



Fermented products to boost nutrition

Strong, creative patent portfolios are essential to protect investment

Consumption of fermented food and drink has soared in the past few years, and the worldwide market is expected to exceed £30 billion by 2022. The recent consumer interest may be driven by the potential health benefits associated with fermented products, such as improved gut health resulting from a balanced gut [microbiome](#). From sauerkraut to sourdough, kombucha to kimchi, or morning probiotic yoghurts to evening craft beers, there's no sign of the fermented trend disappearing any time soon.

Fermented foods and beverages are typically defined as products made by microbial organisms and the conversion of food components through enzymatic action. The use of fermentation, particularly to preserve perishable food material, is a well-known traditional practice. Indeed, chemical analyses of organic residues in ancient pottery jars suggests that fermented beverages were produced as early as 7000 to 6000 BC. Despite this long history, fermentation processing techniques continue to be improved in order to meet the demand for innovative high-quality products. In particular, companies are looking at ways to develop new tastes and textures and to enhance the nutritional content of fermented products.

Given the potential size of the global market, companies will, and should, try to patent these developments where possible.

Companies may aim to obtain patent protection for the new fermented food or beverage by drafting patent claims to the product *per se*. However, drafting such claims may require the use of subjective characteristics such as "improved taste", "maintained odour" or "enhanced eating characteristics" to try to distinguish the new products over previous products. The use of these types of subjective characteristics can lead to problems at the European Patent Office (EPO). For example, problems may arise because the EPO commonly considers that relative terms are ambiguous. Moreover, the evaluation of properties such as taste and odour is inevitably "subjective" such that results obtained when testing the invention, or when testing comparative products, may be considered unreliable. To improve the likelihood of subjective characteristics being deemed to be clear in Europe, it would be helpful to provide a precise frame of reference and to define a specific measurement method, ideally referring to a method which is generally accepted for assessing the sensorial properties in question. However, even with such information, subjective terms may be considered unclear and may also be vulnerable to attack under the ground of insufficiency. Applicants should consider providing fall back positions where possible which instead define the product structurally, for example by defining the specific compounds present in the product and the preferred amounts of each compound.



New fermented products are often a result of improved fermentation processing techniques, such as improved fermentation conditions or novel processing steps. For example, a recent [Quaker Oats patent application](#) describes a co-fermented food product which is achieved by new processing steps involving fermenting milk and oats together. [Calysta](#) focuses on improved loop reactor technology to stimulate the production of biomass.

It may therefore be helpful to include process claims in any patent applications directed to fermented products, to allow the Applicant to focus on their improved fermentation conditions and/or processing steps.

Any claims granted to such processes extend protection to products directly obtained by the process. This means that the “directly obtained” fermentation product will also be protected to some extent by patent protection of the process. Although it can seem daunting to embark on enforcing a process claim, patent holders should remember that there are various tools available to them, such as disclosure and even discovery processes in various European countries.

There are a number of different options available for protecting IP and a blend of different claim types may offer the most comprehensive protection in the case of fermented products. Therefore, understanding the technical and legal nuances is key in order to put in place an effective IP strategy.

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