

MEASUREMENTS - EVALUATION – SOLUTIONS

With more than 60 years of experience, PTS has gained an excellent reputation as a provider of physical and chemical testing services for paper, fibres and packaging.

In many cases, complex issues demand comprehensive solutions and detailed analyses of a wide variety of characteristics and influences, for example when the performance of products varies due to interactions with other media, dynamic forming processes or climatic changes.

It takes a lot of knowledge and methodological competence to find the most suitable analytical method for each problem. Our internal and external networks of excellent specialists enable us to complete even the most challenging tasks. Our department of analytical services acts as one-point contact for customers here.

COMPLETE SOLUTIONS FROM ONE SOURCE

Besides technical expertise in chemical analyses and physical testing, we have another major asset: understanding the needs of our customers. To solve their problems, PTS combines many decades of experience in paper technology with state-of-the-art analytical facilities and highly dedicated staff. Your benefits:

- » One-point contact to find the optimum approach.
- » Flexibility and expert advice.
- » More than 500 methods under one roof.
- » Evaluation of results geared to your specific tasks.
- » Fast processing when things are urgent.

PTS is a non-profitmaking research institute with independent, neutral test laboratories.

Your success is our goal!

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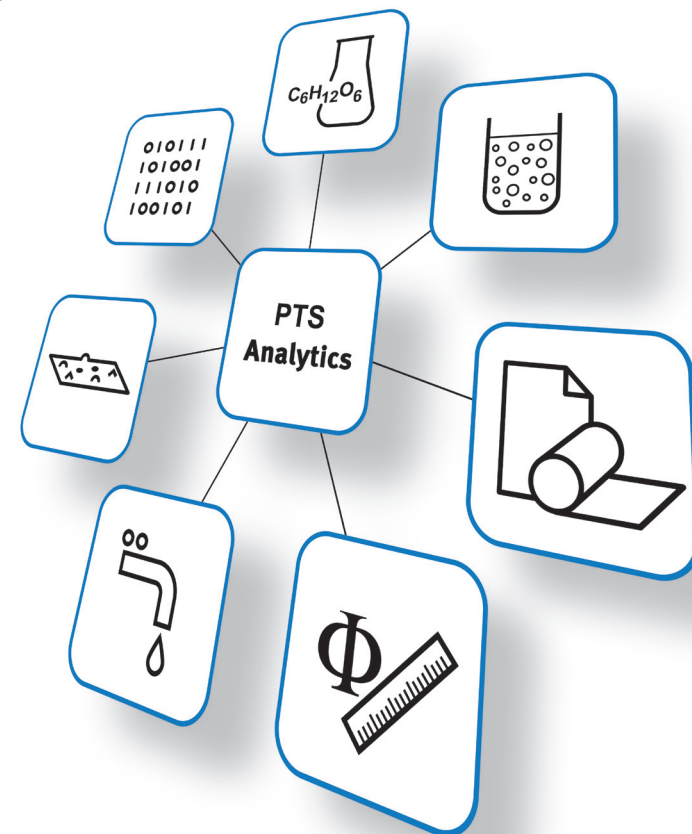
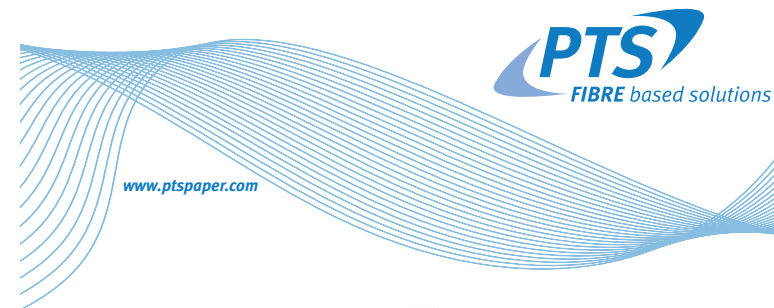


Our testing laboratory is accredited according to DIN EN ISO/IEC 17025. The scope of accreditation is stated in Annex D-PL-17375-01-00 of the accreditation certificate.



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» FIBRES & COMPOSITES » PACKAGING & UPGRADING » INNOVATIVE MEASURING » MATERIAL TESTING & ANALYTICS

QUALITY ASSURANCE
IN PRODUCTION
AND DESIGN

ADVANCED ANALYTICAL SERVICES

YOUR AIMS

Looking for prompt services and state-of-the-art facilities? We are constantly upgrading and enlarging our equipment pool and employ highly qualified, experienced scientists.

Our high **commitment, flexibility and expertise** can be taken for granted if you are looking for solutions to complex problems. Besides accurate measurements, we shall be pleased to provide you with evaluations, advice and concrete support, if desired. In recent years we have expanded our service spectrum by establishing several new, powerful methods to further satisfy your demands. This enables us to offer state-of-the-art analytics addressing burning issues of the paper, packaging and related sectors.

For example:

- » **gas chromatography** for analyses of organic trace compounds and food contact materials,
- » **scanning electron microscopy** with EDX and professional sample preparation for cross-sectional and surface analyses,
- » **spectroscopic methods:** FT-IR-, NIR-, Raman-, Terahertz spectroscopy for chemical analyses of papers and paper components, defects etc.,
- » **particle measurement technology** for characterising dispersions, emulsions and powder,
- » **nano indentation** for the assessment of mechanical properties of coatings and varnishes,
- » **dynamic-mechanical analysis (DMA)** of solids for characterizing their viscoelastic properties.

OUR SERVICES

We focus on the constantly changing requirements of our customers from industry and research, which we are striving to meet by effective combinations of established test methods with cutting-edge analytics.

- » **Analyses of chemical composition and product structures**, e.g. by microscopy, analysis of trace compounds, spectroscopic methods.
- » **Analyses of pulps, pigments and additives**.
- » Physical and chemical characteristics, e.g. by measuring strength parameters, porosity and penetration dynamics, thermal conversion and phase transition processes.
- » **Surface and optical analyses**, e.g. by means of light and electron microscopy, three-dimensional imaging of surfaces, mapping of physical and chemical surface properties.
- » **Printing and converting analyses**, e.g. by (conventional and digital) test printing techniques, special tests investigating the behaviour in converting steps like creasing, folding, cutting, gluing ...
- » **Solving complex analytical tasks with the help of modelling and simulation**.

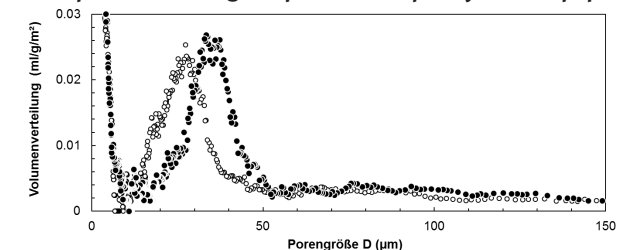
Our test methods are suitable for paper, paperboard, board/corrugated board, nonwovens, composites, paper converting and print products, packages, dispersions, emulsions, water, wastewater, residues.

YOUR BENEFITS

We are much more than a mere analytical laboratory – our specialists are able to comprehend your problems and make useful suggestions how to effectively solve them by means of suitable analytics. Even customers who have not enlisted the services of PTS so far will find valuable assistance

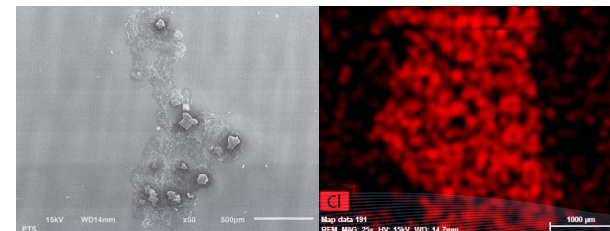
- » with new product developments,
- » quality assurance or
- » the handling of complaints.

Example 1: Assessing the perforation quality of filter paper



Perforation details decide about the performance of specialty filter papers. This was demonstrated by a competition analysis using porosimetry, which led to significant improvements in the product. und so das Produkt maßgeblich verbessert werden.

Example 2: Customer complaints about surface defects



No one had expected to find corrosion in paper materials. The causes of frequent and repeated complaints about quality defects in metal-clad liners could be identified and eliminated by means of a suitable combination of microscopic methods and chloride detection.