RECOMMENDED SRC VALUES FOR SELECTED PRODUCTS

USW technical staff recommend these Solvent Retention Capacity (SRC) profiles for cookie and cracker products. The recommended ranges are wide; most industrial users will identify a narrower target range for each product based on their own experience.

SRC Solvents	*Cracker Flour (%)**	*Cookie Flour (%)**	*Wafer Flour (%)**
100% Water	50 to 70	50 to 70	50 to 70
50% Sucrose	80 to 110	80 to 110	80 to 100
5% Sodium Carbonate (pH 11)	60 to 85	60 to 85	60 to 85
5% Lactic Acid (pH 2)	100 to 120	85 to 100	80 to 100

*** Solvent weight as percent of flour weight, both weights on 14% moisture basis.**

Soft Wheat Products

Soft wheat flour for cookies, crackers and wafers are very sensitive to Lactic Acid SRC values, but share similar profiles for the other solvents. A precise Lactic Acid profile with the other solvents in the recommended ranges will go a long way towards eliminating in-plant process problems.

	Bakers Flour	
SRC Solvents	*Range (%)**	*Optimum (%)**
100% Water	65 to 70	70
50% Sucrose	105 to 115	110
5% Sodium Carbonate (pH 11)	80 to 90	Maximum 88
5% Lactic Acid (pH 2)	> 140	150
Gluten Performance Index (GPI)**	Minimum 0.75	Minimum 0.75

*** For all except GPI, solvent weight as percent of flour weight, both weights on 14% moisture basis.**
**** GPI = Lactic Acid / (Sucrose + Sodium Carbonate)**

Pan Bread Flour

Sodium carbonate (Na_2CO_3) maximum value at 88 is recommended. If excessive damaged starch is present (Na_2CO_3> 90), bread staling will be accelerated with reduced shelf life. Higher Sucrose SRC values indicate higher water retention capacity in the finished bread. GPI is highly correlated to bread volume. GPI values of =>0.75 are recommended for optimum pan bread loaf volume. Higher Lactic Acid SRC values (preferably over 140) and lower Na_2CO_3 values will increase GPI. Na_2CO_3 values can be modified in the milling process.

U.S. WHEAT ASSOCIATES