affected in any way by refrigeration. However storing in a cool dark place is the best place to store olive oil if you frequently use small amounts of olive oil over a long period of time as there is some recent research suggests that constantly thawing oils marginally reduces their shelf life. However it beats storing on a window sill any time!

How long can I expect my extra virgin olive oil to last?

Extra virgin olive oils are best consumed young as it is at this time when their fresh olive like aromas and flavours, and the health giving polyphenols are at their peak. Unlike wine, olive oils do not mature with age, so the closer to their release date that you purchase and use them, the better. However, the higher levels of natural antioxidants and the higher proportion of monounsaturated fats generally found in extra virgin olive oil mean that they generally remain fresher longer than other edible oils.

But as a guide, provided they are stored properly, the majority of current season extra virgin olive oils will retain good flavour, aroma and freshness for at least 12 months.

Can I use extra virgin olive oils for frying?

Yes, but to be honest, refined olive oils (that is those labeled as 'Pure' or 'Light') are probably a more cost effective alternative when more than shallow frying. Refined olive oils also begin to smoke at a higher temperature than most extra virgin olive oils, making them more suited to deep frying. However, extra virgin olive oils are a far better alternative when shallow frying.

Can I reuse olive oil?

Yes, extra virgin olive oils can be reused a few times. However, keep in mind that each time an oil is heated and cooled it will lose some of its aroma, flavour, freshness and health giving polyphenols and tocopherol. Recent research has also shown that olive oils heated by microwaving retain their natural polyphenols to a much greater extent compared with traditional heating methods.