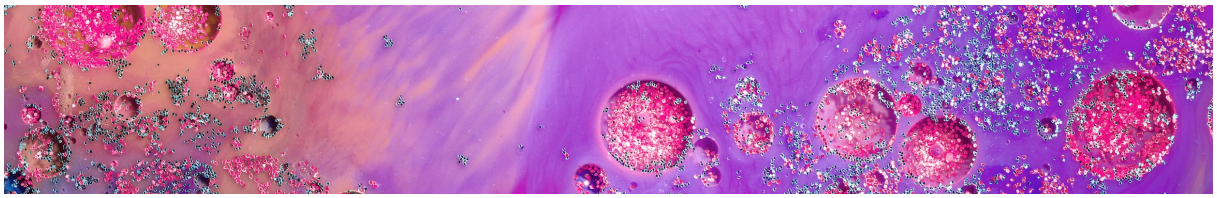
Characterization methods for inks and toners

Norlab offers a whole range of testing and analysis instruments for inks and toners.

Inks are suspensions containing pigments as the disperse phase and liquids as the continuous phase. One of the challenges is to stabilize these suspensions. The most important parameters regarding stability are the viscosity of the liquid and the particle size distribution of pigments. Additionally, surface-active additives are used which can be characterized via zeta potential experiments. Finally, the DataPhysics optical contact angle range of instruments can be used for several applications in the field of inks and toners.



Parameter	Method	Instrument
BET surface area and pore analysis	Gas adsorption	3P micro series 3P meso series 3P sync series 3P surface DX
Density	Gas pycnometry	3P densi 100
Dispersion stability	Analysis of the transmission and backscattering behaviour	MultiScan MS 20 dispersion stability analysis system
Particle dispersibility studies	Non-invasive NMR liquid relaxation technology	MagnoMeter XRS
Particle shape	Image analysis	BeVision D2 Bettersizer S3 Plus
Particle size, concentrated dispersions	Acoustic spectrometry	DT-1202 DT-100
Particle size, nanometer range	Dynamic light scattering	BeNano series
Particle size, powders	Laser diffraction	Bettersizer S3 Plus Bettersizer S3 Bettersizer 2600 Bettersizer ST
Printing head wetting behaviour	Optical contact angle measurement	Optical contact angle systems
Simulation of the inkjet and flying droplet	Optical contact angle measurement	Optical contact angle systems
Solids concentration of suspensions	Non-invasive NMR liquid relaxation technology	MagnoMeter XRS
Substrate absorbing capacity	Optical contact angle measurement	Optical contact angle systems
Surface tension of liquid	Optical contact angle measurement	Optical contact angle systems
Tap density	Tap volumetry	BeDensi T Series

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Parameter	Method	Instrument
Wettability of solid surfaces	Optical contact angle measurement	Optical contact angle systems
Wetted surface area of suspensions	Non-invasive NMR liquid relaxation technology	MagnoMeter XRS
Zeta potential, concentrated dispersions	Electroacoustic spectrometry	DT-1202 DT-310 DT-300
Zeta potential, macroscopic solid samples	Bidirectional oscillating streaming potential method	ZPA 20 zeta potential analyzer
Zeta potential, nanoparticles	Electrophoretic light scattering (ELS)	BeNano series