



# Food Service Technology Center Appliance Test Summary Report

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<b>Manufacturer</b>	Eloma
<b>Model / Serial Number</b>	Genius T6-11 / 105931
<b>Appliance</b>	Half-Size Combination Oven – Electric
<b>Cavity Dimensions (WxDxH)</b>	19.5" x 28" x 22"

<b>Report Number</b>	501311026
<b>Test Date</b>	June, 2011
<b>Tested By</b>	M. Karsz

## Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate, heavy-load cooking-energy efficiency in convection and steam modes by applying ASTM F2861.

## Energy Input Rate <sup>a</sup>

Voltage (V)	208
Rated Energy Input Rate (kW)	9.30
Measured Energy Input Rate (kW)	9.23
Difference (%)	0.8

<sup>a</sup> Measured during steam mode preheat

## Preheat and Idle

	Convection	Steam
<b>Preheat</b>		
Final Preheat Temperature (°F)	340.3	210.3
Duration (min)	9.25	6.05
Electric Preheat Energy (kWh)	0.77	0.82
Preheat Rate (°F/min)	28.9	22.7
Water Consumption (gal)	0.5	0.7
<b>Idle</b>		
Average Cavity Temperature (°F)	351.6	213.1
Electric Idle Energy Rate (kW)	1.65	3.45
Water Consumption Rate (gph)	16.0	11.0



Eloma Genius T6-11  
Combination Oven

## Heavy-Load Cooking Energy Efficiency <sup>b</sup>

	Convection	Steam
Food Product	Russet Potatoes	Red Potatoes
Cavity Temperature (°F)	350	212
Cook Time (min)	39.75	26.81
Electric Energy Rate (kW)	5.81	6.02
Energy to Food (Btu/lb)	232	106
Energy to Appliance (Btu/lb)	362	229
Cooking-Energy Efficiency (%)	65.3 ± 0.5	48.3 ± 3.2
Production Capacity (lb/hr)	54.7 ± 2.3	89.6 ± 3.7
Water Consumption Rate (gph)	14.9	7.2

<sup>b</sup> based on a minimum of three test replicates

## Eloma

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Winston-Salem, NC 27105

[www.elomausa.com/en](http://www.elomausa.com/en)

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### Preheat and Idle – Combi Mode

	Combi
<b>Preheat</b>	
Final Preheat Temperature (°F)	340.9
Duration (min)	30.86
Electric Preheat Energy (kWh)	4.27
Preheat Rate (°F/min)	9.0
Water Consumption (gal)	8.73
<b>Idle</b>	
Average Cavity Temperature (°F)	350.5
Electric Idle Energy Rate (kW)	5.58
Water Consumption Rate (gal/h)	17.6

### Heavy-Load Russet Potato (Perforated Shallow Quarter-size Pans) Test Data

	Run #1	Run #2	Run #3
<b>Measured Values</b>			
Number of Pans	5	5	5
Total Potato Count	75	75	75
<b>Cook Time (min)</b>	<b>39.00</b>	<b>40.33</b>	<b>39.92</b>
Electric Energy Consumption (kWh)	3,817.50	3,862.50	3,862.50
Temperature of Uncooked Potatoes (°F)	75.6	74.8	74.8
Temperature of Cooked Potatoes (°F)	205	205	205
Weight of Stainless Steel Pans (lbs)	11.015	11.165	11.010
Initial Weight of Potatoes (lbs)	36.200	36.250	36.255
Final Weight of Potatoes (lbs)	31.670	31.630	31.615
Water Consumption (gal)	9.7	10.0	10.0
<b>Calculated Values</b>			
Sensible Heat (Btu)	3,935	3,965	3,965
Latent – Heat of Vaporization (Btu)	4,394	4,481	4,501
Energy Consumed by Potatoes (Btu)	8,329	8,446	8,466
<b>Energy to Food (Btu/lb)</b>	<b>230</b>	<b>233</b>	<b>234</b>
Energy Consumed by Pans (Btu)	157	160	158
Energy Consumed by the Combination Oven (Btu)	13,038	13,174	13,174
<b>Energy to Oven (Btu/lb of food cooked)</b>	<b>360</b>	<b>363</b>	<b>363</b>
<b>Cooking-Energy Efficiency (%)</b>	<b>65.1</b>	<b>65.3</b>	<b>65.5</b>
<b>Cooking Energy Rate (kW)</b>	<b>5.88</b>	<b>5.74</b>	<b>5.80</b>
<b>Production Capacity (lb/hr)</b>	<b>55.7</b>	<b>53.9</b>	<b>54.5</b>
<b>Water Consumption (gph)</b>	<b>14.9</b>	<b>14.9</b>	<b>15.0</b>

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## Heavy-Load Red Potato (Perforated Deep Quarter-size Pans) Test Data

	Run #1	Run #2	Run #3
<b>Measured Values</b>			
Number of Pans	5	5	5
Total Potato Count	250	250	250
Test Time (min)	<b>26.92</b>	<b>27.17</b>	<b>26.33</b>
Electric Energy Consumption (kWh)	2,700.00	2,722.50	2,640.00
Temperature of Uncooked Potatoes (°F)	74.9	71.9	71.7
Temperature of Cooked Potatoes (°F)	195	195	195
Weight of Stainless Steel Pans (lbs)	12.940	12.935	13.510
Initial Weight of Potatoes (lbs)	40.000	40.000	40.000
Final Weight of Potatoes (lbs)	40.133	40.275	40.310
Water Consumption (gal)	3.4	3.3	3.0
<b>Calculated Values</b>			
Sensible Heat (Btu)	4,179	4,284	4,291
Total Energy to Food (Btu)	4,179	4,284	4,291
<b>Energy to Food (Btu/lb)</b>	<b>104</b>	<b>107</b>	<b>107</b>
Energy to Pans (Btu)	171	175	183
Energy Consumed by the Combination Oven (Btu)	9,215	9,283	9,010
<b>Energy to Oven (Btu/lb of food cooked)</b>	<b>230</b>	<b>232</b>	<b>225</b>
<b>Cooking-Energy Efficiency (%)</b>	<b>47.2</b>	<b>48.0</b>	<b>49.7</b>
<b>Cooking Energy Rate (kW)</b>	<b>6.02</b>	<b>6.01</b>	<b>6.02</b>
<b>Production Capacity (lb/hr)</b>	<b>89.2</b>	<b>88.3</b>	<b>91.2</b>
<b>Water Consumption (gph)</b>	<b>7.6</b>	<b>7.3</b>	<b>6.8</b>

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