

Patent Protection in the FoodTech Space

Introduction

The FoodTech industry is highly competitive and it can be challenging for companies to maintain a competitive edge. One way a FoodTech company can remain competitive is to seek patent protection for their innovations. This White Paper provides a brief overview of the patenting process in the United States for FoodTech innovations, including what types of innovations can be patent protected and some hurdles to obtaining patent protection on natural products.

Why Patent Protection for FoodTech Innovations?

The two most common forms of intellectual property protection for FoodTech companies are patents and trade secrets. A patent is a government granted monopoly right on the patented invention for a limited period of time (typically, 20 years from the filing date). A trade secret (think, Coca Cola's soda formulation), on the other hand, can potentially last indefinitely, but is subject to numerous risks. A trade secret does not, for example, protect against a third party reverse engineering your recipe or independently developing your invention. Additionally, a trade secret does not allow you to block others from practicing your invention, and only remains a trade secret as long as certain steps are taken to safeguard the trade secret. Although a patent offers a limited duration of protection, in many cases it affords much stronger protection than a trade secret. Patents also add value to the company and are highly desired, if not required, by potential investors. Accordingly, FoodTech companies should consider filing patent applications to protect their innovations. Innovations in the FoodTech area that are customer-facing, such as the final consumer product or even an intermediate B2B product should be protected by patents as such innovations are reverse engineerable. Other innovations such as processing and manufacturing could be protected by either trade secret or patents. But keep in mind, internal secret use provides limited protection from patent infringement of third party patents.

What types of innovations can be patented in the FoodTech space?

Patents may be obtained for any new and useful composition of matter. For example, new food recipes, food products, or food ingredients are patentable, especially if they are not alone a "product of nature". Some examples of food patents that have been granted in the United States include patents for a protein beverage concentrate, low-caloric sweeteners, ground meat replicas, and edible cups. Also eligible for patenting are methods of manufacturing food products or methods of using a known food product or ingredient in a new way. Some examples of method patents that have been granted in the FoodTech space include patents covering

methods of forming edible snack chips, methods for imparting a beef-like aroma to meat replicas, and methods for preparing frozen fried eggs. Inventions must be novel and non-obvious. This can be a significant hurdle especially for recipe or formulation patents. Whenever possible, inventors should identify and highlight in the patent application any new and nonobvious properties of their invention, for example, synergistic effects between different ingredients or unexpected results.

Exceptions to patent eligibility in the FoodTech space

There are a few exceptions to patentability in the United States that inventors should be aware of. The most common exception to patentability in the FoodTech space is the prohibition on patenting products of nature. Thus, if an inventor identifies a novel protein naturally found in plants that makes food taste sweet, the inventor will not be able to obtain a patent on the exact protein if merely isolated from its natural environment. However, this does not prevent the inventor from obtaining a patent on such a recombinantly produced protein if the recombinant product has different structural features (e.g., non-naturally occurring truncates or post-translational modifications) and surprising attributes that make it inventive. Additionally, if an inventor alters the protein in some way such that it has a “markedly different characteristic” from the naturally-occurring protein, patent protection may be obtainable. For example, an inventor could obtain a patent on a protein variant that makes the protein taste sweeter than the naturally-occurring protein because the protein variant has “markedly different characteristics” than the naturally-occurring protein (in this case, both structural (amino acid changes) and functional (sweeter) differences). This analysis applies to non-protein based products as well. If inventors wish to obtain a patent on a natural product, they should focus on novel ways of using the natural product (such as by using it to impart an unexpected property to food) and claim the food with such unexpected properties as well as the methods of manufacturing the natural product and final consumer product. Inventors should also be aware that these rules are specific to the United States, and may diverge considerably from other jurisdictions. For example, Europe allows patents on natural products if the claims make it clear that the natural products are isolated from their natural environment or made in a non-natural way. Inventors should, therefore, include claims that are patentable in the United States and claims that are patentable in other jurisdictions.

Summary

Patent protection is an effective way for a FoodTech company to protect their innovations. FoodTech companies should consider pursuing patent protection on innovations that are valuable to the company.