# Heritibility of solvent retention capacity tests for for soft wheat quality. (C01-souza142655-Oral)

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## Abstract:

The solvent retention capacity (SRC) uses the ability of flour to retain a range of solvents as a means of evaluating components of wheat quality: pentosan content, starch damage, gluten strength, and general water retention. Soft spring wheat inbred lines from three populations were produced in irrigated, replicated trials in 2000 and 2001. Milling, baking, and the SRC parameters (water, sucrose, sodium carbonate, and lactic acid solvents) were determined for the three populations and heritabilities estimated. SRC measures were highly heritable in all three populations, ranging from 0.67 to 0.97. The range in heritability for SRC in these populations was similar to heritability of plant height and greater than the heritability of sugar snap cookie diameter or flour extraction. In all three populations SRC values for water, sucrose, and sodium carbonate were negatively correlated with cookie diameter (r= -0.54 to -0.89), while the relationship between lactic acid (gluten strength) and cookie diameter was complex. This study suggests that selection for lower water, sodium carbonate, and sucrose SRC likely would result in improved sugar snap cookie quality.

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