

## **Patent landscape: Technology Development behind science in the Flavor and Fragrances (F**

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This work has analyzed patent applications worldwide using Thomson Innovation Software®. The information retrieved made it possible to build a landscape regarding the evolution of F&F patented technologies. Within this patent landscape a snapshot has been provided of patents applied for in the US, Japan, Europe (the UK, France, and Germany). The first set of patents analyzed shows a very large participation of China, producing and developing tobacco-related technologies. The second set of patents analyzed excluded the great majority of Chinese patents, and included the Swiss company Firmenich as the company that has the most triadic patent applications, and Japan, which is by far the country with the most applications, followed by the US. Manual sorting is found to be an indispensable procedure to avoid errors in analysis caused by duplicated information or indexing errors. Bearing in mind the data analyzed, it is very important to note that the vast majority of patent assignees in the F&F field are companies; moreover, very often the companies with the most applications do not necessarily predominate in sales or market share. In summary, the F&F sector is highly competitive and requires continuous innovation in new products, or new and more efficient processes to obtain them. Beyond patent applications, intellectual property includes trade secrets, brand names, and trademarks. Innovative and smart companies play with every kind of combination of intellectual property protection; in this case, information regarding intellectual property will not be retrieved from patent databases. Although the broad reach of intellectual property includes many kinds of information that are not readily available, the patent landscape is still a trustworthy means of representing technological facts and trends. Intellectual property managers and investors can use patent landscapes safely to avoid expending efforts on unrewarding investments.

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