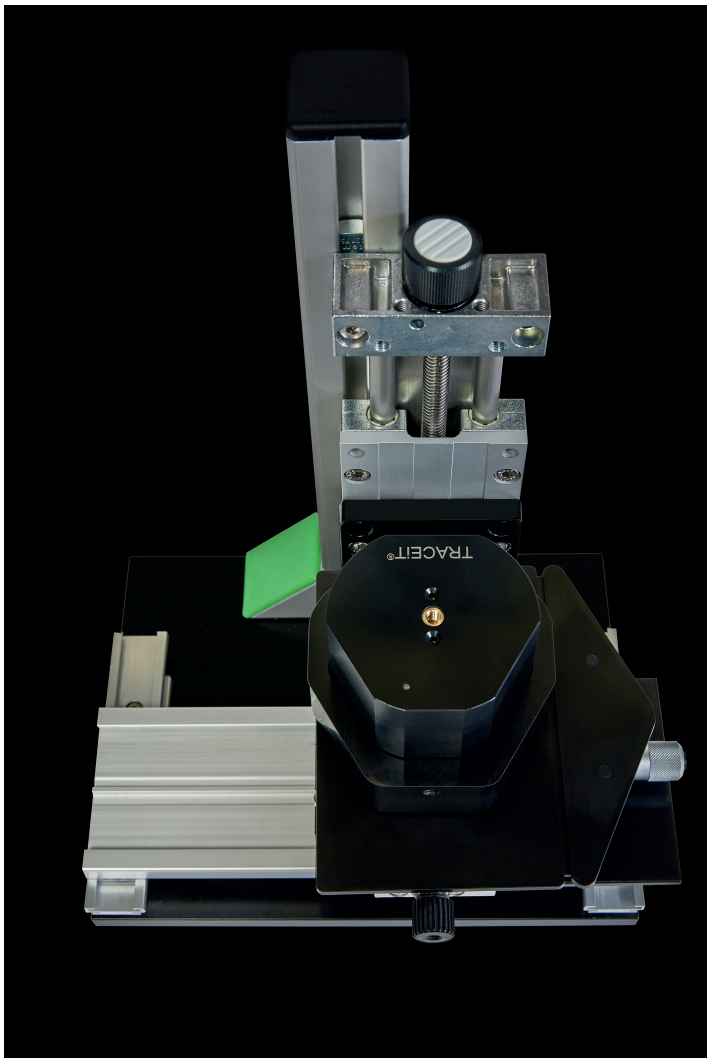
INNOWEP®

quality + durability + haptic

TRACEiT®



- 3D Topography
- Roughness
- Visual Documentation
- Height Distribution
- Porosity Distribution
- Effective Contact Area

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HIGHLIGHTS

- Mobile design
- Fast measurement
- Easy operation
- Non-contact method
- Reproducible and calibratable system
- Fast and Easy documentation of 3D topography & visual impression & porosity

BASIC FUNCTIONS

Surface profile is a key parameter of a product's quality, which affects the product's overall performance. The height values of the surface (often referred as to "valleys" and "peaks") determine many functional features, e.g. abrasion, adhesion, etc. Furthermore, the analysis of wear or abrasion after the mechanical tests is also needed to determine the quality of surface coatings. Therefore, an accurate measurement and documentation of the surface profile helps to make the right decision for the product's quality control.

TRACEiT® is the only mobile measurement instrument which measures the surface profiles in a fast, mobile, optical, non-contact fashion. The fast and easy measurement of 3D topography as well as the documentation of visual impression makes it widely used in R&D for new material development as well as in the quality control of manufacturing processes.

Parameters which can be measured with **TRACEiT®** include:

- Roughness
- 3D Topography/Mapping
- Light intensity
- Porosity
- Effective contact area

Additionaly, **TRACEiT®** is suitable for use on lab samples and finished products with handheld, or a positioning adapter, or a a tripod or a robotics unit.

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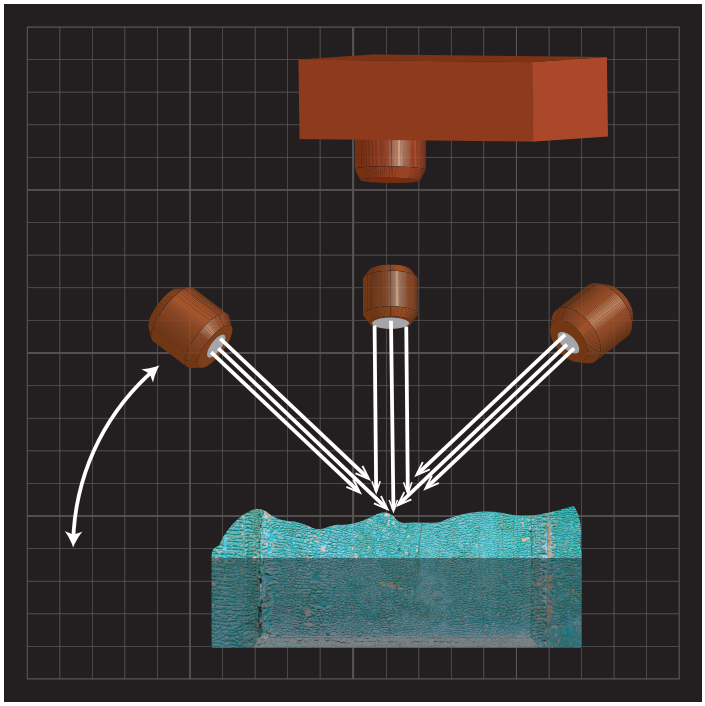
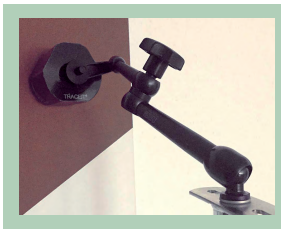


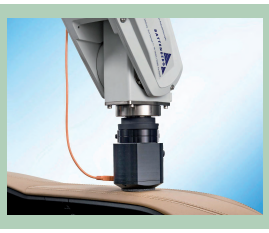
TEST PRINCIPLE

- Measuring head with 3 white light optics for topography measurement
- Additional built-in camera for visual impression documentation
- up to 1500 pixels both in x- and y-directions
- 5mm x 5mm fixed measurement area
- Simultaneous analysis of all measurements with the same resolution on the same sample area

APPLICATIONS

- **Automotive**: interior and exterior parts (leather, plastics, textiles, coating, paints)
- **Paper**: painting, drawing, safety paper, ancient paper
- **Security paper**: banknote, counterfeit indentification, passport, ID
- **Medical**: skin structure, skin cancer, scar
- **Cosmetics**: skin type and structure
- **Cultural heritage**: wall painting, sculpture, sandstone, wood
- **Customs**: counterfeit identification
- **Textile**: handbag, wallet, functional clothes





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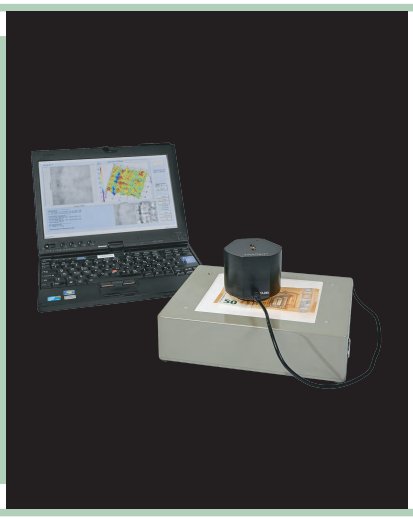
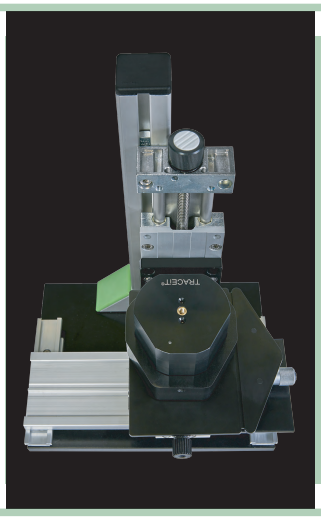
OPTIONS

Transmitted Light

Providing the standard light to recognize and rate the structures of transparent or translucent materials, e.g. glass, foils, paper or fabrics. Mainly for the measurements of porosity, fibre structures, and etc.





Positioning Device

For accurate positioning of the sample and further stitching functionality. Standard tripod can be also provided.

Robotic Device

Compatible with Battenberg Robot for on- site measurement both in laboratory and manufacturing plants.

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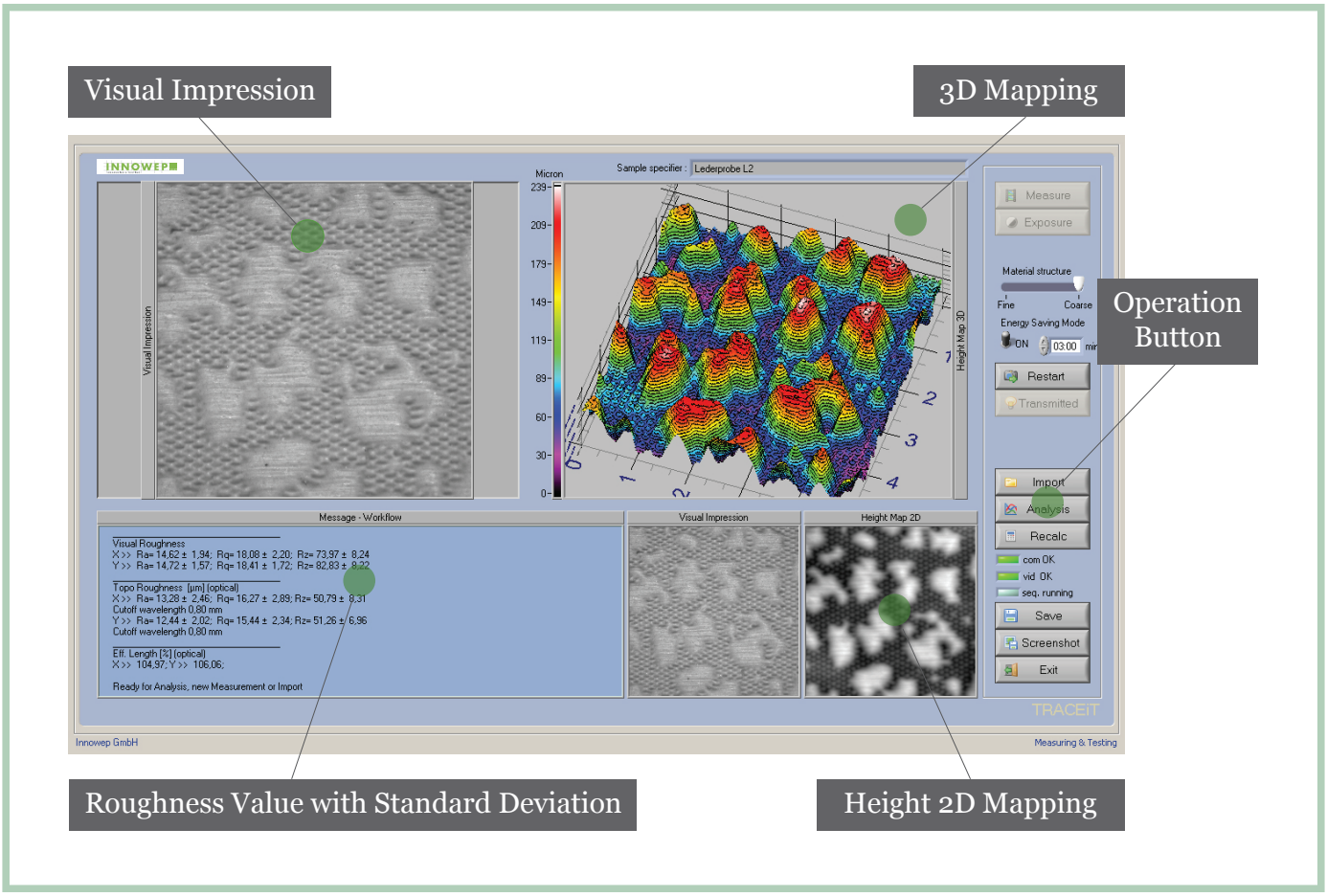
SOFTWARE ILLUSTRATION - MAIN ANALYSIS

The topography values and the visual impression are not only measured but are also transformed by an analysis tool into various roughness parameters with standard deviation values.
All measurements and calculations are carried out via interaction of the measuring head and the notebook, in which data storage, evaluation and analysis take place. Data can also be exported to other programs for further calculation.



- **Visual Impression**: overall appearance of a surface to the human eye
- **Roughness Value**: complex micro- and macro-structure
- **3D Mapping**: physical topography
- **Height 2D Mapping**: two dimensional topography

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SOFTWARE ANALYSIS - FURTHER ANALYSIS

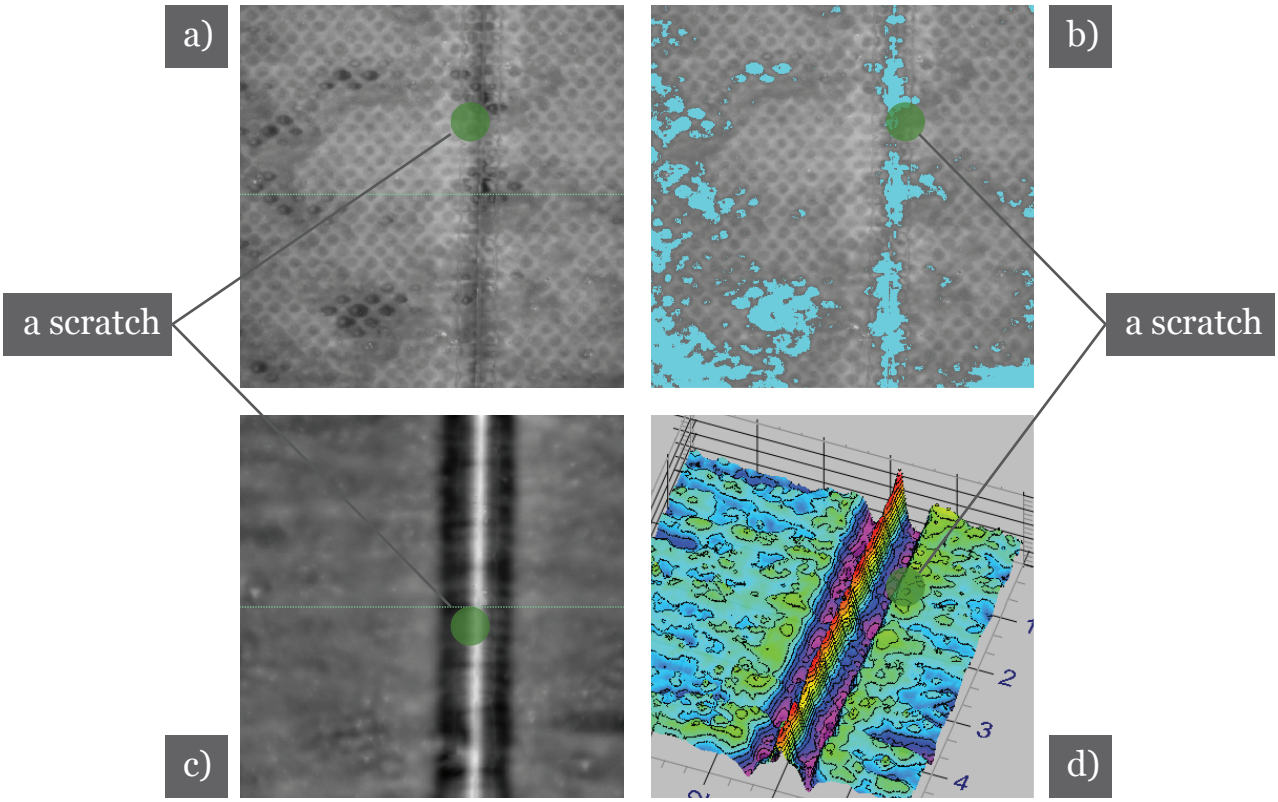
Direct comparative analysis on a surface after a scratch test with the same resolution of:

a) Visual Impression, light intensity;

b) Area of the lower height between 0-106 µm marked in turquoise;

c) Selected topography area with the highest peak and lowest valley area marked in yellow;

d) Top view of 3D topography/3D mapping with the height range of 0-182 µm;



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