

Ground pistachio coffee could be healthier alternative to decaf

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Coffee made from ground pistachios could be a healthier option for decaf drinkers, say scientists.

Pistachios have been used as a coffee alternative in Turkey for many years since [roasted nuts](#) have a similar aroma to conventional roasted [coffee beans](#). But their high [oil content](#) means that instead of producing a dry powder, they make an oily, sludgy paste.

'This plant has been roasted and used as a caffeine-free alternative to coffee beans for many years, but it has such a high oil content that it didn't resemble the coffee grinds people know how to use at home. This meant it wasn't really a suitable alternative,' says Dr Fahrettin Gogus of the University of Gaziantep in Turkey, lead researcher on the NERC-funded project.

Gogus and his team have found a way to remove the excess oil produced in the roasting process to make ground coffee that you could use at home.

'We wanted to produce a powdery version which in the future could be widely used. This oil-free version can be used in any coffee machine to produce espresso-like coffee,' Gogus says. 'It is not exactly the same as a traditional cup of coffee; it has a very different aroma. But in the same way that Arabica coffee or Robusta have specific aromas our coffee has a pine and citrus aroma which makes it very special as a cup of coffee.'

The pine and citrus aroma is a product of certain compounds, called volatiles, which are found in the oil the pistachios produce during roasting. While some of the volatiles give the coffee a pleasant smell, others can be harmful. By roasting the nuts and then pressing them the scientists managed to remove half of the oil, together with those potentially harmful compounds.

'Yes, by removing the oil we lose some of the flavour, but we also remove the unwanted components,' says Gogus. 'Some of these volatiles are known to be carcinogenic but any product such as caramel or chocolate has some level of these. As long as we remove the oil after roasting, these amounts are very low. In a cup of coffee made with pistachio they wouldn't be harmful.'

Unlike decaffeinated coffee beans, pistachios haven't been treated chemically to remove the caffeine. The type of nut used to make the coffee, *Pistacia terebinthus*, is also known for its antioxidant, antiseptic and anti-inflammatory properties - making pistachio [coffee](#) a much healthier alternative.

'We plan to separate the [oil](#) we produce and sell it as a product in its own right, and we can use the rest of plant too so it will be a very sustainable

process,' Gogus explains.

More information: Reference: Mustafa Z. Ozel, Derya K. Yanık, Fahrettin Gogus, Jacqueline F. Hamilton, Alastair C. Lewis, "Effect of roasting method and oil reduction on volatiles of roasted Pistacia terebinthus using direct thermal desorption-GCxGC-TOF/MS, LWT" - *Food Science and Technology*, [dx.doi.org/10.1016/j.lwt.2014.05.004](https://doi.org/10.1016/j.lwt.2014.05.004).

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