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VIOLETGLASS

Studying the effects of light on natural products in different packaging

Independent Research by ENERLAB

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The following independent research was carried out by ENERLAB, a pioneering laboratory based in France, recognized and accredited by the French Ministry of Scientific Research. ENERLAB analyzed the effects of light on seven natural products over a period of 74 days. The products were placed in glass containers of different colors: transparent, green, amber, black and MIRON's violet glass, as well as transparent plastic.

The natural products

The seven natural products in the experiment were organic wine, olive oil, organic lavender hydrosol, liposomal hemp extract, liposomal vitamin B12, organic spirulina and organic lavandin essential oil.

ORGANIC WINE

ORGANIC OLIVE OIL

ORGANIC LAVENDER HYDROSOL

LIPOSOMAL HEMP EXTRACT

LIPOSOMAL VITAMIN B12

ORGANIC SPIRULINA

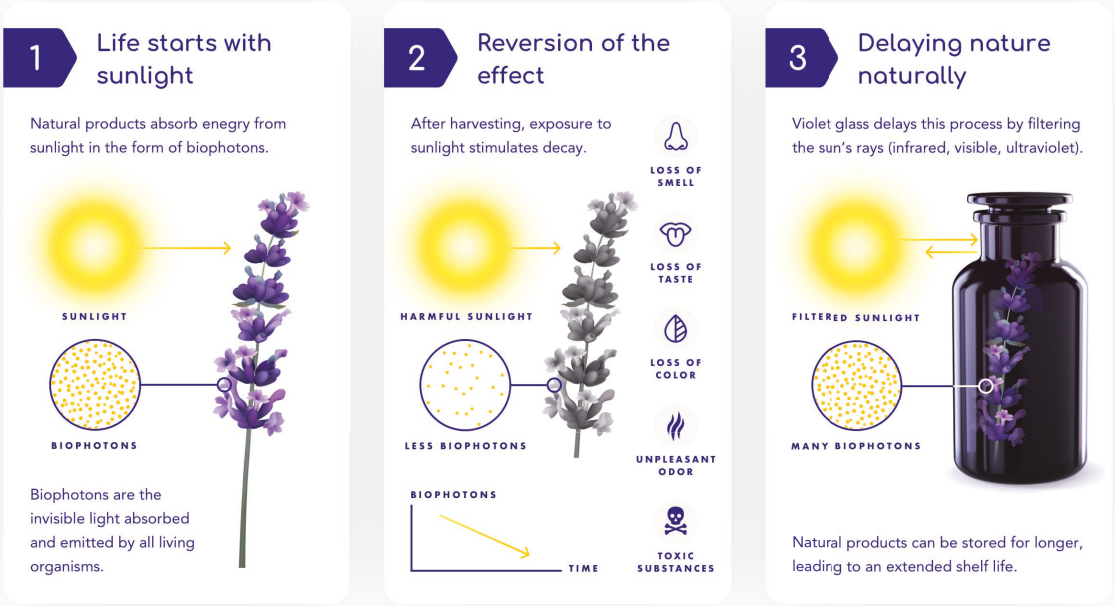
ORGANIC LAVANDIN ESSENTIAL OIL

What are biophotons?

Biophotons are light particles that are generated by almost all living things. Including plants, animals and human beings. In fact, we are all absorbing and emitting millions of biophotons every day. There are currently over 40 scientific groups worldwide, working on biophoton research. It seems that there's a clear link between biophotons and mental and physical well-being. Learn more about biophotons.

Background and goal

All plant and animal cells must have light because it supports life itself. Light energy in ultraviolet light (UV), visible light and infrared (IR), play a vital role in the overall quality of food and natural products. Light is responsible for degradation and oxidation (both destroy nutrients), loss of color and the formation of unpleasant odors and toxic substances.



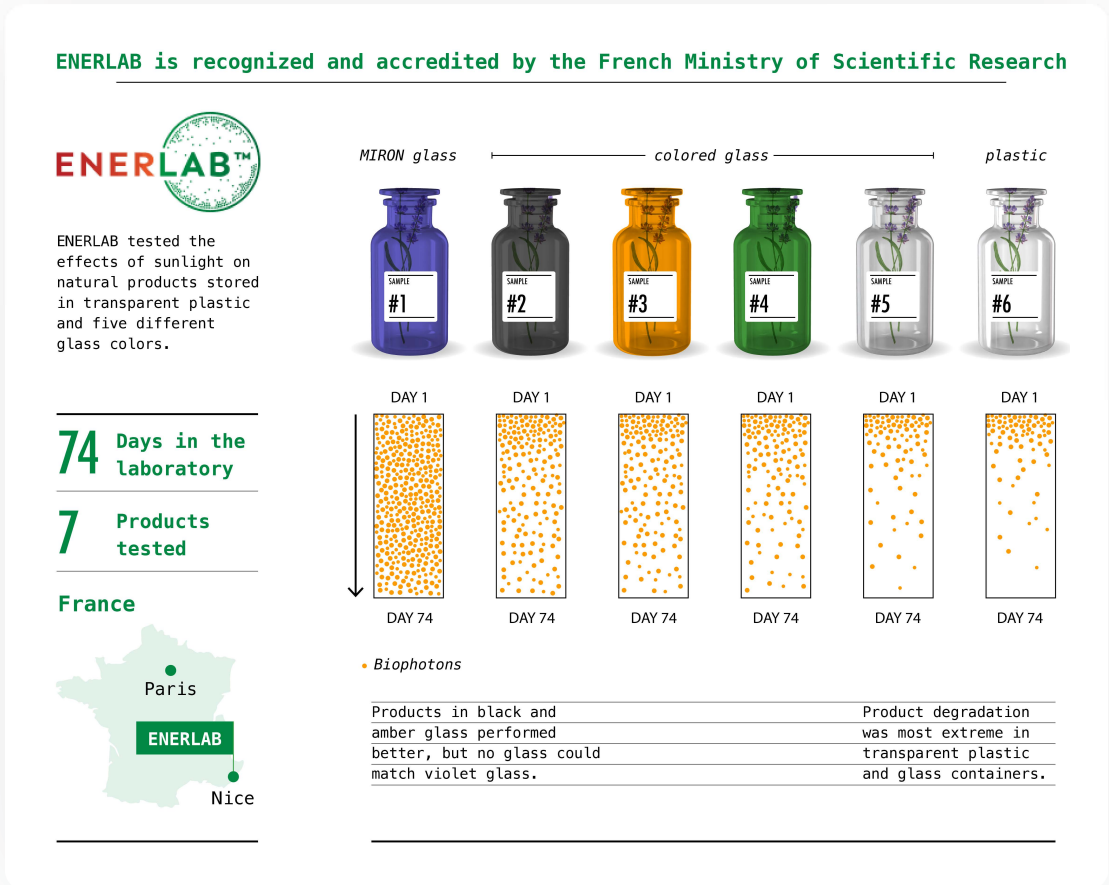
ENERLAB determined the effects of light on these products by measuring the level of biophoton emissions and also the quantity of biophotons in products. Biophotons are the invisible light emitted and absorbed by all living things, including humans. Foods and natural products, with a higher biophoton content and with higher biophoton emissions are healthier and can be stored for longer (extended shelf life).

Results

All the natural products in all the different containers were subject to the same laboratory conditions. 27 different samples* were taken over a 74-day period. ENERLAB's study showed that in all cases, degradation was strongest in the transparent plastic packaging, followed by transparent glass packaging. The amber and green glass fared better, but still showed various levels of degradation. These results demonstrate the influence and importance of the container color and material it's made from.

The other major finding of this study was the increase in biophotons in violet glass, over time. The goodness and quality of the natural products improved. Only violet glass increased the level of biophotonic emissions. The scientific study by ENERLAB makes it abundantly clear that packaging is the key to the preservation and quality of natural products.

Results sheet



** Data-minded readers may notice that during the experiment, not all possible combinations were made. That's because certain products, like CBD oil, will never be placed on the market in a plastic container.*

Relative Light Units

ENERLAB measured the quantity and intensity of the biophotons using a measurement known as relative light units (RLU). The science behind this is rather complicated, but in simple terms, the higher the quantity and intensity, the better natural products are preserved. In the chart, ENERLAB measured the effects of light on organic spirulina. As you can see, MIRON's violet glass outperformed other glass (and plastic) packaging by a very wide margin.

Biophoton Intensity of Organic Spirulina