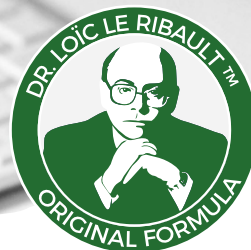


Silicium Laboratories The Silica Experts

Certifications and clinical studies



Since 2003, Silicium has been manufacturing the authentic formula of **Doctor of Science Loïc Le Ribault**, pioneer and creator of liquid organic silica, a product protected by patent:

"Composition for therapeutic use comprising organic silicon compounds" priority patent number FR8519204A, and European EP0228978A1 and EP0228978B1, and in the USA with patent US5391546.

Since **2011 SILICIUM LABORATORIES**, by the will of Dr Loïc Le Ribault is the owner of this intellectual property, its patents and trademarks. Therefore, it is the only company authorized to use '**organic silica of Loïc Le Ribault**', different and more advanced than Norbert Duffaut's.

Since then, Silicium continues to lead dozens of studies and actions to improve the quality of its products.



Our Barcelona-based laboratory has facilities authorised to manufacture medicines for the **EU under European Medicines Agency (EMA)** regulations and Good Manufacturing Practice (GMP). Our products are manufactured according to **pharmaceutical-grade** standards, even stricter than those of a food or dietary supplement plant.

A few years ago, **we demonstrated in other studies in patients with bone and joint problems** the effect of silica in reducing joint pain, improving quality of life and improving mobility. **Our preclinical studies** in cells have shown that silica in bone precursor **cells increases collagen synthesis and promotes its mineralization.**



Efficacy Studies

We work to offer you the most effective solution for you well-being



CTNS
Centre Tecnològic de Nutrició i Salut

AIBMR
Life Sciences, Inc

eurecat
Centre Tecnològic de Catalunya

We present one of our most recent studies on two ingredients containing MMST and OSA in the image. The anti-ageing effect is evaluated, and the cosmetic benefits are measured: **improvement of hair, skin and nails.**



We're the pioneers in conducting **non-toxicity studies**, giving our products "GRAS" status in the United States, which reinforce the evidence of the **quality of our products and guarantee the safety of our ingredients:**



- Studies conducted with Loïc Le Ribault monomethylsilanotriol:

Phase I studies

OECD 471: AMES Bacterial Reverse Mutation Study

OECD 473: Chromosomal Aberration

OECD 474: Mouse Micronucleus

OECD 407: 14 days Repeated oral toxicity for 14 days

Phase II study

OECD 408: 90-day repeated oral toxicity.

All these studies demonstrate the non-toxicity of the product, its inability to produce genetic aberrations or mutations or to cause cancer.

Stability Studies to ensure the quality and safety of products throughout their shelf life. Our products have a long history of research before going on sale.



we're a company that promotes a healthy lifestyle, and we use different conservation **processes that are more respectful with the organism**. Silicium Laboratories, after several years of research, has managed to eliminate preservatives, treating products through new natural and environmentally friendly processes.



We don't use chemical products, nor do we add everyday toxics in the disinfection of bottles for liquid products such as peracetic acid or ethylene oxide, both with the possibility of generating harmful residues for the health. Our treatment to sterilize the product does not produce any residue.

Quality Assurance All our products are analyzed during the manufacturing process to **guarantee the quality and innocuousness of each batch produced**. Based on the absence of pathogenic or harmful microorganisms, we evaluate physicochemical parameters such as pH and density and silica, monomethylsilanetriol and silicic acid content using state-of-the-art analysis techniques such as nuclear magnetic resonance (NMR) and chromatography.

Comparative Bioavailability We have conducted bioavailability research to compare which products are best absorbed by humans and thus offer the best formulations.

ISO Certifications

Committed to the quality of our products, we have been **ISO22000:2018 certified for Food Safety and Safety** for three years.

We comply with the highest quality standards in the food supplements market, enabling us to provide our customers with value-added products



Opinion European Food Safety Authority (EFSA)

In 2016 the highest food safety authority in the European Union issued its opinion on the use of **MMST as a safe ingredient for oral consumption in food supplements**: "Safety of organic silicon (monomethylsilanetriol, MMST) as a novel food ingredient for use as a source of silicon in food supplements and bioavailability of orthosilicic acid from the source" (EFSA-Q-2013-00874).



This positive opinion is part of the process for the subsequent authorization of MMST as a novel ingredient in the EU.

It should be emphasized that this is NOT a patent granted to a particular company. Since 20 December 2017, the responsible European body has authorized this ingredient in the EU for use in food supplements for human consumption. This information is published in **COMMISSION IMPLEMENTING REGULATION (EU) 2017/2470 of 20 December 2017**, establishing the Union list of novel foods according to Regulation (EU) 2015/2283 of the European Parliament and the Council on novel foods.

Silicium Laboratories Patents

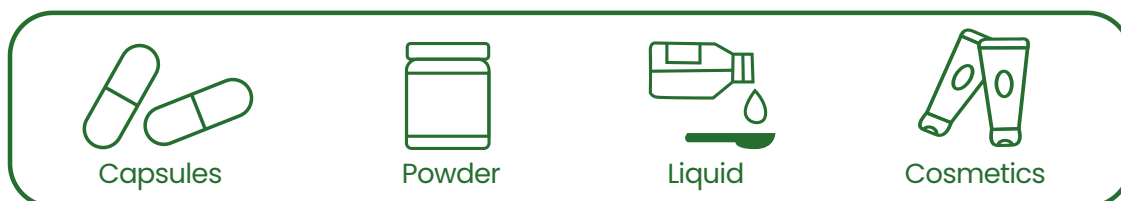
Apart from those mentioned above by Loïc Le Ribault, thanks to our research vision to always be the best in **the field of organic silica**, we've international patents protecting new developments in silicon in the area of silanols in solid and powder form with high bioavailability:

"ORGANOSILICON COMPOUND MICROPARTICLES AND PROCESS FOR THEIR PREPARATION" PCT/EP2019 / 055401, awarded in Europe and the USA.

In conclusion, after almost 20 years of manufacturing silica products, our company can offer the original Loïc Le Ribault product with **the best possible quality, reliability and efficiency**.

Experts in different silica forms **have improved ingredients and products and developed new patented forms of silica**. We're taking as a starting point ALWAYS the legacy of Dr Le Ribault and taking it to another level through our expertise as a company.

ORGANIC SILICA IN



Mission and Objectives

We'll continue to promote the manufacturing and distribution of organic silica by all the people we have the opportunity and honour to help by **offering them the best choice of bioavailable organic silica**.

We'll continue to research and innovate in the field of silica-rich food supplements, with the philosophy and enthusiasm that Loïc Le Ribault shared with us to bring the benefits of organic silica to everyone.

Barcelona, 30 November, 2021
Silicium Laboratories Team

