



## **EnWave Strengthens IP Protection with New U.S. Patent for an Advanced Cannabis Drying Process**

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**EnWave Corporation (TSX-V: ENW | FSE: E4U) ("EnWave", or the "Company")** announced today that the U.S. Patent and Trademark Office has granted the Company a new method and apparatus patent for the drying and decontamination of cannabis using its Radiant Energy Vacuum ("REV™") advanced dehydration technology. This new patent further strengthens EnWave's intellectual property protection of its method of reducing bioburden in cannabis while concurrently achieving fast, uniform drying. EnWave's newly patented process uses proven parameters, including power density and vacuum conditions that vary throughout the process, to optimize terpene and cannabinoid retention and materially reduce bioburden. The original patent application was filed in 2017.

EnWave has successfully commercialized its proprietary drying technology with large cannabis operators in the United States and Canada, with three large-scale machines being sold to multi-state and single state operators in the U.S. within the past year. EnWave collaborates closely with cannabis producers to optimize drying protocols and programs to maximize the quality of finished dried products and optimize the return on investment achieved using REV™ technology.

Traditional methods for drying cannabis, such as room drying or hang drying, expose the harvested plants to open air. As a result, cannabis cultivators must routinely monitor the drying room's humidity, temperature, and airflow patterns for long periods of time from 7 to 14 days. The unsophisticated nature of cannabis drying rooms also allows for mold to proliferate and spread due to inconsistent humidity and airflow controls. The traditional methods also take significant time for the cannabis plants to dry from 75% to 80% initial moisture down to 8% to 15% final residual moisture and increases the likelihood of crop spoilage during the drying phase.

Traditional drying methods often also require subsequent processing step, such as gamma and electron (beta) irradiation, to reduce the bioburden in the cannabis (e.g., killing microbes on the product). These subsequent processes add further time and cost to the post-harvest processing and can cause elevated temperatures and generate highly reactive radicals that damage active components such as cannabinoids and terpenes, causing discoloration, and/or changing the smell of the final product.

In contrast to the traditional drying methods, EnWave's proprietary REV™ process allows for the drying of cannabis in the absence of oxygen, at low and controlled temperatures, resulting in a fresh-to-dry processing time of less than 2 hours. Since REV™ rapidly dries cannabis in a controlled environment the plants can be dried before bioburden and microbes can propagate. REV™ technology offers an improved method for reducing the bioburden of cannabis and avoids the drawbacks of traditional decontamination methods. EnWave's proprietary processing methods allow cannabis cultivators to rapidly process high volumes of plant material and eliminate unnecessary costs and time associated with traditional drying methods.

In 2021, EnWave made significant progress after partnering with one of the largest cannabis cultivators in the U.S. market. Furthermore, it announced that the Illinois MSO producing REV™-dried premium cannabis flower on its first 120kW REV™ system since September 2021, has recently purchased a second 120kW REV™ system that will be delivered over the coming months. The MSO pays EnWave a royalty based on the finished weight of dried cannabis processed using the installed REV™ systems. A single 120kW REV™ machine can process approximately 200 lbs/hour of wet cannabis biomass, yielding approximately 45 lbs.

of dried finished product. This translates to over 200,000 lbs./year of dried cannabis for sale. EnWave's REV™ equipment can be manufactured for GACP compliance and GMP upon request.

The timing of the approval of this new patent coincides with double-digit growth in the U.S. cannabis industry. U.S. sales of medical and recreational cannabis are expected to reach an estimated \$45.8 billion by 2025 according to Headset. Legal cannabis sales are forecast to increase steadily with each consecutive year, with cannabis flower sales dominating the market, accounting for \$13.1 billion in 2021.<sup>1</sup>

EnWave's vacuum-microwave dehydration technology is protected by a portfolio of 18 various apparatus and process patents.

Additional information regarding REV™ drying technology for cannabis applications can be accessed in the [Maximizing Terpene Retention White Paper](#) located on EnWave's website.



## About EnWave

EnWave Corporation, a Vancouver-based advanced technology company, has developed Radiant Energy Vacuum ("REV™") – an innovative, proprietary method for the precise dehydration of food and cannabis applications. The Company has developed patented methods for uniformly drying and decontaminating cannabis through the use of REV™ technology, shortening the time from harvest to marketable cannabis products. EnWave also holds a robust intellectual property portfolio protecting several unique processes relating to specific food applications produced using vacuum-microwave technology.

REV™ technology's commercial viability has been demonstrated and is growing rapidly across several market verticals in the food, and pharmaceutical sectors, including legal cannabis. EnWave's strategy is to sign royalty-bearing commercial licenses with innovative companies in multiple verticals for their use of REV™ technology. The company has signed over fifty licenses to date spanning twenty countries and five continents. In addition to these licenses, EnWave established a Limited Liability Corporation, NutraDried Food Company, LLC, to manufacture, market and sell REV™-dried snack products in North America, including the Moon Cheese® brand, as well as co-manufacture for third parties.

EnWave has introduced REV™ as an advanced dehydration platform in the food and cannabis sectors: faster and cheaper than freeze drying, with better end product quality than air drying or spray drying. EnWave currently offers two distinct commercial REV™ platforms:

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<sup>1</sup> Source: MJBiz Daily

1. *nutraREV*® which is a drum-based system that dehydrates organic materials quickly and at low-cost, while maintaining high levels of nutrition, taste, texture and colour; and,
2. *quantaREV*® which is a tray-based system used for continuous, high-volume low-temperature drying.

EnWave is also active in the pharmaceutical industry through a joint development agreement with GEA Lyophil, a leader in GMP drying machinery.

More information about EnWave is available at [enwave.net](http://enwave.net).

### **EnWave Corporation**

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