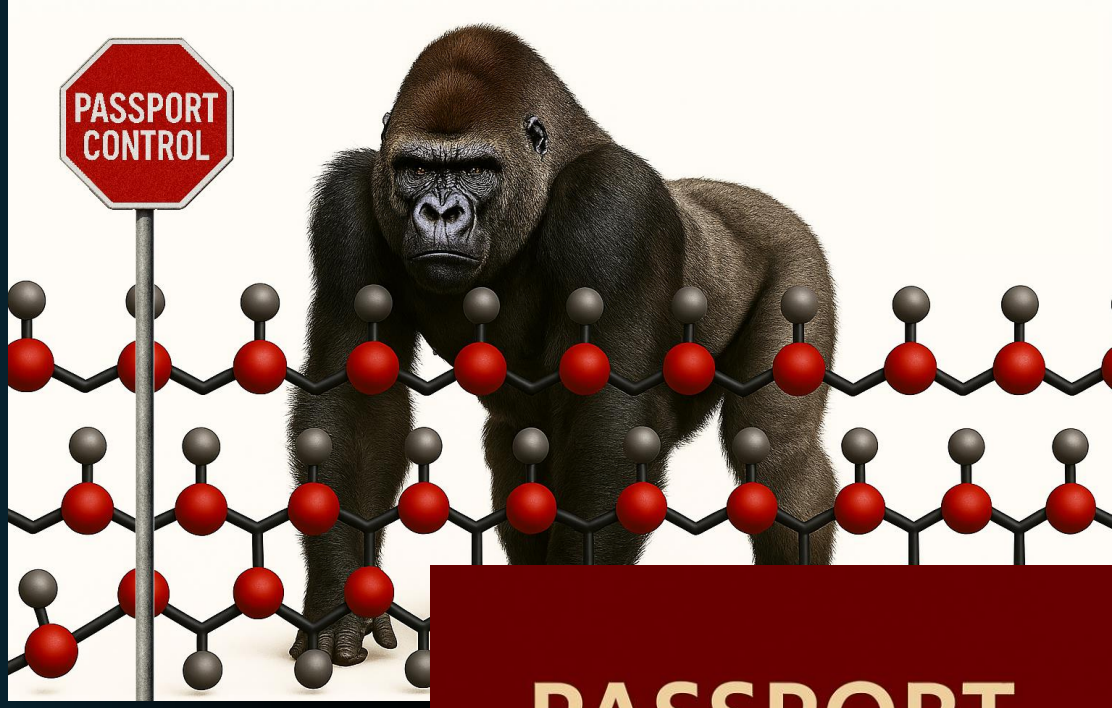
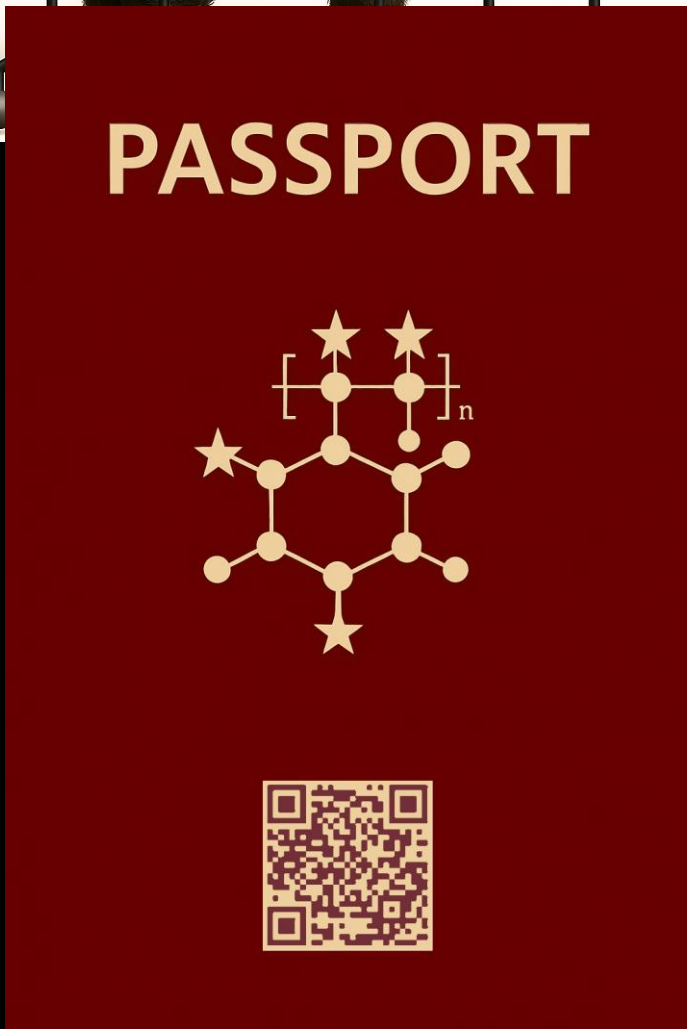
The Digital Product Passport (DPP)

with Material Authentication

Digital Product Passport (DPP) in Plastics Processing

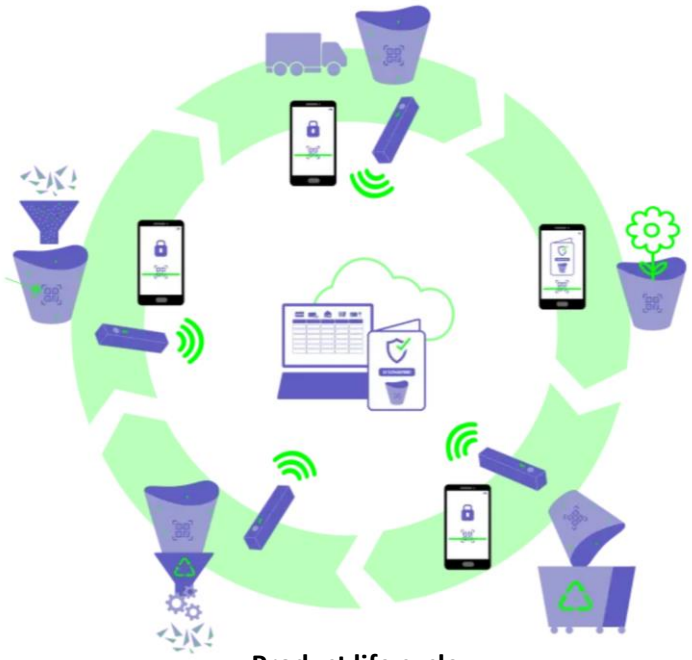
The **Digital Product Passport (DPP)** is set to become a game-changer for the plastics industry. It acts as a digital twin of any plastic product, carrying verified information across its entire life cycle – from raw material to processing, use and recycling.





* **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.

Wild Pot



Product life cycle

From Waste to Smart Design – The Wild Pot Story

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.

* Invisible marker technology is embedded directly into the material.
* Each unit is paired with a unique QR code, acting as the visible gateway to its Digital Product Passport (DPP).
* Using cutting-edge marker detectors, authenticity can be verified at any stage – during production, at retail, in use, and even after recycling.

What makes it extraordinary:

* 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.
* Combined with the DPP, it provides a tamper-proof chain of trust: Where the plastic comes from is clearly documented.

TAGTEC

TAU Reader Technology – Cutting-Edge Sensor Intelligence

With TAU Readers – available as LUMI-TAU INLINE, MOBILE and LAB – marked objects can be securely detected and differentiated by marker type.

Mobile and Lab authentication:

* Sensor data is transmitted over the air to a smartphone.
* The TAU app compares the measured marker signature with the values stored in the cloud, which is queried using the OR code.
* If the two match, the product is instantly verified as authentic.
* MOBILE and LAB units enable fast authentication in the field, at retail or in quality control labs.

Inline verification in production:

* INLINE systems ensure during manufacturing that each product contains the correct marker concentration.
* Only then is the item marked with a laser-engraved individual QR code, binding the physical marker to its Digital Product Passport (DPP).

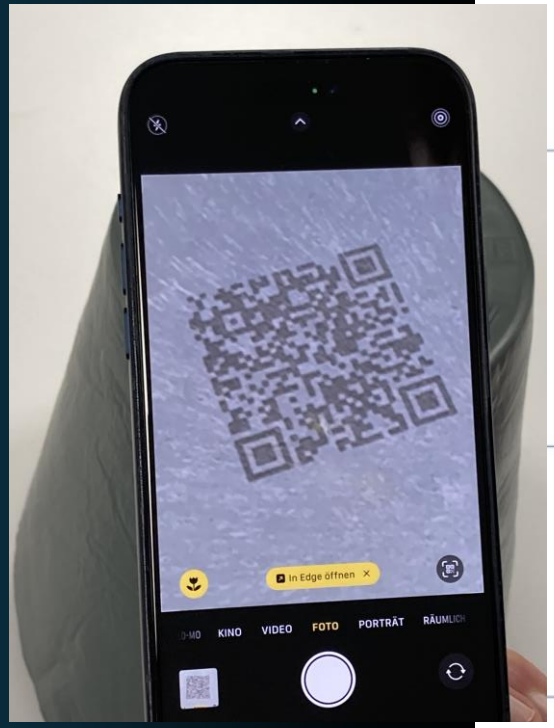
Smart recycling & closed loops:

* 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, the required amount of marker-based masterbatch can be added automatically to ensure that the new product achieves the precisely defined marker concentration.

Seamless Synergy of Sensors, Marker Technology, Smartphone Apps and the Cloud

Together, TAU Readers + Marker + QR code + Digital Product Passport create a tamper-proof chain of trust:

* **Secure authentication at any stage of the 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.

Digital Product Passport

Wild Pot

✓ active

This product is not intended for food contact.

ID QRAdp9btAfE

This product saved 0,3kg CO_2 eq (IPCC GWP 100a).

Product information

Producer of material	Wildplastic GmbH
Material description	PP - Polypropylen, recycled, single-variety
Amount of raw material	200 g
Additive	Gabriel-Chemie GmbH

Production

Machine	Wittmann EcoPower 180/750 DC B8X Insider
Date of Production	October 08th 2025, 10:16 am (CET)

Distribution

Collection point	no

Scan history +

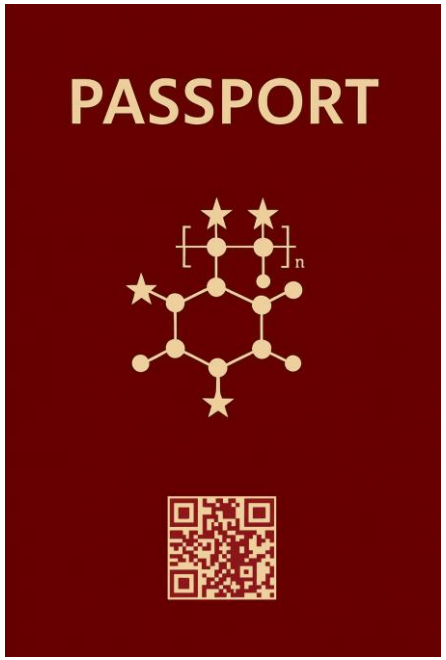
Product status +

Number of Scans: 14

Realized through Strong Partnerships

The **Digital Product Passport (DPP)** 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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with Material Authentication

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INTEGRITAG stands for the future of labeling from a single source.

We increase efficiency in the supply chain, protect brands, secure identities, and strengthen consumer engagement.

Our 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. This results in applications such as digital product passport, supply chain tracking, product authentication, and consumer engagement — for greater transparency, compliance, and data-driven added value.

✉ integritag@all4labels.com

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Innovative phosphors powering product authenticity since 1948.

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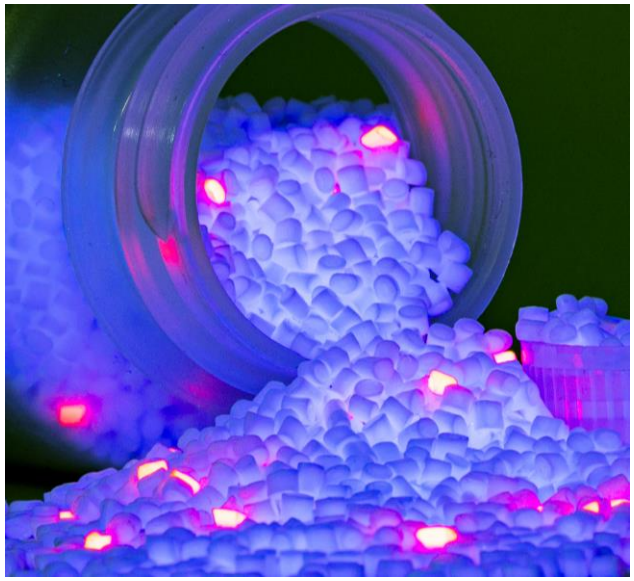

✉ info@leuchtstoffwerk.com

Clarity about the Authenticity of a Product

The Digital Product Passport (DPP) with Material Authentication

Always keep an eye on the authenticity of the products

Our specialists are happy to tell you more about it

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Let's make sensors more individual