Consumer testing for an export market can identify target consumer segments in the population of interest. Sensory product profiles from descriptive analysis give context to these results, providing actionable outcomes for product developers. This systematic approach also highlights potential in the export market, which can encourage retailers in the export region to feature the optimized products.

Sensory descriptive analysis was conducted on a range of commercial red wines selected by Chilean wineries who were evaluating products for export. 12 wines were selected for testing. 614 verified consumers in Toronto-area LCBO outlets each tested 3 of 12 wines presented by balanced incomplete block design (BIBD). Cluster analysis identified 4 segments. Product sensory profiles provided interpretative context.

Now novel refinements are made to this testing approach. Sensory descriptive analysis data are analyzed to construct a sensory space. Product sensory properties inform the development of a sensory informed incomplete block design (SIIBD) for consumer testing, rather than using a conventional BIBD. The SIIBD is composed of product subsets emphasizing sensory contrasts, and balancedness in the design kept within specified bounds. The design approach was evaluated on 12-present-6 study of commercially available Canadian white breads. Two smaller-sized SIIBDs are nested within the 12-present-6 SIIBD, to evaluate the efficiency and stability of the design. Model-based cluster analysis with one latent factor proposed a five-cluster solution.

The updated SIIBD strategy lends itself not only to a consortium representing multiple brands for export, but is readily adapted to other sensory testing contexts.