

Press Release

BYK: a new dimension in high throughput screening

- One of the world's largest and most versatile Flexshuttle facility inaugurated
- Significant time-to-market advantage for customers
- BYK doubles capacity in application technology
- Ca. 15-million-euro investment

Wesel, April 20, 2021 – With its digital lab that is one of a kind worldwide, BYK, a leading global manufacturer of specialty chemicals, is launching into a new era of applications technology and so is giving a whole new dimension to its range of tailor-made additive solutions for its customers.

"The fully automated high throughput screening (HTS) system at BYK performs series tests with impressive speed and efficiency. 220 samples can be produced and tested within 24 hours in high throughput. This is equivalent to up to 80,000 samples per year," explains Dr. Jörg Hinnerwisch, BYK CTO.

A fully digitalized process enables the time required for series testing to be cut from the previous norm of some months to just a few days. The time saving this entails not only generates greater scope for the creation of new differentiating customer solutions, but also doubles BYK's capacity in application technology.

"The facility operates like a giant filter. With it, we are able to determine with great precision which of a vast number of products tested are the two or three that will be of the greatest use and advantage to the customer," says Manfred Knospe, Head of HTS at BYK.



Photo caption: Vessel storage with labeller



Click or scan here to visualize BYK's innovative HTS facility.



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The ultra-modern facility is complex. It includes 32 modules with 27 different functionalities all set to check and test BYK additives in paints, plastics, and adhesives. The modules are connected to each other via a rail system, with shuttles moving the samples individually from one module to the next.

The examination of liquid samples with respect to pH value, foam, or particle size distribution forms part of this one-of-a-kind HTS facility. In addition, two rheology measuring instruments evaluate the flow behavior.

Depending on the usage concerned, the samples are then applied by pouring out, drawing down, or spraying, and cured using UV radiation, or by means of oven or air drying. Finally, they are then subjected to a fully automated test for property characteristics such as gloss, flow, or color.





Photo captions from left to right: pH module and dissolver module

Click on the respective images to obtain a printable file.

"By making this investment in the future, we are, on the one hand, once again establishing more scope for creativity for our highly qualified researchers, who are working on tomorrow's additive solutions. On the other hand, the enormous speed of our HTS facility allows us to substantially reduce the time-to-market phase for our customers, thereby also securing an important competitive edge for them," says BYK Division President Dr. Tammo Boinowitz.

BYK is a leading global supplier of specialty chemicals. The company's innovative additives and differentiated solutions optimize product and material properties as well as production and application processes. Amongst other things, BYK additives improve scratch resistance and surface gloss, the mechanical strength or flow behavior of materials, and properties such as UV- and light stability or flame retardancy. In the field of quality assurance, BYK's measuring and testing instruments serve to effectively assess appearance and physical properties.

The company's customers include manufacturers of coatings and printing inks, plastics, adhesives and sealants, as well as cleaners, floor coatings, and lubricants. BYK additives are also successfully used in the construction chemistry, oil and gas, and foundry industries.

BYK has a global network of subsidiaries and operates production sites in Germany (Wesel, Kempen, Moosburg, Schkopau), the Netherlands (Deventer, Nijverdal), and the UK (Widnes), in the USA (Wallingford, Chester, Gonzales, Louisville, Earth City and Pompano Beach), and in China (Tongling),

The company is part of the ALTANA Group and employs a workforce of more than 2,300 people worldwide.

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This press release is also available on the Internet at $\underline{\text{www.byk.com/press}}.$

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