



# **SIKORA**EXTRA

Your magazine for Inspection | Sorting | Analysis

Free material analyses with the  
PURITY CONEPT Systems

04

Talking with Dr. Michael Schlipf about  
fluoropolymers

08



Dear readers,

The new SIKORA EXTRA is here! In this issue, we once again provide you with news about quality control and process optimization in the plastics industry. Find out how free material tests can help you decide on a suitable inspection and analysis system. We also report on innovations with the PURITY CONCEPT V. Thanks to the latest software update, the device is now a real all-rounder in the laboratory.

Dr. Christian Frank  
CEO SIKORA AG



In March, we had Dr. Michael Schlipf, Managing Director of FPS GmbH and Chairman of the Fluoropolymers Working Group of proK e.V., as our guest. Read his interview to find out what current developments are shaping the fluoropolymer industry.

We hope you enjoy reading it!

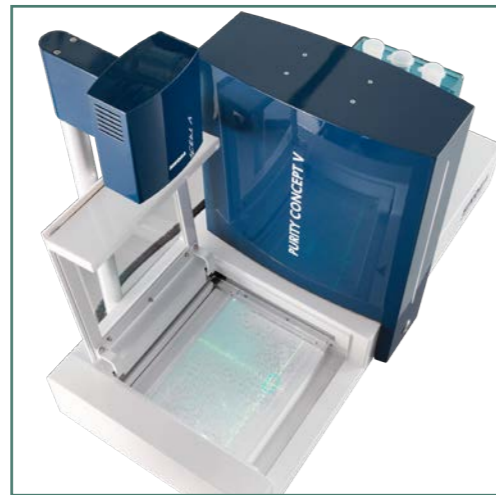
Yours sincerely,

Holger Lieder  
Executive Board SIKORA AG

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## FREE MATERIAL ANALYSES WITH THE PURITY CONCEPT SYSTEMS

Benefit from our expertise – 3,000 tests already completed

Ensuring pure pellets is a top priority for manufacturers and processors. However, if the causes of impurities are not found, they cannot be avoided but can only be sorted out later. Therefore makes sense to integrate a root cause analysis into the quality control process. As a manufacturer and distributor of innovative laboratory testing systems, SIKORA is happy to support you with free material tests to help you decide on a suitable system.

In a preliminary discussion, we will clarify with you what requirements you have for your material and how an analysis with our PURITY CONCEPT V optical inspection and analysis system works. You then send us samples of the materials you would like to test. Once we have received the samples, we will analyze them free of charge. The PURITY CONCEPT V detects optical impurities such as discoloration and black as well as colored specks down to 50 µm in size. If required, the material can also be analyzed for metallic impurities using the PURITY CONCEPT X X-ray measuring system.

As part of the evaluation, we create a comprehensive test report for you. It contains a large

number of images from the software used to analyze the materials. These show the detected contaminants in various analysis modes in an overall and gallery view as well as information on the color distribution of the contaminants and extensive statistics. This gives you complete transparency as to which samples are suitable for analysis and how this is carried out. You can also see how varied the results would look depending on the selected analysis mode and parameter settings.

With our technical capabilities and expertise gained from over 3,000 material tests, SIKORA is a reliable partner when it comes to analyzing your materials. With the help of the generated report, we can provide you with further information if necessary, such as where problems with impurities are coming from. In this way, you will be professionally and competently supported in your cause research.

Contact us at +49 421 48900 0 or via email at [sales@sikora.net](mailto:sales@sikora.net) to arrange your free material analysis.

### DR. LINDA MITTELBERG, GROUP LEADER SPECTROSCOPY AT THE SKZ

"In May last year, we opened our new Training Center for Quality Management (TZQ) at the SKZ in Würzburg. With this practice-oriented facility, we want to make the plastics industry more competitive in the long term through high qualification and further training of specialists. Among other things, we are also presenting the PURITY CONCEPT V from SIKORA for the inspection and analysis of plastic pellets in the laboratory."



## INLINE INSPECTION, SORTING & ANALYSIS OF PLASTIC PELLETS



### PURITY SCANNER ADVANCED

Unique on the market

- From 25 µm – detects the smallest impurities
- Combination of optics and X-ray – visual impurities and metallic contamination
- Stainless steel vibration chute – wear-free for clean material transport



Video link

# RELY ON THE ALL-ROUNDER FOR YOUR LAB

## Offline quality control with the PURITY CONCEPT V

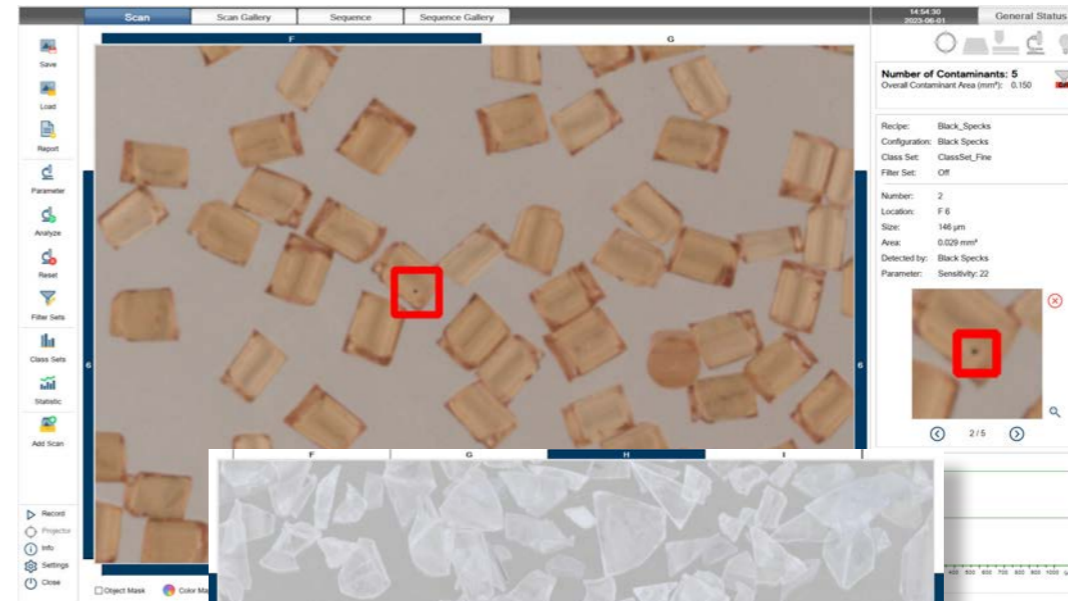
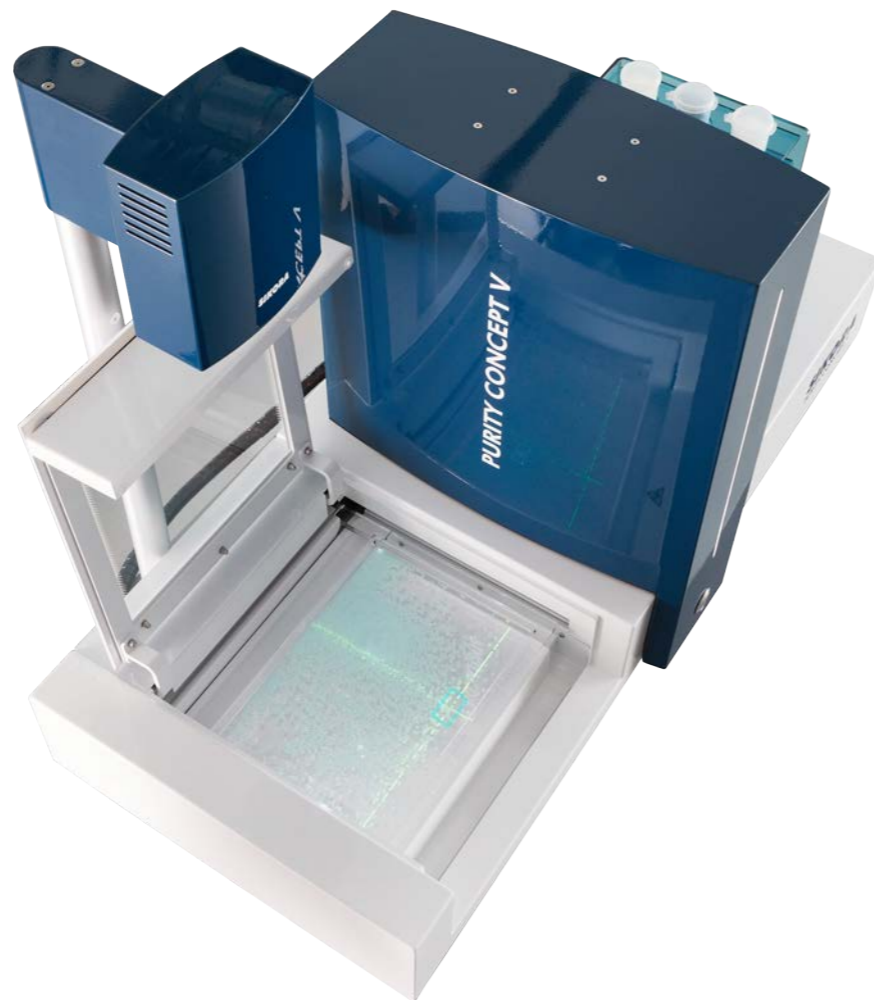
Whether pellets, test plates, test strips or powders – different test samples are examined during random sample testing depending on the process and requirements of the manufacturers and compounders. What if all samples could be analyzed with just one system? With the PURITY CONCEPT V inspection and analysis system, this is now possible thanks to a software update.

The PURITY CONCEPT V is a real all-rounder when it comes to quality control in the laboratory. The material to be inspected is distributed on a sample tray and moved through the inspection area. There it is inspected within seconds using a color camera. The integrated analysis software automatically detects, visualizes and evaluates contaminants down to 50 µm. A projector marks the contaminated material on the sample tray and also highlights it in the camera image.

The new software update extends the range of applications for the PURITY CONCEPT V. "Region filters" in the software can now be used to define specific regions on the sample carrier that are to be analyzed. These regions can consist of rectangles, ellipses and even polygons and define the reference area. In addition to pellets, plates and flakes, a wide range of films/test strips and powders can also be analyzed. Each defined area on the sample tray is numbered so that

detected contaminations are directly assigned to the respective sample part. For example, ten test plates can be analyzed simultaneously with just one click. This makes recurring work easier and saves a considerable amount of time. In less than 1 minute, the user receives a complete analysis and evaluation including comprehensive documentation of the test results.

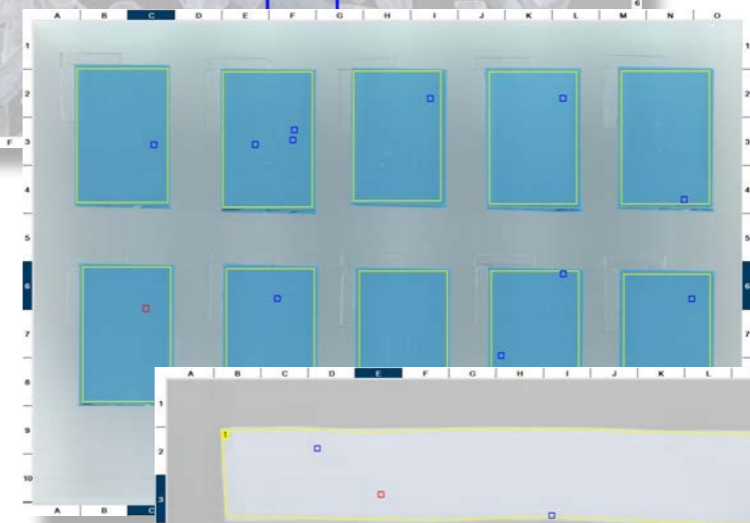
The reference surface can also be used to determine the contamination index or speck index of the tested material. For this purpose, the contaminated area is set in relation to the total size and evaluated. This provides the basis for a simple and immediate material release decision.



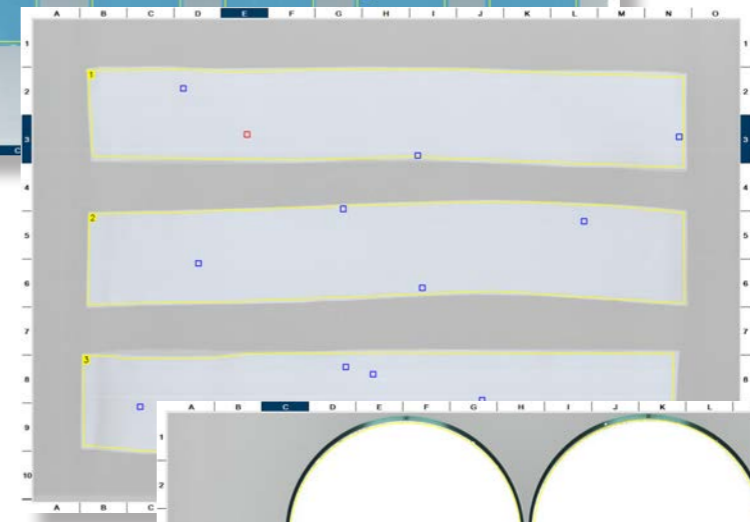
The PURITY CONCEPT V inspects pellets...



... Flakes...

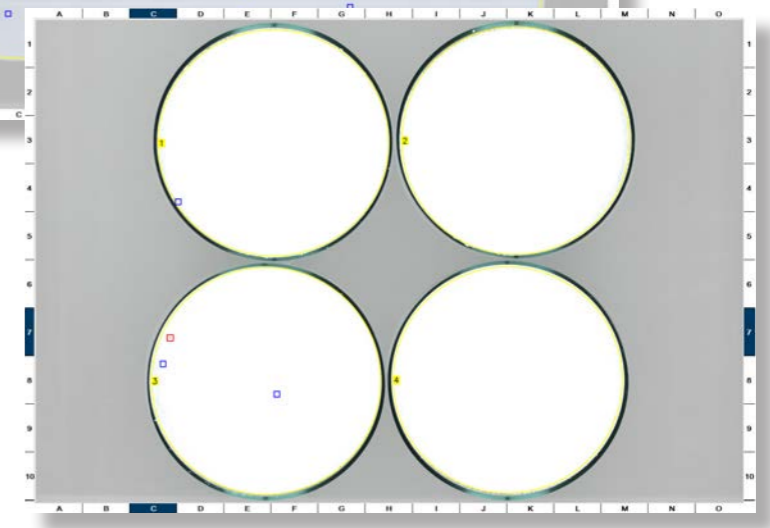


... test sheets..



... test stripes...

... and powder.



# TALKING WITH DR. MICHAEL SCHLIPF ABOUT FLUOROPOLYMERS

Megatrends unthinkable without without fluoropolymers



Dr. Michael Schlipf, Member of the Board and Chairman of the specialist group Fluoropolymergroup of the pro-K Industrie-Association of Semi-Finished and Consumer Products made of plastic e.V., visited SIKORA

Environmental standards for production facilities. The imported high-performance materials do not achieve the usual level of quality and purity in all respects. The local shortage of raw materials is expected to lead to an increase in prices, which will put European industry at a further competitive disadvantage.

### What significance does inspection and sorting technology currently have in the production and processing of fluoropolymers?

Fluoropolymers are primarily used in demanding applications such as medical technology, the semiconductor industry and high-frequency technology as well as the food and beverage industry. The highest

standards of purity and quality apply to these applications. Manufacturing processes can be very complex; the greater the damage in the event of contaminated end products. This is why inspection and sorting technology plays an important role before the granulate is processed.

### How do you see the future development of the industry in terms of material purity testing?

We are currently in a phase of disproportionate growth in the volume of fluoropolymers. This is due to the fact that most innovative megatrends are based on the use of fluoropolymers. As these new applications place high demands on fluoropolymers in terms of purity and quality, it is already clear that quality-enhancing production steps such as purity testing will continue to develop at a disproportionately high rate.

Thank you very much for the interview!

### Dr. Schlipf, what role do fluoropolymers play in the new megatrends such as e-mobility, 5G data transmission, green hydrogen or meeting the goals of the EU's Green Deal?

Due to their special property profile, fluoropolymers are the basis for all of the megatrends mentioned: in electric cars, they are mainly used in batteries, but also in electronics as functional and safety components. 5G data transmission takes place via antennas made of CCL (copper-clad laminates), a composite of copper foil, PTFE or FEP foil and PTFE-coated glass fabric. Green hydrogen is produced by electrolyzing water using electricity from wind or solar energy. The membranes in the electrolysis cells are made of fluorine ionomers. Replacing fossil fuels with green hydrogen makes a significant contribution to achieving the goals of the Green Deal.

### What does the planned restriction of PFAS (fluoropolymers) in Germany/Europe mean for manufacturers and processors?

Manufacturers of fluoropolymers in Europe are reducing their product portfolio or discontinuing the production of fluoropolymers completely. Half of the fluoropolymers required in Europe will then have to be imported, which will drastically increase the dependency of the high technology positioned in Europe on imports from abroad. Europe has comparatively high safety and envi-

## RAFFLE

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### Wordgrid

Find these 6 hidden words in the letter grid:

- MATERIAL ANALYSIS
- QUALITY CONTROL
- PELLETS
- FLUOROPOLYMERS
- ALLROUNDER
- FLAKES

Send us a picture/a screenshot of your solution by July 31, 2024, to: [extra@sikora.net](mailto:extra@sikora.net)

Win one of 3 Blink Video Doorbell (black).

Your contact details will not be passed on to third parties. Every entry will be entered into the prize draw. Unfortunately, SIKORA employees and their relatives may not take part. Each person can only enter once. We will evaluate the first e-mail, all subsequent e-mails will be considered invalid. Legal recourse is excluded.

GOOD LUCK!

## NEXT EVENTS



• FIP | 4.-7.6.2024 | Lyon, France



• InterPlas | 19.-22.6.2024 | Bangkok, Thailand



• Plastics Recycling Show | 19.-20.6.2024 | Amsterdam, Netherlands



• Plastics Recycling World Expo | 11.-12.9.2024 | Brussels, Belgium

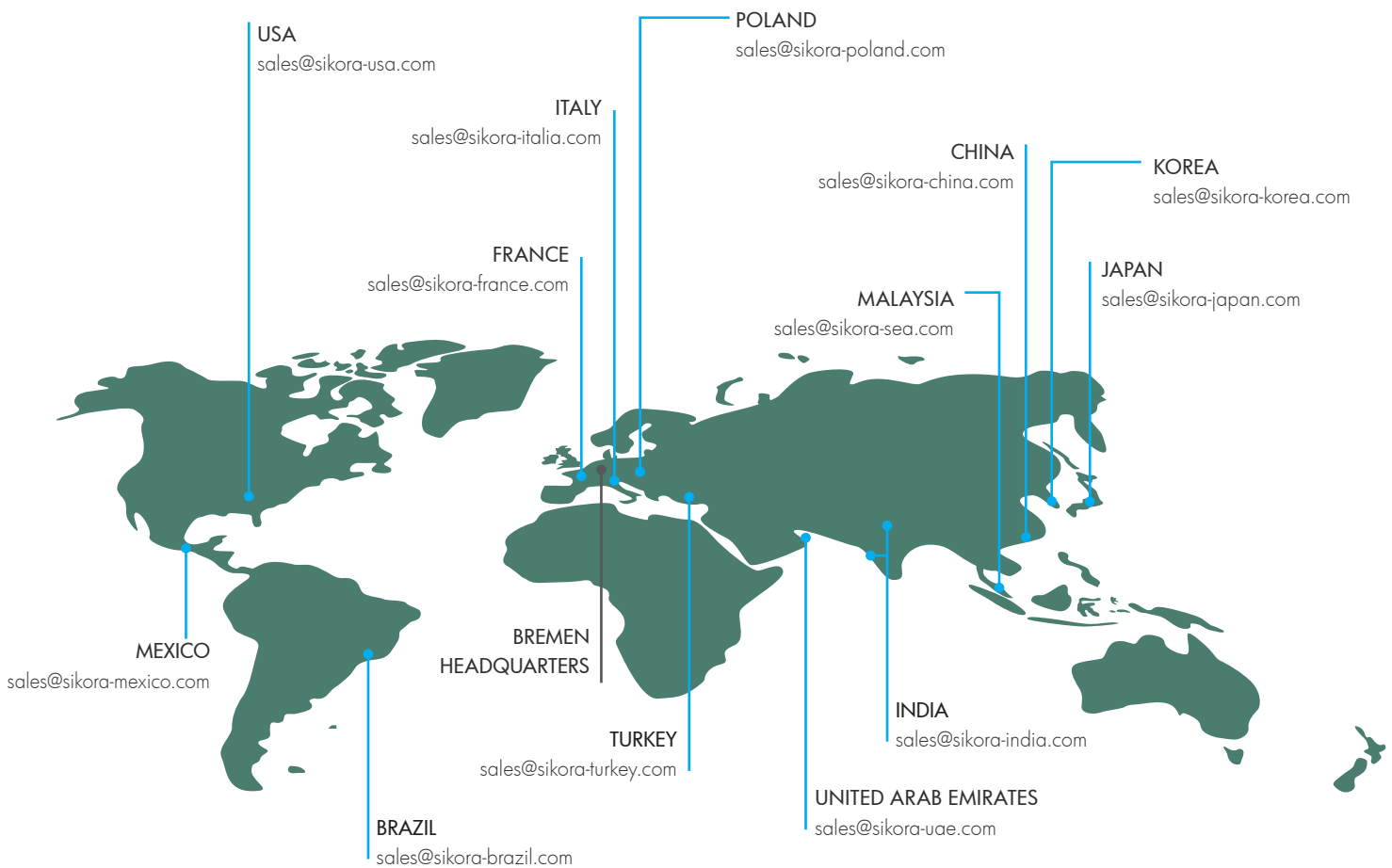
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Technology To Perfection

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