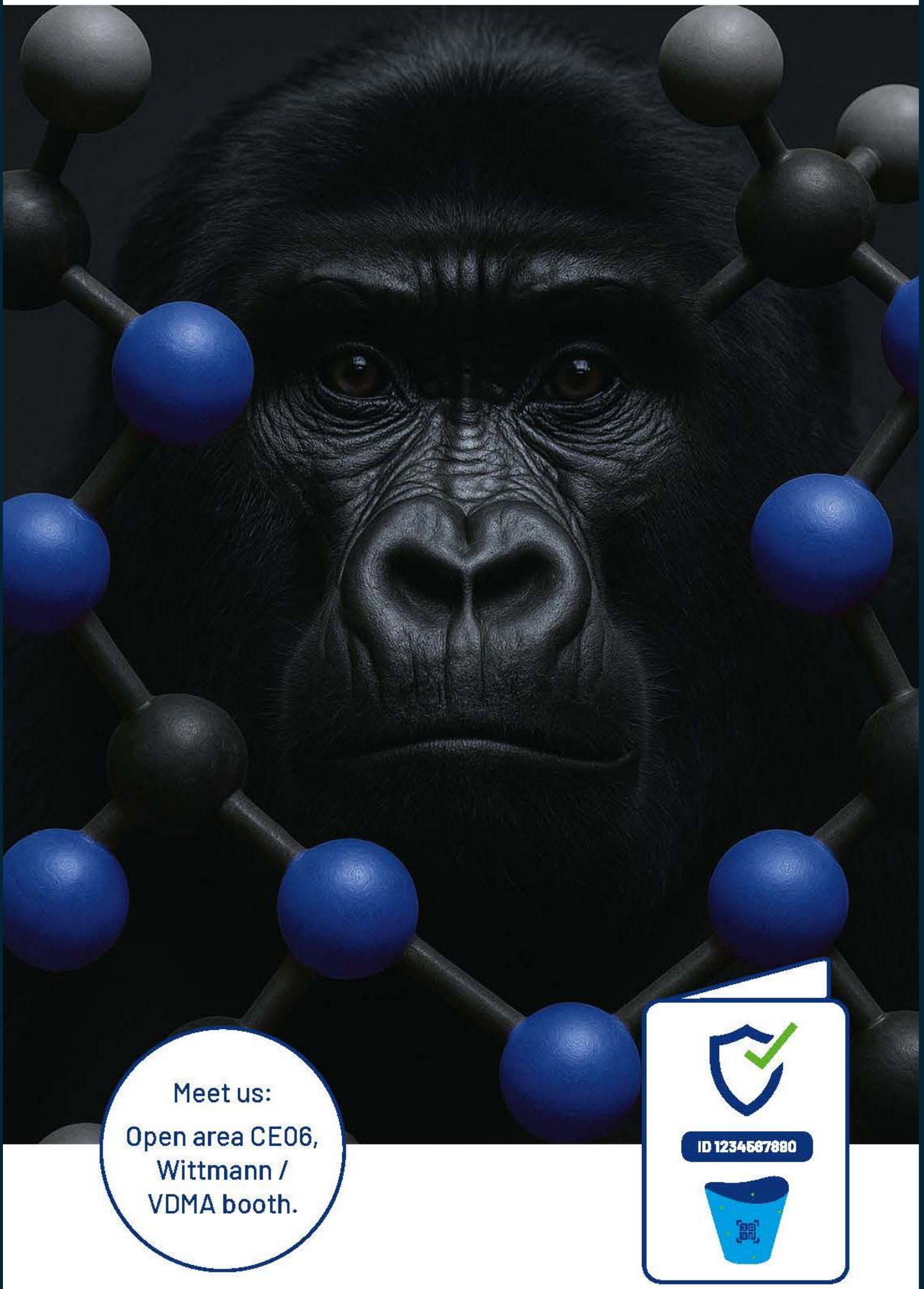
Sensor Instruments

Let's make sensors more individual

THE DIGITAL PRODUCT PASSPORT

with Material Authentication



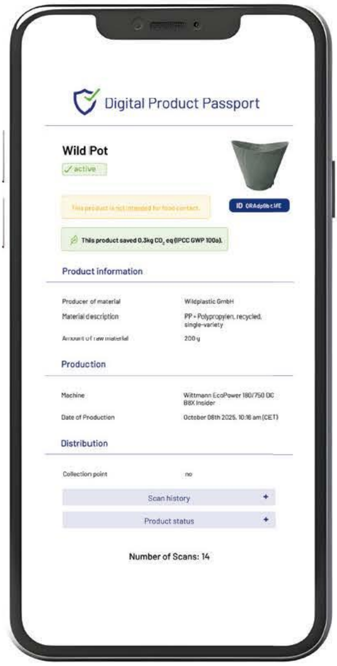
Meet us:

Open area CE06, Wittmann / VDMA booth.

Digital Product Passport (DPP) in Plastics Processing

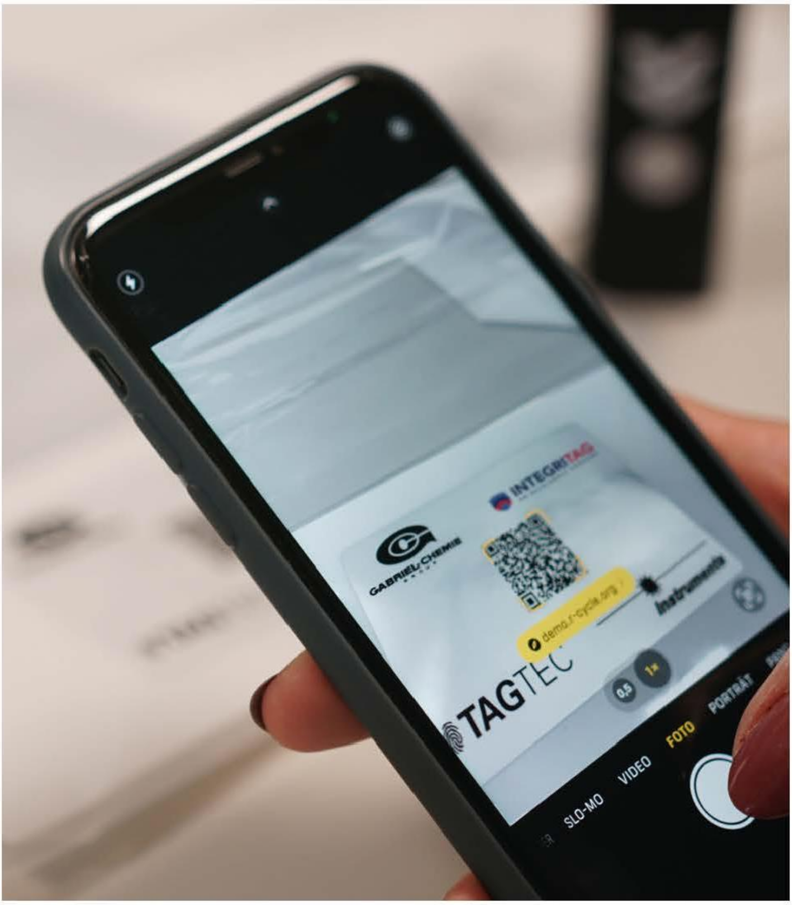
The Digital Product Passport (DPP) is set to become a game-changer for the plastics industry. It acts as a digital twin of any plastic product, carrying verified information across its entire life cycle – from raw material to processing, use and recycling.

Check our live demo:



- **Full transparency** – clear traceability of polymers, additives and recyclate content.
- **Circular design** – enables smarter sorting, dismanting and closed-loop recycling.
- **Proof of sustainability** – documentation of CO_2 footprint, energy demand and recyclate content.
- **Regulatory compliance** – aligns with EU ESPR and PPWR targets for 2030 and beyond.

Seamless Synergy



Together all these components create a tamper-proof chain of trust:

- ✓ **Secure authentication at any stage of lifecycle.**
- ✓ **Process control from production to recycling.**
- ✓ **Guaranteed traceability across multiple cycles.**

This is sensor technology at its finest – merging cutting-edge optoelectronics, digital intelligence, and circular economy design into one seamless system.

A Game-Changer for the Plastic Industry

Our database-driven single item recognition using QR codes is combined with a physical marker in the product. This combination not only guarantees the authenticity of the product, it also ensures 100% material recognition in the recycling process, even when the product no longer exists in its original form.

From waste to smart design.

The **Wild Pot** is a symbol of how plastic waste can be reborn as a digitally traceable, circular product – made from **WILDPLASTIC®** that has been rescued from the environment and recycled by local waste collectors. Every Wild Pot carries its own digital identity.

» **Learn more:** wildplastic.com

Protecting your originals.

Invisible marker technology made by **Leuchtstoffwerk Breitungen (LWB)** is embedded directly into the material. The marker withstands every process – shredding, washing, melting – and still remains detectable. This ensures that even after the Wild Pot has been recycled into flakes and, finally, into pellets, its origin remains traceable.

LWB specializes in inorganic phosphors and optical materials for specialist markets in light production, diagnostics, product marking and the authentication of bank notes and security documents.
» **Questions about marker technology?**
info@leuchtstoffwerk.com

Transparency, compliance and data-driven added value.

Each Wild Pot is paired with a unique QR code – provided by **Integritag Digital**. These components act as the visible gateway to the product's Digital Product Passport (DDP).

Scanning the integrated unique QR code

Integritag's portfolio ranges from secure labeling solutions with holograms and contactless technologies such as QR codes, RFID, the more sustainable eRFID and NFC to intelligent digital solutions and cloud services that seamlessly connect physical products with the digital world.
» **Learn more:**
integritag@all4labels.com

Cutting-edge sensor technology.

Using TAU Reader as marker detectors made by **Sensor Instruments**, authenticity can be verified at any stage – during production, at retail, in use, and even after recycling – detected and differentiated by marker types.

INLINE systems ensure during the manufacturing that each product contains the original marker. Once verfied, the item gets its unique identifier. The detector verifies - in combination with the unique identifier - the authenticity via cloud solution, which enables fast checks in the field, retail or laboratories.

Sensor Instruments develops and manufactures optoelectronic sensor systems for product authentication, particularly for the plastics and recycling industries. Designed for inline, laboratory and mobile use, and made in Germany.
» **All about sensors:**
info@sensorinstruments.de

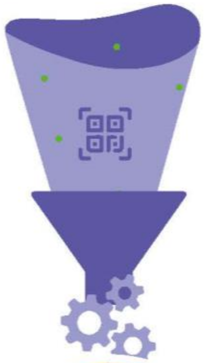
TAU Reader scanning a Wild Pot

Collecting DPP traced products.

The identification and verification of individual DDP connected products at the collection point enables them to be forwarded to the recycling organisations sorted by type. The TAU Reader prevents replicas from being accepted. The database enables complete traceability of the product life cycle.

Recycling benefits.

During recycling, INLINE TAU Readers separate marked objects from mixed waste streams. Even after shredding and extrusion, the marker remains detectable, enabling resorting and traceability.



When the recyclate is reused, INLINE TAU Readers measure the exact marker content in real time. Integrated with dosing units, they automatically add the required amount of marker-based master batch to ensure the new product achieves the precisely defined marker concentration.

Realized Through Strong Partnerships

The Digital Product Passport is the result of a shared vision and close collaboration among dedicated partners. We extend our sincere thanks to all contributors whose expertise, commitment, and teamwork made the realization of this groundbreaking innovation possible.

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AN ALL4LABELS COMPANY
all4labels.com/brands/#integritag

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Talk to us, we are glad to be there for you.

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