Characterization methods for paints and varnishes

Norlab offers solutions for the characterization of the functional components used in a paint formulation, or to assess the performance and stability of the formulated product.

Our product range comprises testing and analysis instruments for dispersion long-term stability, particle size of powders and in nanometer range, particle shape, zeta potential, paint surface tension and wetting behaviour of the substrate.

Parameter	Method	Instrument
BET surface area and pore analysis	Gas adsorption	3P micro series 3P meso series 3P sync series 3P surface DX
Density, solids	Gas pycnometry	3P densi 100
Dispersion stability	Analysis of the transmission and backscattering behaviour	MultiScan MS 20 dispersion stability analysis system
Paint surface tension	Optical contact angle measurement	Optical contact angle systems
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
Solids concentration of suspensions	Non-invasive NMR liquid relaxation technology	MagnoMeter XRS
Substrate absorbing capacity	Optical contact angle measurement	Optical contact angle systems
Tap density	Tap volumetry	BeDensi T Series
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

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Parameter	Method	Instrument
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