OVERVIEW

This protocol describes tests for gas, electric, dual-fuel, and induction ranges and cooktops, as well as electric wall ovens.

TESTS TO BE CONDUCTED

Ratings Tests

Cooktop High: (Cooktops, Ranges)

Generally, use the element/burner with the highest power rating for this test, or the burner specified for the fastest heating.

A data acquisition system is used to measure the time it takes to heat a large pot of water, 4 liters of water in a covered pot to achieve a 110 degree temperature rise.

Cooktop Low: (Cooktops, Ranges)

Considers performance on the following two tests:

Chocolate Melt: Generally, the element/burner with the lowest power rating is used for this test. A data acquisition system is used to monitor the temperature rise of a small pot over a 30 minute test duration.

Sauce Simmer: Approximately 2 quarts of crushed tomatoes are placed in a large stock pot on a large, high powered burner. The sauce is preheated using a high setting until it attains a temperature of 160 degrees, then the element/burner is turned down to the lowest setting to see if the burner can maintain the sauce below a boil. The temperature of the sauce is monitored for a period of 30 minutes.

Baking: (Wall Ovens, Ranges)

Baking performance is based upon the following two tests. Assessing uniformity relies on color readings for each cake or cookie:

1. Cakes: Color uniformity of four layers of a packaged white cake mix baked using two racks - two cake layers on each rack.

2. Cookies: Color uniformity of two trays of sugar cookies baked on two racks. 12 cookies
Broiling: (Wall Ovens, Ranges)

Hamburger broiling: Quarter-pound hamburger patties (80% lean) are broiled at the highest broiling setting, following the manufacturer recommendations for rare or medium-rare meats. Nine hamburgers are used in a 3 x 3 grid. Burgers are “turned” during the cooking process. Exterior searing/browning is observed

Oven Capacity: (Wall Ovens, Ranges) We measure the usable oven capacity, with consideration of oven racks, brackets, housing, or other projections into the oven cavity.

Self Cleaning: (Wall Ovens, Ranges) we assess how well the cycle can rid ovens of a baked-on food mixture using a maximum self-clean period.

The mixture includes cherry pie filling, tomato puree, egg yolk, mozzarella cheese, Velveeta Pasteurized Cheese Spread, tapioca, and lard. All ingredients mixed well in a food processor.

The mixture is “painted” onto interior surfaces of the oven and baked on.

The self-clean cycle is selected and the amount (if any) of residual residue is assessed.