accensors

Smart sample vessels & Lab-on-foil

Diagnostics and analytics continuously and easy monitored - so that you no longer miss anything

www.accensors.com

accensors
Printed Foilsensors

accensors has set itself the goal to develop new sensor solutions. Our dedicated engineers are continuously working on the development of innovative SMD foil sensors, which can be integrated into your products in the simplest way and perfectly fitting. We place great emphasis on close cooperation with customers to ensure that our products meet their actual requirements. Our internal developments go through a comprehensive process of testing and validation to ensure the highest quality and reliability. For this reason, our sensor portfolio is manufactured with the utmost care in our own production facility to ensure consistent and precise sensor performance and quality.

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Analysis & Diagnostics rethought

What if it is possible to drop spoke samples onto a Lab-on-a Chip system at home and have the result on our smartphone in a few moments? What if we could perform the analysis and research of novel virus strains more efficiently and with more knowledge.

That would be great, but how to make it work?

With accensors technology and capabilities, this is already a reality. We call this lab-on-foil/smart sample vessels. And the genius is that our solutions are not only simpler, more efficient and generate more insights, NO we completely focus on your needs and jointly develop solutions for the perfect integration of lab-on-foil systems and smart sample vessels into your overall system.

Right from the start ... newly conceived analytics and diagnostics with foil sensor technology .... Because we want to generate even more insights and safety from the sample material

Lab-on-foil systems can revolutionize diagnostics.

Our foil sensor technology from accensors offers the possibility to realize different sensors on smallest space. Due to the additive design of foil sensors it is possible to combine different materials and sensors without any problems.
Due to production possibilities in the Roll2Roll process or also in the Shett2Sheet process, we can produce enormously large quantities of lab-on-foil systems, as well as medium to small quantities.

> ***Immediately digital results**, Lab-on-foil systems allow that already the sampling carrier becomes intelligent and immediately the analysis is performed.*
> ***Disposable** Lab-on-foil system and **Reuseable Read-out-Device**, this module separation has proven itself and offers with our recycling concept for the Lab-on-foil systems a revolutionary change in diagnostics*

- Easy to use - especially for end users
- Immediate digital results, as well as absolute values
- Sustainable use concept

Foil sensor technology makes dumb analysis vessels intelligent

Analytical instruments already monitor their process very closely. But what happens to the cell culture between these steps? When do which effects occur in my analyte, even specifically when a process step is running?

Foil sensor technology as lab-on-foil systems turns dumb containers into smart sample vessels.

> If you look at the quality assurance measures under which production in the automotive industry takes place, then I see enormous potential in laboratory technology. Of course there are SOP's that describe the clear analysis process, but sample tracking to monitor the SOP does not exist in most cases

Foil sensors from accensors as lab-on-foil systems can be combined very easily with sample containers or can be converted to sample containers themselves. By means of an easily attachable and reusable readout unit, the sample vessel itself becomes intelligent and provides insights into the entire processing and can continuously monitor essential effects in the analyte in detail.

The result:
"smart sample vessels"

Development

The know-how of accensors is the development of customized sensor solutions. According to your needs and the attributes of your product, the sensor technology is adapted.

Prototyping

We are specialized in accelerated development processes. As a result of the first R+D phase, rapid prototyping and the production of small functional batches are part of our daily tasks.

Testing

Our production facility has a wide range of options for testing sensors and validating functions. In-house developed and built test equipment is successfully used here.

Up-scaling

Here small-batch manufacturing to large-batch production. This is done in collaboration with our partner network. Membranes and sensor components will be applied by us afterwards.

Integration

To connect your foil sensor to your product, we have a variety of different integration methods at our disposal.

gluing & bonding / Laminat / Injection Molding / Assembling / Welding

Serial production

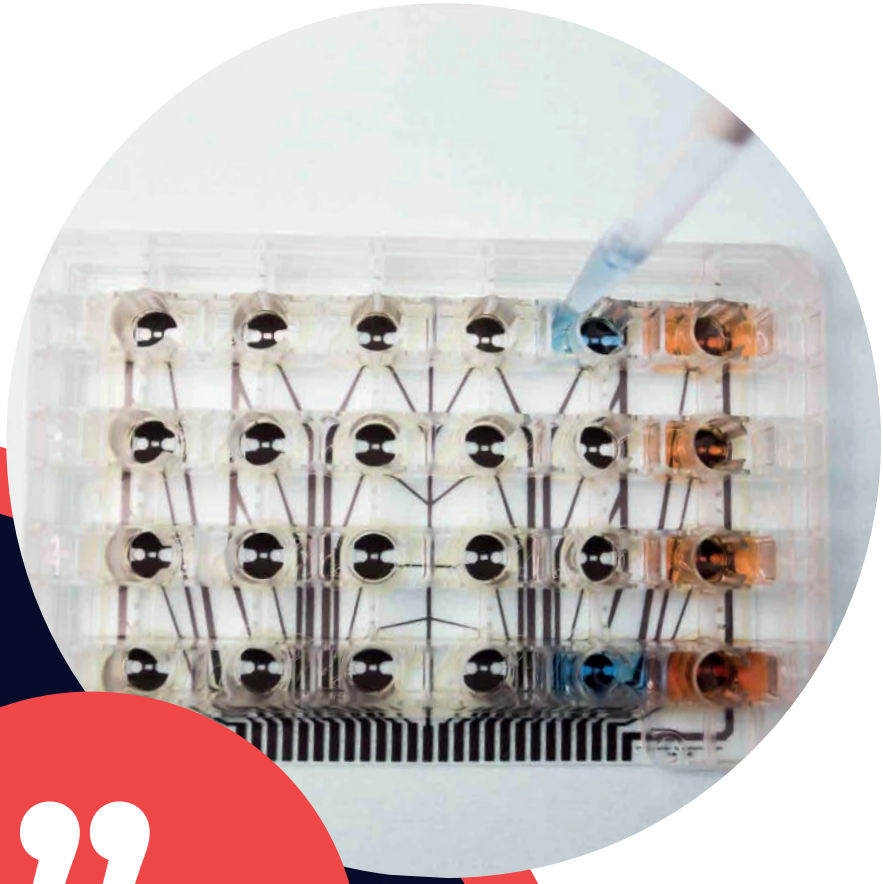
Finally, the product design allows for large scale production with roll-to-roll processes in our partner network. Together, we make sure that we take care of all quality steps.

Quality Control

Finally, the product design allows for large scale production with roll-to-roll processes in our partner network. Together, we make sure that we take care of all quality steps.

Petri dish or 96-well microtiter plate ? In each well, or only in one replicate ? pH and temperature or impedance ?

We at accensors love and live sensors. Therefore, it is not only a task but a sense-giving passion for us to develop sensors in such a way that they provide meaningful, important and useful insights and information.



For all our love of technology, our focus as a sensor product developer is always on the benefits in the use case.

The accensors USP's form a mix of

– Know how
– Desire
– Intellectual property rights

Know how

Skills - That's what it's all about.
At accensors, we bring together a team of technicians, scientists, health experts and business economists to fully realize maximum success for our sensors right from the start.

Desire

Realization strength and motivation to achieve something new, to realize new sensors, is in our DNA. As a whole accensors team we want to make a meaningful contribution to more safety in healthcare, higher quality of life for patients and professional assistance through our foil sensor solutions.

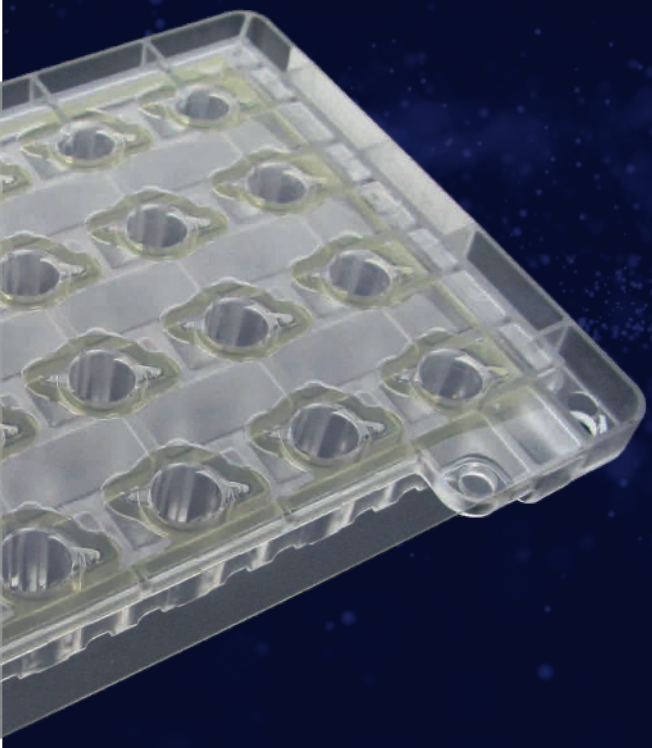
Intellectual propery rights

A broad portfolio of intellectual property rights anchors our ability and desire. We at accensors differentiate our property rights into three classes.

– Basic technology and processes
– Special sensor features for UseCases
– Integration in or on products

Bonding or thermoforming

At accensors, we offer two ways to connect our foil sensors as lab-on-foil systems to the sample containers or diagnostic kits and sampling carriers.

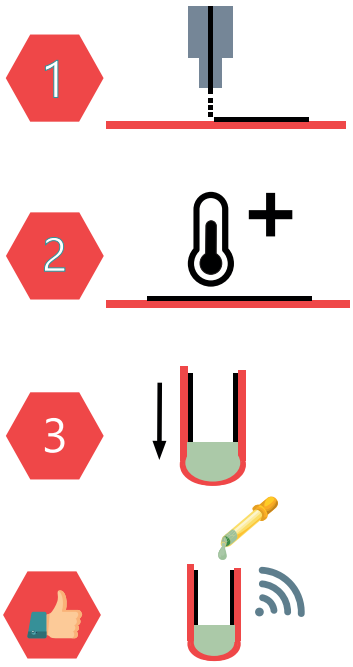


Bonding:

The foil sensor can be connected to the plastic or glass body via an adhesive process. Different adhesive solutions are available for this purpose, which are selected with regard to biocompatibility, tightness and also resistance to other media.

Thermoforming:

With a view to a simplified manufacturing process, we at accensors have realized another production process. By building a foil sensor lab-on-foil system on a thicker foil material, it is possible to thermoform this foil material afterwards. This eliminates the need for a plastic or glass body, since the required vessel is formed directly from the foil material. This also eliminates the need for a bonding process.



Key facts and uniqueness

> *Who always does what he is already able to do, always remains what he already is.*
> *- Henry Ford*

Thinner than a hair

At accensors we use foil materials from a thickness of 6µm on which we build our sensors.

Biocompatibility Clotting

The compatibility of our foilsensors is a "must have". We have developed different concepts to ensure compatibility.

Disposable ability

Foilsensors from accensors are developed in such a way that a sustainable recycling process can take place.

Not just some measurement values ...

but the really relevant ones - For us, it is standard to develop multiparametric sensors to record several different parameters simultaneously.

No "product change" due to upgradeability

To avoid major changes to the product or manufacturing process, we develop solutions for retrofitting foilsensors to existing products.

Response times

A big PLUS of foil sensors. Due to the small wall thicknesses and the quasi direct contact with the analyte, our foilsensors have extremely fast response times.

Material flexibility

Depending on the conditions of use, we use different foil materials, such as PEEK, PEN, PC, PET or PI. Elastic foil material is also possible and offers options especially for balloon catheters.

In the future - Active treatment

We at accensors are working on further functions that can be directly combined with our foil sensors. Thus, active sensor-based monitoring and treatment becomes real.

Applications and handling

personalized Chemosensitivity Test - Monitoring the metabolism of mammary carcinoma with different cytostatic drugs.

Legionella analysis in drinking water - SOP monitoring using smart sample vessels in the form of a Petri dish.

Physical sensors:

Temperature
pressure
flow rate
conductivity or impedance
many other parameters

Electrochemical sensors:

pH
sodium
magnesium
urea
many other parameters

Biosensors:

Coming soon

why choose accensors?

Your vision is our mission: customised sensor development

Whether smart plasters, intelligent catheters or other consumables with integrated sensor technology, as a service provider we offer companies and customers our development expertise and the corresponding connectivity. Let us transform your idea together to realise your innovation thrust and make your products become more intelligent.

„Who if not us – when if not now?“

We offer agile milestone-based development with regular review of deliverables and increments. After reaching each predefined milestone, there is the possibility to continue or stop the development process in the follow-up sprint. While you focus on your core business, we explore how we can solve your problem or come to new insights with your products.

Regardless of whether you already have a clear project idea or would like an initial brainstorming session with our team. Just contact us if you are curious about working together!

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