



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Wells
Model	G-23
Appliance	3-foot flat electric griddle

Report Number	5012.08.45
Test Date	November, 2008
Tested By	D. Cowen

Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate and heavy-load cooking-energy efficiency of the griddle by applying the ASTM F1275-05 Standard Test Method.

Energy Input Rate

Rated Energy Input Rate (kW)	16.0
Measured Energy Input Rate (kW)	15.6
Difference (%)	2.32

Preheat to 375°F

Duration (min)	10.8
Electric Energy Consumption (kWh)	2.52
Preheat Rate (°F/min)	28.1

Idle at 375°F

Idle Energy Rate (kW)	1.45
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Heavy-Load Cooking Energy Efficiency ^a

Food Product	Hamburgers
Load Size (Count)	24
Cook Time (min)	7.50
Average Recovery Time (min)	4.07
Electric Cooking Energy Rate (kW)	5.57
Energy to Food (Btu/lb)	456
Energy to Appliance (Btu/lb)	606
Cooking-Energy Efficiency (%)	75.3 ± 0.6
Production Capacity (lb/hr)	31.4 ± 2.3

^a based on a minimum of three test replicates.



Wells G-23 electric griddle.

Wells Bloomfield, LLC

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Heavy-Load Test Data

	Repetition #1	Repetition #2	Repetition #3
Measured Values			
Electrical Energy Consumption (Wh)	6,420	6,390	6,510
Cook Time (min)	7.50	7.50	7.50
Total Test Time (min)	71.56	69.38	67.37
Weight Loss (%)	33.66	33.50	33.73
Initial Weight (lb)	36.307	36.302	36.217
Final Weight (lb)	24.085	24.140	24.002
Initial Fat Content (%)	17.4	17.4	17.4
Initial Moisture Content (%)	62.6	62.6	62.6
Final Moisture Content (%)	55.7	55.9	54.2
Initial Temperature (°F)	0	0	0
Final Temperature (°F)	159	159	160
Calculated Values			
Initial Weight of Water (lb)	21.728	22.725	22.672
Final Weight of Water (lb)	13.414	13.494	13.018
Weight of Fat (lb)	6.317	6.317	6.302
Weight of Solids (lb)	7.261	7.260	7.243
Sensible to Ice (Btu)	364	364	363
Sensible to Water (Btu)	2,894	2,884	2,891
Sensible to Fat (Btu)	403	402	402
Sensible to Solids (Btu)	231	231	231
Latent – Water Fusion (Btu)	3,273	3,272	3,265
Latent – Fat Fusion (Btu)	273	274	273
Latent – Heat of Vaporization (Btu)	9,034	8,954	9,364
Total Energy to Food (Btu)	16,472	16,380	16,788
Energy To Food (Btu/lb)	454	451	464
Total Energy to Griddle (Btu)	21,911	21,809	22,219
Energy to Griddle (Btu/lb)	604	601	613
Cooking-Energy Efficiency (%)	75.2	75.1	75.6
Cooking Energy Rate (kW)	5.38	5.53	5.80
Production Rate (lb/h)	30.4	31.4	32.3
Average Recovery Time (min)	4.43	4.06	3.73

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