Introduction. ELM Recycling stands for high-quality plastic recycling. By continuously developing its processes, systems, and employees, ELM Recycling wants to keep the largest possible proportion of existing materials in the loop as secondary plastics for further processing. This way, ELM Recycling is making its contribution on the way to a closed circular economy. To further improve, ELM Recycling decided to invest in our innovative trinamiX Mobile NIR Spectroscopy Solution to flexibly identify more than 30 plastic types on-the-spot.

Challenge. When it comes to quality, one of the main levers in plastics recycling is the sorting process. The first step of this process involves the identification of unknown plastic material streams. While ELM Recycling uses automated sorting lines for rapid plastic type identification, these are only helpful for the materials that are processed in this part of the production line. All the other material streams would have to be sent to an external lab for analysis. This is very time-consuming and cost-intensive.

Solution. Seeing room for improvements, ELM Recycling has been looking for a solution that combines the advantages of reliable laboratory analysis with the flexibility of fast on-the-spot plastics identification. ELM Recycling found this solution in trinamiX's innovative tool. Thanks to the flexibility of a pocket-sized tool that can be easily carried anywhere, the solution is now applied daily in different buildings and production steps in ELM Recycling’s main operations in Bissingen.
Success. The broad integration of trinamiX’s solution across production processes has led to a more efficient operation at ELM Recycling. It is used several times a day in different departments by the production staff, whether in incoming inspection, directly after production, or in the final quality control of outgoing products. Since the well-being of employees has a high priority for ELM Recycling, the solution also has replaced the hazardous sensory tests involving lighting plastic samples – the healthier choice of pushing a button has become the preference over inhaling smoke.

About trinamiX. At trinamiX, we make advanced NIR technology accessible to people outside a laboratory for a variety of applications across industries, including agriculture, circular economy, chemistry, and food. We make the invisible visible.

»Thanks to the rapid identification of plastics, the efficiency of our quality controls has been noticeably increased.«

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