

NIR Technology Now Measures Kappa Number of Kraft Pulp

Cost effective approach could save mills up to \$150,000 in chemical costs

Vancouver, British Columbia – November 28, 2016 – FPIinnovations, in partnership with FITNIR Analyzers Inc., announced the successful commercialization of an innovative new product using near infrared technology (NIR) to quickly and efficiently analyze the kappa number of kraft pulp. The unique approach determines kappa number in less than four minutes and eliminates the need for all associated chemicals. The kappa analyzer also does not rely on other parameters for measurement (such as sample weight) thereby reducing measurement error.

While NIR technology has been used in many industries with applications from pharmaceuticals to food quality control, FPIinnovations developed specialized expertise to apply this technology to the pulp and paper industry. Solving practical problems encountered in mills, NIR can now be used to measure kappa number, while eliminating many of the complex factors traditionally faced in the process. Easy and quick kappa number measurement allows mills to monitor and control pulp production, from the beginning of the process to the final product. Quicker adjustments improve mill efficiency, while reductions in chemical consumption lead to significant cost savings.

FITNIR Kappa is the third of three commercial products offered by FITNIR based on the same NIR technology being used in mills across North America, Indonesia and Scandinavia. The other two products, FITNIR Online and FITNIR Benchtop, also developed in conjunction with FPIinnovations, provide fast, accurate and true measurements of a complete suite of key pulp liquor properties for recovery, recaust, digester, and chlorine dioxide generator applications.

NIR technology uses a broad spectrum of infrared light to illuminate a pulp sample. The resulting unique spectral frequencies are then recorded by the spectrometer and computer. A proprietary algorithm, developed by FPIinnovations' researchers and further fine-tuned by FITNIR, analyzes and determines the lignin content of the sample to ascertain the kappa number.

Quotes

"This is a great example of how research and development leads to innovation and commercially viable products that benefit industry," stated Pierre Lapointe, President and CEO of FPIinnovations. "The partnering of former FPIinnovations researcher Thanh Trung, now FITNIR's VP of Technology, facilitated the commercialization of this technology and is a demonstration of the innovation ecosystem at its best. Industry and governments should expect more of the same as we implement our five-year strategic action plan."

“We pride ourselves on listening to the needs of the market and responding appropriately,” said FITNIR Analyzers’ President, Tom Sands. “Mills were wanting another means for reducing variability and standardizing kappa measurements across sites and now we are able to offer FITNIR Kappa. The growth of our NIR product suite and applications is satisfying as we continue to contribute to the strength of the pulp and paper industry.”

Associated Links

- FPInnovations: www.fpinnovations.ca
- FITNIR Kappa: fitnir.com/products-services/kappa/

About FPInnovations

FPInnovations is a not-for-profit world-leader that specializes in the creation of scientific solutions in support of the Canadian forest sector’s global competitiveness and responds to the priority needs of its industry members and government partners. It is ideally positioned to perform research, innovate, and deliver state-of-the-art solutions for every area of the sector’s value chain, from forest operations to consumer and industrial products. FPInnovations’ staff numbers more than 525. Its R&D laboratories are located in Québec City, Montréal, and Vancouver, and it has technology transfer offices across Canada. For more information about FPInnovations, visit: www.fpinnovations.ca.

About FITNIR Analyzers Inc.

FITNIR’s automated online and benchtop analyzers reliably measure complete pulp liquor compositions. Fast, frequent and accurate measurements drive control strategies that decrease process variability and environmental impact for improved efficiencies and profitability. Proven applications for the digester, recausticizer, recovery boiler, ClO₂ generator, brownstock washer, and now kappa measurements for wet and dry pulp, FITNIR is the next generation of process analyzers. Visit www.fitnir.com.

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