COLDBLOCK TECHNOLOGIES ANNOUNCES DEVELOPMENT OF METHODS FOR USE IN FOOD TESTING & ANALYSIS

Rapid Digestions Using ColdBlock are Complete in Less than 20 Minutes

A Meaningful Improvement in Turnaround Time and Sample Throughput Without Sacrificing Accuracy or Precision a Key Development in Food Testing

Thursday, April 20, 2023 (TORONTO) – **ColdBlock Technologies Inc.** ("ColdBlock") has announced the development and publication of new sample digestion methods for use in food testing and analysis. These new methods represent a significant improvement over traditional methods used in food testing, with digestions completed in just 10 to 20 minutes, resulting in a significant increase in sample throughput rates and faster turn-around times. These new methods, developed and tested on a range of 7 different food CRMs (ranging from bovine muscle to quinoa to eggs), produce results with the same repeatability, accuracy, and precision as slower traditional methods. The methods were developed using ColdBlock's Pro Series 16-64-sample medium-size CBM digester platform but can also be scaled for use with ColdBlock's CBL & CBS digester platforms.

Digestion methods were developed using a mixture of Nitric Acid (HNO_3) and Hydrogen Peroxide (H_2O_2). The first method, developed and tested on Bovine Muscle, Dogfish Liver, Corn Bran, Quinoa Flour, and Dried Spinach CRM's, is a quick 10-minute digestion with power settings between 60 and 70%. The second method, developed and tested on Skimmed Milk Powder and Egg CRM's is a 2-step 20-minute digestion at 70% power. "What really stands out here is the speed of these digestions. ColdBlock's open vessel design, ease of use, and accuracy are setting a new performance standard in the food testing sector," said Lorie-Ann Doig, Director of ColdBlock's R&D Laboratory.

All samples were run in triplicate and analyzed for a range of key elements using either ICP-OES or ICP-MS equipment. Recoveries were all well within the confidence limits established by the CRM manufacturer and RSD's (a measure of variability) were all extremely low. Results can be found in each of the application notes that have been added to the ColdBlock applications library page in the Food & Agriculture section. Access to detailed data is available upon request.

In development of these new methods for the food industry, the ColdBlock Pro Series CBM digester was selected. This 16-channel digester can handle sample sizes up to ~3-5 grams and can be scaled up into a 32/48/64 sample system. For smaller sample sizes (<1g) and increased throughput requirements, the ColdBlock CBS system (20/40/60/80 samples) can also be used. While just 2 digestion methods were established for the 7 different food sample type CRMs, the Pro Series software controls allow for simple program, storage, and repeat use of many more complicated, multi-step digestion methods.

ColdBlock CEO Craig West stated, "Rapid digestions that still achieve required accuracy & repeatability are critical within food testing industry, where a fast turn-around time and high capacity is essential. ColdBlock's Pro Series digesters provide a complete solution and feedback from existing customers in the food sector has been very positive."

ColdBlock Technologies continues to develop applications for its innovative digestion technology that help improve laboratory efficiency, throughput, and worker safety. The company's sample digestion technology has now been sold to laboratories around the world with demonstrated success in mining, agriculture, food, and environmental testing. For more information, references, access to detailed data, or to organize a meeting with ColdBlock's in-house laboratory team, please speak with your ColdBlock salesperson or email us at info@coldblock.ca.

About ColdBlock Technologies

ColdBlock is disrupting the analytical laboratory technology sector with its innovative sample digestion technology. This technology utilizes focused short-wave infrared heating and a unique cooling zone to dissolve solid sample matter into solution for multi-element analysis with a significantly faster, simpler, and safer process compared with older digestion methods. ColdBlock's sample digestion system is being utilized in laboratories across several industries, saving time and money by increasing sample throughput capacity and significantly reducing turnaround times, while providing accurate and reliable results. ColdBlock Technologies Inc. is a privately owned company based in Ontario, Canada.

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