

NOTE: This method is posted in the USDA Commodity Requirements – CSB-13 – Corn Soy Blend. http://www.fsa.usda.gov/Internet/FSA_File/csb13.pdf

Consistency (Bostwick value) for cooked product 11.75 percent gruel for corn-soy blend.

a. Apparatus

- (i) 1 - 400 ml. Pyrex beaker
- (ii) 1 - stainless steel kitchen fork
- (iii) 1 - 30^o C water bath
- (iv) 1 - consistometer, Cenco-Bostwick, Central Scientific Stock No. 24925

b. Method Place 175 grams of boiling water in the 400 ml. beaker, cover with watch glass, and bring to boiling on an electrically heated hot plate with surface temperature 600^o - 650^o F. Gradually add 23.5 grams of the commodity to be tested, while stirring vigorously with the fork. Bring to boiling and boil for 2 minutes while stirring vigorously with fork. Remove from the hot plate and stir 1/2-minute.

Place the cooked slurry in the 30^o C water bath and hold there for 10 minutes. Place on the scale and add water lost by evaporation so that total slurry weight is now 200 grams. Stir 25 times with the fork. Place cooked slurry in the 30^o C water bath and hold there for 1-hour. Remove from the bath and pour into the reservoir of the Bostwick consistometer until it is filled higher than its top level. Strike off the excess with a straight edge. Allow the cooked slurry to rest for 30 seconds. Trip the release lever of the consistometer and read the Bostwick value after exactly 1-minute.

(3) Consistency for ingredient specification cornmeal, processed (gelatinized).

a. Apparatus

- (i) 1 - 800 ml. Pyrex beaker
- (ii) 1 - wooden-handled spatula with a 5-inch stainless steel blade
- (iii) 1 - cylindrical open-bottom container, i.e., a 3-inch long section of seamless steel tubing 3.0-inch o.d. and 2.87 inch i.d.
- (iv) 1 - glass plate 10 by 10 inches
- (v) 1 - paper measuring scale, 10 by 10 inches containing a drawn 3-inch diameter center circle and concentric circles drawn of increasing diameter every one inch. Space between circles is divided to indicate each 1/4-inch diameter.

b. Method

Place 400 ml. of water at 25 °C in an 800 ml. glass beaker. Gradually add 125 g. of the gelatinized (processed) cornmeal while stirring vigorously with a wooden-handled spatula with a 5-inch stainless steel blade. Then stir gently for 3 minutes using a spatula to smooth any lumps that may form. Allow the slurry to stand an additional 2 minutes for hydration. Then stir gently for about 10 seconds with the spatula. Place a glass plate over a paper measuring scale and center the cylindrical container over the scale. Transfer the slurry to the retaining cup which is resting in the vertical position on the flat glass plate. Transfer the slurry until the cup is filled higher than its top level. Strike off the excess with a straight edge. Allow the slurry to rest for 30 seconds. Then remove the cup from the glass plate with a vertical pull, avoiding lateral motion. Allow the cup to drain onto the patty for 10 seconds. After waiting 1-minute for the size of the patty to reach equilibrium, read its diameter to the nearest 1/8-inch, as shown on the scaled sheet of paper underneath the glass.