

Monday, October 09, 2017 05:00 PM - 06:00 PM

📍 TC CC - Grand Hall

Cookies and crackers are among the most popular baked goods, with low moisture, in the world, Brazil being the second largest producer and the fourth biggest worldwide exporter of this kind of product. Mixolab equipment is used to study dough rheological behavior, and its Profiler tool applied for a complete flour characterization in quality control, establishing limits according to six functional criteria: 1st) water absorption, 2nd) kneading behavior, 3rd) gluten strength, 4th) maximum viscosity, 5th) amylase activity and 6th) retrogradation, each one with an index value ranging between 0 to 9. The aim of this study was to establish cookie and cracker flour quality profile in Brazil according to different industrial flour mills using the Mixolab Profiler tool. Twenty-two different commercial flours provided for milling companies, three of them for cookies and three for crackers, were analyzed in duplicates, using Mixolab Standard protocol to construct Profiles for each one of these two products, totaling six profiles. The minimum and the maximum Mixolab index values obtained, from the 1st to the 6th functional criteria, were 2-10-212 and 8-76-588 for cookies; and 1-10-212 and 8-73-667 for crackers, respectively. This wide range of index values showed that each industry that purchases, from the mill, can have different flour specifications for the same product (industrial secret). Mixolab Profiler is an efficient quality control tool to evaluate protein and starch characteristics (rheological and gelatinization properties, respectively) in the same test, permitting a complete characterization of wheat flour according to the product end-use and industry necessities. Besides milling industry and final product manufacturers, Profiler can also be used as a tool to find end-use specifications for wheat genotypes in Wheat Breeding Programs.

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