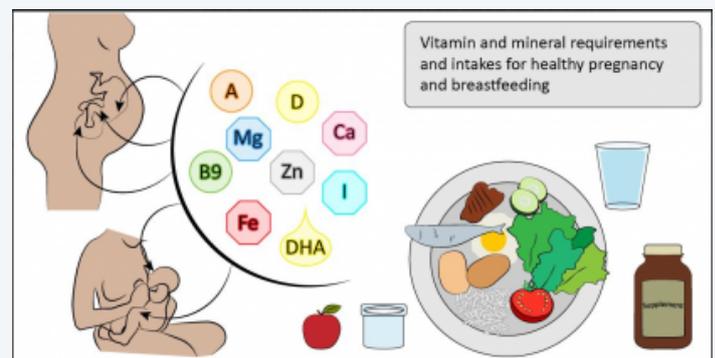


Dielen has used natural products to develop a completely safe nutritional supplement for pregnant women.

To compensate for nutrient deficiencies identified during pregnancy, Dielen and Carnot I2C Institute (CERMN) have focused on real needs and supplement quality.

Supporting Innovation

Food supplements have now become commonplace, however, the origin of ingredients cannot always be guaranteed and this poses certain risks for consumers. Women are becoming mothers at a later age when compared to the last century and are frequently highly deficient in DHA Omega 3, vitamins B6, B9 and D3, calcium, iodine, zinc, magnesium and iron. Food supplements must take account of the changes inherent to pregnancy and protect the unborn child. Dielen teamed up with Carnot I2C to determine which nutrients are actually necessary – in what proportion and in what form – to market a pharmaceutical-quality food supplement. Based on an innovative combination of fish oils, marine magnesium and other essentially marine-based ingredients, women may take this supplement from conception right through to the end of breastfeeding.



The client needs

The Dielen laboratory was set up in Cherbourg in 1978 and began developing marine active ingredients in 1980. Since 2007, this SME has been marketing HACCP, GMP and ISO 22000-compliant clinically tested food supplements. When it began focusing on the specific needs of pregnant women in 2018, Dielen sought to use scientifically proven data to verify which nutrients are essential and in what quantities. A meeting with a female professor in therapeutic chemistry at CERMN (Normandy centre for research into medicines) was decisive in kick-starting the partnership with Carnot I2C. The extensive existing bibliography was reviewed and the findings were published jointly in "Nutrients" scientific journal in February 2021. Cooperation then continued into the pharmaceutical technology phase and the partnership culminated in the marketing of "Dielen Grossesse", a product for woman who are either pregnant or nursing, available in pharmacies since April 2021. In just two years, Dielen has been able to market a supplement that stands apart from the pack thanks to the quality and originality of its ingredients, by guaranteeing the absence of any pesticides or heavy metals, for example in Omega 3 extracted from purified fish oil.

Partnership

Carnot I2C Institute (Innovation Chimie Carnot), which includes CERMN, brings together eight Normandy-based research labs that look after the R&D requirements of businesses by developing sustainable chemicals solutions focused on health and wellness.

The analysis of 85 US, Canadian and European scientific publications, carried out with the help of a post-doctoral researcher recruited via the Carnot Institute, made it possible to validate the list of essential nutrients and their quantity, both during pregnancy and lactation.

Thanks to CERMN's expertise in nutrients and their bio-availability, it was able to provide advice on formulation and deal with issues around limiting interactions between vitamins and trace elements, or administering iron and magnesium in a form designed to avoid digestive problems.

The food supplement comprises both morning and evening capsules, each with its own ingredients and a neutral taste that is perfectly adapted to any nausea being experienced in the normal course of pregnancy. Dielen is continuing to develop the product inside and outside France in order to deliver a perfectly adapted and safe solution, which explains the inroads it is making into a highly competitive market.