

How Axxicon made a Difference – Customer Story Biosurfit

Situated in Lisbon, Portugal, [Biosurfit](#) is a company that develops and sells medical tests for immunoassays, haematology and clinical chemistry. They had a product idea to enable physicians to give their patients more accurate and comprehensive answers in a single consultation. But how to fund and transform this idea into a prototype? Biosurfit needed a partner with experience in tooling and moulding microstructured components as well as product development and production. We at Axxicon were able to answer their call for help.



We were fortunate enough to spend a few minutes with Biosurfit Founder and CEO **João Garcia da Fonseca** and Senior R&D Manager **Nuno Reis**. João and Nuno revealed how Axxicon helped them to solve the production problem of their disposable diagnostic disc.

A brief history

Nuno

“João started this company in 2006 with a small team. We all knew that we wanted to create a disposable diagnostic disc product for point of care testing. We just didn’t have the tech to carry it out. We knew what the disc should include and look like, the kind of chemistry we wanted to use, and we knew that the market was ripe for this kind of product. We wanted to bring together optics for detection, microfluidics for processing the samples, and reagents because you need them in order to make the reactions work for this kind of testing. The down side of our idea? We had little knowledge about the tough regulatory requirements and no one to help us produce this kind of disc.”



How Biosurfit met Axxicon

Nuno

“When we first started to produce our microfluidic discs, we worked with an Asian company for microfluidic disc moulding. This company was fine when it came to low cost and low volume disc production. However, it was soon clear to us that for high volume production at the quality level required we needed a different technology. This is where Axxicon came in. Dirk Verhoeven, Technical Director, contacted me to introduce Axxicon and discuss what they could do for Biosurfit. Everything Dirk told me about just made sense and fit with our product requirements. You see, our former suppliers were mostly moulding discs, whilst Axxicon was constructing tailor-made moulds. Furthermore, some of our suppliers were actually using Axxicon moulds! Axxicon was not merely replicating the plastic, they had the actual knowledge about how to create and produce the specific moulds we wanted – Intricate moulds capable to produce millions of parts. What’s more, Axxicon was excited to create these kind of products.”

Choosing Axxicon



"We came to Axxicon with a cutting-edge request and they met our needs, right from the start. It's been a journey of zeroing in on the challenges and then finding the solutions. Interesting, because there was no way to know what problems we were going to face at what time. We simply addressed the challenges together, head on. Axxicon has proved themselves to be much more than just a supplier."

João Garcia da Fonseca
Biosurfit Founder and CEO

Nuno

"The first step in our collaboration was to apply for a [Eurostars research grant](#). We had the knowledge and experience on how to make these complicated discs and products with many parts. But not the start-up money to get going. Axxicon and Biosurfit applied to Eurostars for funding at the same time, and Eurostars was quite impressed with our joint proposal. After evaluation, Axxicon received the funding from the Dutch Eurostars counterpart, and Biosurfit was able to strike up a deal with Axxicon to provide the first plastic discs for discovery. We worked together to discover how the moulds could be made, what was the best approach, etc. Many competencies were gained from this discovery and the quality of the first disposable discs was excellent. Assured that we could reproduce the discs as needed, we could then move forward with a high-quality product."



"We have worked with other companies, but Axxicon's knowhow distinguishes them clearly from everyone else I have worked with from around the world. They can look at a design, consider all its challenging features and come up with a physical, working object. The people of Axxicon are really great at that!"

Nuno Reis
Senior R&D Manager, Biosurfit

Overcoming Challenges

Nuno

"One important challenge was to add three holes through the disc at a given location. Usually the holes are punched through the disc with a machine, post production. Not so at Axxicon! They found a way to mould the discs with the holes included and keeping the parts straight. They came up with a great solution to this problem. In 2015, we redesigned the product together with Axxicon. We went from two discs that were bonded together to one integrated disc. The old discs were simple microfluidic structures, but the new design incorporated the microfluidic structures along with optical features requiring high quality surfaces.

Every time we give Axxicon a challenge, they are totally up for (and excited about) the task."

Continued, valuable service

João

"When considering new types of blood tests, we already know that we'll turn out a high-end plastic part. That part needs to be cost efficient and compliant with the various (strict) requirements, but there are different requirements for different parts. With Axxicon, we know that we are in this together and that any issues will be addressed immediately. Whether that's research into requirements, tweaking a design or answering questions."



Nuno

"The value of working with Axxicon is not only in the injection moulding of the plastics. Axxicon's value lies in getting a design from us, converting that design into a mould insert and defining the moulding parameters that work with that mould insert to produce the parts we need."

Excellent, reliable collaboration

João

"We always have direct access to everyone in the project team at Axxicon. Additionally, we have regular phone calls that cover the technical side as well as the business side of things. You know, Dutch people are very open and direct. Even though it's not a very common way to communicate in Portugal, at Biosurfit we do our best to mirror the Dutch directness. Axxicon has the right people to help us move forward, and I think it's a great example of a partnership."

Nuno

"Our relationship with Axxicon is more of a partnership. We discuss and tackle any technical problems together. Then we move forward with our plans, work out the kinks and come up with a solid solution. We are both willing to do a lot to reach a solution. And no matter what challenges we put in their path, Axxicon always listens to the problem. Together we discuss the possible solutions from all angles and come up with a viable and cost-effective solution. It has been a pleasure to work with Axxicon."

Making a difference

João

"This all started as a dream, and then we got to bring our dream into reality. We didn't know how to produce better discs. But Axxicon did. There weren't existing production processes for the kind of product we wanted, so these processes had to be developed. The production processes were defined by collaborating with Axxicon and combining our expertises, and we eventually had a quality physical product."



Want to learn more about how Axxicon can support your project? Visit www.axxicon.com