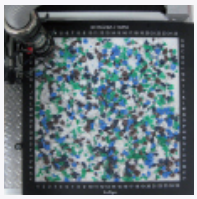
sIRoGran

Automatic granule scanner for all mixed granules and flakes with statistic functions

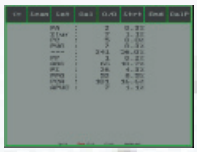
Technology by **IoSys** – Europe's Leading Specialist for Plastic Detection

GUT
Environmental Technologies

With the near infrared spectrometry of the IoSys units it is possible to identify non-dark plastic parts like flakes, pellets, ground material or granulates directly in order to be able to determine the quality, purity and the composition of the material very quickly.



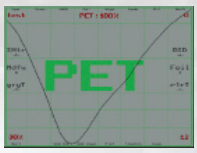
The measuring principle is the diffuse near infrared reflection spectroscopy where the characteristic absorption patterns of different polymer types in a typical spectral region are used. The polymer sample is radiated with infrared light and the reflected light of the measuring place is analyzed by a near infrared detector array.



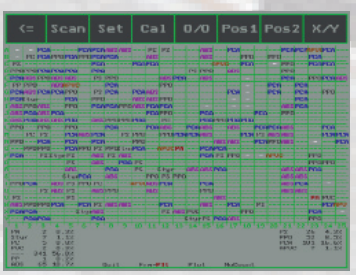
Automatic plastic identification: The material can either be dispersed on a so-called **MicroPlate** with 625 holes (25 x 25 lines, e.g. for pellets or granulates) or directly scattered on the so-called **OpenFrame** reference reflection plate (e.g. for flakes, ground materials). The measuring head – fixed in a X/Y-sledge – scans the pre-set measuring area line for line. Depending on preset parameters and measuring mode, the identified plastics can be shown continuously on the display in different colours for each given position (1...25, A...Y), together with the overall percentage composition. Unknown materials or non-identifications (e.g. due too dark samples) can be selected to be counted or not.

The stationary device includes the optical NIR-system and the computer, which controls and evaluates the identification process as well as the power supply unit. Software operation can be made by an external keyboard or by the integrated VGA touchscreen. For control measurements in insecure cases a chosen position can be selected by pressing this square on the screen. The measuring head then is automatically driving to this certain position and checking this place again.

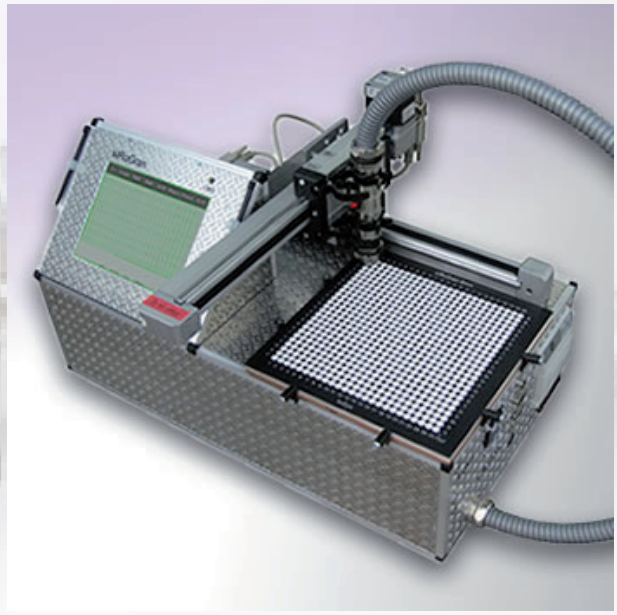
With the USB-Stick data exchanges can be made to external computers. A built-in Mini-Plotter printing out the results allows result documentation.



For manual plastic identification the measuring rod simply is pressed on to the analysis sample. The measurement begins by pressing the start button on the rod. Within a second the VGA-touchscreen shows the recognized polymer.



The software allows detailed spectra viewing, loading, saving and comparing. This possibility helps to develop own measuring applications besides the standard ranges.



With the **sIRoGran** it is possible to identify the following relevant plastic types independent of surface texture and humidity content in their mixing proportions or purity qualities:

PA6/PA66	PS	PC+ABS	ABS+PVC	PLA
PA12	PPO	PBT	PVC	Cellulose
PE	SAN	PET	PE+PA	
PP	PC+PET	PMMA	PE+PET	
ABS	PC	POM	PP+PET	

Technical Data:

- Dimensions:	480 x 290 x 390 mm
- Weight:	8 kg
- Power Supply:	100 - 230 VAC, 50/60 Hz

Optional Accessories:

- External VGA-Screen for a bigger display of the results

Specifics of the unit:

- Operational Area: Plastics from the household, packing and electric/electronics range
- Purity control of bulk materials like e.g. granulates, ground materials, flakes and pellets
- Contact-free and non destructive measurement
- Measuring field size adjustable, grain sizes even less than 1 mm are measurable
- Measuring steps of 0.15 mm – 1.5 mm
- Detection and documentation of mixing ratios
- Individual manual measurements possible

For further information: GUT GmbH · Birkenwaldstr. 90 · 70191 Stuttgart · Germany
T: +49-711-257 39 79 · F: +49-711-257 39 34 · e-mail: gutgmbh@online.de