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**New challenges of world demand**  
***Abstracts***

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**ABSTRACTS**

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**CHARACTERIZATION OF THE TECHNOLOGICAL QUALITY OF EMBRAPA'S 2002-2005  
WHEAT COLLECTION FOR SELECTION OF COOKIE PRODUCTION GENOTYPES**

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Some wheat genotypes produced in the South of Brazil could be used for the commercial production of cookies, especially those cultivated in the Rio Grande do Sul state. Those wheats have weaker gluten strength than the same cultivars cultivated in the other Brazilian states, due mainly to weather and soil differences. It is fundamental to know the wheat technological quality for the breeding programs to aid in selection of better genotypes for crossings. So, the objective of this work was to characterize a wheat collection used at Embrapa, to facilitate the selection of wheat genotypes for crossing for the production of cookies. A block of 169 wheat genotypes produced under identical field conditions in Passo Fundo, RS was analyzed for the cropping seasons 2002 through 2005. The analyses included: test weight (TW); thousand kernel weight (TKW); grain protein (GP); falling number (FN); total flour yield (TFY); ash flour (AF); flour apparent density (FAD); Minolta color ( $L^*$ , brightness;  $a^*$  value, red-green and;  $b^*$  value, yellow-blue); alveography (T, tenacity; E, dough extensibility; T/E ratio; SI, swelling index; W, flour gluten strength; T/SI ratio; and EI, elasticity index); SRC test (adaptation AACC N<sup>o</sup> 56-11, using a 0.2 g of sample), using solutions of 5% lactic acid (indicator of gluten quality), 5% sodium carbonate (indicator of starch damage), and 50% sucrose (indicator of pentosans and gliadins); and damaged starch (SDMatic), DS. For the four years, 63 wheat genotypes showed average W values lower than  $150 \times 10^{-4}J$  (including the cultivars BRS Louro, Fundacep 36, BRS Angico, BRS Buriti, Avante, BRS Camboata, Pampeano, Fundacep 37, BRS 177, BRS Guatambu, and BRS Camboim). Twenty-five of those 63 genotypes also showed low values of T/E ratio ( $< 0.5$ ), indicating good extensibility for cookie production; 52 of those had clear flour ( $L^* > 93$ , and  $a^*$  value  $< 0.2$ ); but only 12 of those had low DS ( $< 3.5\%$ ). Significant correlations between wheat quality parameters were observed: SRC sodium carbonate and DS ( $r = 0.75$ ); SRC water and DS ( $r = 0.62$ ); SRC lactic acid with W ( $r = 0.73$ ), with T ( $r = 0.53$ ), and with IE ( $r = 0.83$ ); GP with SRC water ( $r = -0.40$ ) and with DS ( $r = -0.53$ ); AF with  $L^*$  ( $r = -0.45$ ), with W ( $r = 0.46$ ), and with DS ( $r = 0.42$ ). It was concluded that, in spite of this, it is advisable to accomplish more than one analysis to characterize wheat technological quality so that the results can be reliable. Therefore, wheat genotypes of Embrapa's collection can be used as parents in breeding which will produce selections for the commercial cookie industry.

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