



Guarana

Manufacturers are increasingly adding guarana to a wide range of products. *Consumer Choice* takes a closer look at the qualities that are being attributed to the substance.

Guarana seeds, also known as *Paullinia cupana*, grow in Brazil and play an important role in Brazilian culture. The main ingredient of guarana is guaranine which stimulates the nervous system resulting in an energy boost similar to that provided by coffee. Guarana seeds contain up to four times more caffeine than coffee beans and, because they are fatty seeds, guarana is slowly released into the bloodstream and reported to have longer-lasting effects. Guarana-based drinks are widely consumed in Brazil. Traditionally, guarana is roasted, dried and the seeds found in the berries of the plant are ground. The resulting powder is grated into sugar and water and drunk like tea. The drink is claimed to be magical, with uses ranging from curing bowel

complaints to acting as an aphrodisiac.

Nowadays guarana is more commonly found in soft drinks in Brazil. Indigenous drinks manufacturers pose major competition to Coca Cola, which developed its own guarana-based beverages such as 'Kaut'. However, imitation brands find it difficult to compete with the taste of the original product. Coke's main Brazilian rival, Antarctica, has dismissed any threat of opposition and in one television ad, an Antarctica spokesman stands in front of a guarana plantation and directs a loaded command to viewers: 'Now ask Coca-Cola to show you the Coke tree!'

Growing markets

The popularity of guarana-based products is not limited to Brazil and companies

worldwide are using it in the attempt to differentiate their brands. Toothpaste, mouthwash, vitamins, chocolate, lozenges and chewing gum are just some examples of products which are now available with added guarana. In the European beverages market, energy drinks is one of the fastest growing sectors, and popular brands such as Red Bull, Shark and Fuel are among the big-sellers making big profits. According to a 2008 Business Insights report, the overall European market for energy beverages is expected to reach €3.29 billion in 2011. Soft drinks, teas, fruit juices, smoothies and even some brands of water are being transformed with the addition of 'natural energy' ingredients many of which are caffeinated. Guarana, taurine, ginseng and other herbal substances are combined with caffeine in

AT A GLANCE

Energy drinks.

Evidence for uses.

Guarana products.

Useful contacts

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Useful website

European Food

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Report by
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energy drinks, and then producers hasten to inform us of the benefits. Drinks manufacturers are succeeding in convincing us that we are in constant need of an energy boost. Their advertisements and brand names seek to capture the sense of power, strength and vitality that the consumer can expect when they purchase the products. Students are lured by the promise that they will be able to study or party through the night and for sportspeople there is the attractive suggestion of enhanced performance.

Consumer Choice looked some products on the market that contain guarana

- **Berocca® Boost** This is a popular supplement available in tablet form that claims on the label to be a 'Unique clinically proven combination of vitamins, minerals and the natural fast-acting energiser Guarana'. Berocca® Boost claims to be 'the instant fuel you need to spark your mind and body.'
- **Boost Guarana** Until recently Cadbury's had a guarana version of their popular chocolate 'Boost' bar but this is no longer manufactured in Dublin. Cadbury's were obliged to withdraw it due to lack of consumer demand.
- **LIDL Jet Gum Energy Guarana** Chewing Gum containing caffeine and guarana extract. The label warns that it is 'not suitable for children, pregnant women and people sensitive to caffeine.'
- **Lucozade Alert** This energy drink is aimed specifically at the Irish market and is described on the Lucozade website as 'A combination of glucose, caffeine, ginseng and guarana, ostensibly helps to overcome mental fatigue and improve alertness.'

Applying the science

Despite the widespread addition of

guarana to a variety of products, little research has been conducted on the substance itself. This may be because it is mostly used in combination with other caffeine-containing substances.

Weight loss

Guarana is commonly added to herbal slimming pills and drinks because there is some, albeit limited, evidence that it may suppress appetite and increase fat-burning. Slimmers may find themselves feeling fuller after drinking these products and, if their appetite is reduced, they may end up consuming fewer calories from other sources. However, there are no studies to prove that guarana's effect on metabolism is any different from caffeine or other stimulants. It is certainly not a quick fix for people who wish to shed some weight. It is important to be aware that even if short-term weight loss occurs this may be as a result of the diuretic effect of caffeine which leads to water loss.

Although the addition of stimulants to drinks and supplements may enable people with low energy to increase their physical activity, many drinks with added herbal extracts including guarana also contain vast quantities of sugar which can hinder attempts to lose weight. Because of concerns about potential negative effects, the use of caffeine or caffeine-like substances for slimming purposes is not recommended. The best way to achieve this is to reduce portion sizes and increase physical activity.

Memory aid

Another common claim made about guarana is that it aids memory and slows down cognitive decline. A 2004 study published in the journal *Pharmacology, Biochemistry and Behaviour* describes an investigation into the effects of coffee, guarana, and yerba mate on mood and

cognitive performance in human volunteers. The results indicated that guarana increased accuracy on vigilance tasks. Indeed, a number of studies have established that guarana keeps people alert but this is to be expected, given what is known about its high caffeine content. This research study also found that guarana increased systolic blood pressure. This leads to the concern that guarana, when combined with other caffeine-containing substances, may worsen the effects on blood pressure. The guarana content should be taken into account along with the caffeine content of any beverage it is added to. It is important to remember that the side effects of consuming too much caffeine must also apply to guarana. Excessive caffeine can cause anxiety, insomnia, headaches or stomach irritation. Pregnant and breastfeeding women should keep their caffeine intake low.

EU verdict

Earlier this year European safety authorities and regulators announced that they do not intend to review the safety of ingredients such as ginseng and guarana in caffeinated energy drinks despite issuing a verdict on taurine and D-glucurono- γ -lactone. The European Food Safety Authority (EFSA) found no safety issues existed at average usage levels of 0.5 cans of energy drinks per day or at the maximum recommended limit of 1.4 cans per day. Although the review validated the safety of these two specific ingredients it is not an evaluation of the safety of energy drinks, per se.

An earlier report from Safefood (see *Useful contacts*) drew attention to the fact that the majority of the public may not realise that guarana-containing products are in fact high in caffeine. This makes it essential for manufacturers to label guarana-containing products correctly and to account for the guarana content when estimating the total caffeine content. This is particularly relevant to consumers who may be caffeine-sensitive. Following the EFSA's review on taurine and D-glucurono- γ -lactone, Safefood reiterated its advice to consumers, stressing that "stimulant drinks are not suitable for rehydration purposes following sport, that caution should be exercised in the consumption of stimulant drinks with alcohol, and that marketing of these products should be undertaken without ambiguity or association with sport or alcohol."

choice comment

The use of guarana in its homeland Brazil may differ greatly from practices acceptable in the Western world. Although it may have potential beneficial health effects guarana is not a medicine and more research is needed before any concrete claims can be made. The fact that products, particularly energy drinks, can make claims about added natural ingredients does not dispel concerns about how the drinks are being used and how much of a health risk they pose. It is impossible to say with certainty how safe they really are.

Under EU legislation non tea and coffee based drinks with over 150mg/l of caffeine must be labelled as having 'high caffeine content'. The amount of caffeine in guarana products varies and precise amounts may not be stated on labels. People with heart conditions and those who prefer to limit caffeine intake should avoid guarana. Substances high in caffeine may provide a short-term boost but cannot be used as a substitute for adequate sleep and a balanced diet.