

## PREBIOTIC COMPOSITION OF ESSENTIAL OILS AND L-CARNITINE

### Description:

Ischemic heart disease (ICD) and type 2 diabetes mellitus (T2DM) are currently problematic health conditions worldwide. These diseases are closely related due to the association between metabolic state and cardiovascular risk. Previous studies on both diseases suggest the relationship between the intestinal microbiota and these pathologies. The consumption of the Mediterranean diet has anti-inflammatory and antioxidant properties. In addition, it has been related to an increase in beneficial bacteria, such as those related to the production of short-chain fatty acids of great importance for health. However, it has been observed that these beneficial effects are limited, which is why it is necessary to design new nutritional strategies, such as the development of nutraceuticals. For this reason, a research group has developed a composition of essential oils from plants typical of the Mediterranean diet together with L-carnitine. One of the examples of the effect of these nutraceutical formulas on the microbiota is the reduction of proatherogenic substances of bacterial origin, such as TMAO, which are associated with the development of cardiovascular diseases. These formulas based on essential oils present, in addition to the beneficial effects typical of the Mediterranean diet, those specific to cardiometabolic diseases such as IC and DMT2.

### Keywords:

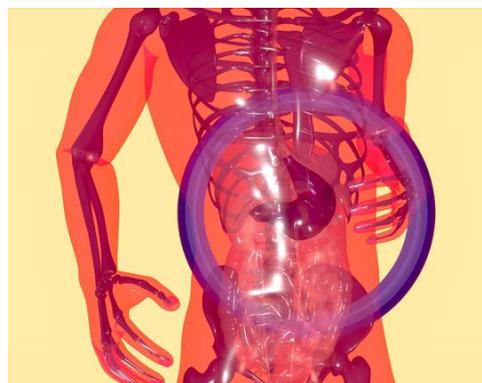
[Gut Microbiota](#), [Cardiovascular Diseases](#), [Ischemic Heart Disease](#), [Diabetes Mellitus Type 2](#), [Nutraceuticals](#), [L-Carnitine](#)

### Sectors:

[Health](#)

### Areas:

[Health Sciences](#), [Therapeutics](#), [Food](#), [Quality of life](#)



### Advantages:

- Allows a prebiotic improvement on the intestinal microbiota in relation to IC and DMT2.
- It has beneficial effects on IC and DMT2 due to its anti-inflammatory and antioxidant activity.

### Uses and Applications:

The application of the invention is in the medical field, specifically in heart disease. At present, the prediction of the progression of these diseases and their relationship with intestinal microbiota is increasingly important. The present invention solves this problem, since it allows the development of new nutraceutical formulas that reduce proatherogenic substances of bacterial origin, such as TMAO, which are associated with the development of cardiovascular diseases.

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