

Expertise, tests and analyses for innovation

TNO Triskelion aims at growth through partnerships



Fig. 1: Luuk Renfurm, Head of Sales & Marketing: "Being truly independent and serving markets that need your services are a wonderful drive for growth"

As a TNO spin-off, TNO Triskelion operates as a commercial and independent private limited company. It implements a variety of analyses and provides consultancy services especially for the food, pharmaceutical and chemical industry. The focus is on the quality and safety of food contact materials.

The company name TNO Triskelion includes two elements which are distinguishing for the company located in Zeist, the Netherlands. TNO indicates that it is a spin-off of the well-known research organization, while Triskelion refers to a Greek symbol in which three elements (tri = three) come together. The number three is a direct reference to the three markets they serve: food, pharmaceuticals and chemistry. TNO Triskelion's mission is to safeguard the quality and safety of food, medicine and chemical substances by implementing specialized analyses and studies. Based on test results, the company also provides independent consultancy services. These services are used to introduce products on the market and to properly inform legislative bodies and authorities.

BROAD PORTFOLIO

The various activities are divided over a number of areas of expertise, including immunology, toxicology, analytical services, ADME/DMPK and regulatory services & risk assessment. Luuk Renfurm, responsible for Marketing and Sales: "A broad portfolio. The bottom line is that our company researches the properties of various products and materials with a special purpose in mind. How do people react to certain substances or a combination of substances, which substances are used for a specific product, what are the effects of a substance, which specific substance is toxic, etc."

TNO Triskelion's customers include producers of food such as infant/medical nutrition and food supplements and pharmaceutical manufacturers. For the chemical industry we implement safety investigations and registration work based on specific TEACH legislation.

PACKAGING INDUSTRY

The company puts a special focus on materials and products which come into contact with food, the so-called Food Contact Materials (FCM). "An important target audience", says Henriette Veenendaal-Hesselman, Packaging Project Manager. "The Packaging department evaluates whether food contact materials comply with food packaging legislation. We request the chemical composition of the product in question and test it in accordance with European and national legislations for Food Contact Materials and/or American regulations. These legislations and regulations contain all the chemical substances which are permitted for packaging materials." In some cases additional migration tests may be required, based on the test results. Simulants instead of real food are used during these tests. Simulants and the corresponding time and temperature conditions are included in the afore-mentioned legislations. Veenendaal-Hesselman: "A simulant is included for each food type."



Fig. 2: Henriette Veenendaal-Hesselman, Packaging Project Manager: "The packaging industry is an important target audience"



Fig. 3: The laboratory is the heart of TNO Triskelion

We use MPPO as a simulant if the packaging or transport material is used for dry food. The simulant for acidic drinks with a pH level < 4.5 is 3 percent acetic acid, the simulant for aqueous substances is 10 percent ethanol and for fatty food we use olive oil as a simulant. We recently conducted a similar investigation for sleeve manufacturer Filcoflex.

In addition, TNO Triskelion can screen materials for NIAS (Non-Intentionally Added Substances) by using LC and GC MS techniques. NIAS are substances which are present in the finished product as impurities of the ingredients used. Finally, the company also examines the physical properties of packaging materials. For example, is the material suitable for transport after filling? Will the material tear or affect the flavour? TNO Triskelion also implements tests for these issues.

PETITION

When a food contact materials manufacturer wants to use an ingredient which is not included in legislation, they have to submit a petition to the authorities. Besides knowledge of legislations and regulations, this requires much analytical experience and the implementation of extensive laboratory tests. If the ingredient is approved based on the test results, it will be included in legislation. Veenendaal-Hesselman: "All this is necessary to prevent people from coming into contact with harmful packaging materials."

INDEPENDENCE

Luuk Renfurm explains that he started working at TNO as a business development manager for the pharmaceutical market about 8.5 years ago. At the time, the organization had a Quality & Safety business unit. This unit, with approx. 200 employees, operated under the banner of TNO, but was already remarkably independent and market-oriented. When it became obvious that their activities were commercially viable, the unit gained independence and in 2011 TNO Triskelion was established." Renfurm is enthusiastic about the company. "The entire independence process was very interesting to witness. Being truly independent and serving markets that need your services are a wonderful drive for growth. Therefore, growth is one of the main objectives for the future and well achievable. We have employees - an important part has roots with TNO - who are specialists in their area of expertise.

In addition, our employees are capable of inventing creative and innovative solutions for new problems. Especially when comes to developing new test set-ups and methods. Their ambition level is high in this area."

INNOVATION

The innovative character of the company is demonstrated by ERS (Emergency Response Service). TNO Triskelion applies ERS to implement an analysis in a very short time in the event of calamities in production environments and to express their opinion about the cause or impact of a calamity. Furthermore, the company focuses on long-term relations with customers by supporting them with broad knowledge and innovative techniques during the development of new products and troubleshooting. Renfurm: "It is really about the long-term strategic partnerships we have large companies in 'functional foods', among others. This is no longer a regular customer/supplier relation, but a more intensive collaboration in which we mainly operate as equal partners. In short, a dynamic and inspiring company with excellent growth potential for the future."

Fig. 4: Filcoflex is a manufacturer of polyurethane sleeves for the food and pharmaceutical industry, among others. Typical of these sleeves is that they are both explosion-resistant, and play an important role in explosion prevention. And now these flexible connections also have been proven to be safe for repetitive contact with food. Filcoflex called in TNO Triskelion to test their sleeves for food safety, including migration test reports in accordance with FDA and EC 1935/2004 and 10/2011 directives.