

# Food Service Technology Center Appliance Test Summary Report

The information in this report is based on data generated at the PG&E Food Service Technology Center.  
California consumers are not obligated to purchase any full service or other service not funded by the program.  
This program is funded by the California utility rate payers under the auspices of the California Public Utilities Commission.

<b>Manufacturer</b>	Moffat
<b>Model</b>	G32D5 (with flue cover) SN: DEV0072
<b>Appliance</b>	Full-size convection oven - Gas

<b>Report Number</b>	501310042
<b>Test Date</b>	November, 2010
<b>Tested By</b>	D.Livchak

## Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate, heavy-load cooking-energy efficiency and browning uniformity of the oven by applying ASTM F1496. The oven was modified for testing by adding a flow restrictor to the oven vent.

## Cavity Volume

Internal Oven-Cavity Volume (CuFt)	6.36
------------------------------------	------

## Energy Input Rate

Rated Energy Input Rate (Btu/h)	33,000
Measured Energy Input Rate (Btu/h)	33,019
Difference (%)	0.06
Fan/Control Energy Rate (kW)	0.145

## Preheat to 340°F

Duration (min)	11.00
Energy Consumption (Btu)	5,303
Preheat Rate (°F/min)	25.55

## Idle at 350°F

Idle Energy Rate (Btu/h)	11,433
Control Idle Energy Rate (W)	123

## Heavy-Load Cooking Energy Efficiency a

Food Product	Russet Potatoes
Oven Temperature Set-point (°F)	350
Cook Time (min)	71.74
Cooking Energy Rate (Btu/h)	28,754
Cooking Energy Rate (kW)	0.13
Energy to Food (Btu/lb)	232
Energy to Appliance (Btu/lb)	478
Cooking-Energy Efficiency (%)	48.5 ± 0.6
Production Capacity (lb/h)	61.1 ± 3.1

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

Food Service Technology Center  
12949 Alcosta Blvd. Suite 101, San Ramon CA 94583  
P: 1.800.398.3782 F: 1.925.866.2864 [www.fishnick.com](http://www.fishnick.com)  
© 2010 Fisher-Nickel, inc. All right reserved.



## Moffat

16 Osborne St.  
Phillipstown, Christchurch, New Zealand  
<http://www.moffat.com/>

<b>Manufacturer</b>	Moffat
<b>Model</b>	G32D5 (with flue cover) SN: DEV0072
<b>Appliance</b>	Full-size convection oven - Gas

<b>Report Number</b>	501310042
<b>Test Date</b>	November, 2010
<b>Tested By</b>	D.Livchak

### Heavy-Load Potato Test Data

	Test #1	Test #2	Test #3
<b>Measured Values</b>			
<b>Cook Time (min)</b>	<b>72.84</b>	<b>72.26</b>	<b>70.11</b>
<b>Gas Energy (Btu)</b>	<b>34,774</b>	<b>34,702</b>	<b>33,658</b>
<b>Electric Energy (kWh)</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>
Heating Value (Btu/scf)	1,020	1,020	1,020
Initial Weight of Potatoes (lb)	73.00	73.09	73.07
Final Weight of Potatoes (lb)	63.49	63.84	64.17
Initial Temperature of Potatoes (°F)	75.2	73.1	77.1
Final Temperature of Potatoes (°F)	205	205	205
<b>Calculated Values</b>			
Sensible Heat (Btu)	7,966	8,095	7,857
Latent - Heat of Vaporization (Btu)	9,225	8,973	8,628
Total Energy to Food (Btu)	17,191	17,068	16,485
<b>Energy to Food (Btu/lb)</b>	<b>235</b>	<b>234</b>	<b>226</b>
Total Energy to Oven (Btu)	35,302	35,225	34,169
<b>Energy per Pound of Food Cooked (Btu/lb)</b>	<b>484</b>	<b>482</b>	<b>468</b>
<b>Cooking-Energy Efficiency (%)</b>	<b>48.7</b>	<b>48.5</b>	<b>48.2</b>
<b>Electric-Only Cooking-Energy Rate (kW)</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>
<b>Gas-Only Cooking Energy Rate (Btu/h)</b>	<b>28,644</b>	<b>28,814</b>	<b>28,804</b>
<b>Production Capacity (lb/h)</b>	<b>60.1</b>	<b>60.7</b>	<b>62.5</b>

### Sheet Cake Uniformity

Food Product	White Cake Mix
Bake Time (min)	31.00

Top



Fan located on the bottom in all pictures

<b>Manufacturer</b>	Moffat
<b>Model</b>	G32D5 (with flue cover) SN: DEV0072
<b>Appliance</b>	Full-size convection oven - Gas

<b>Report Number</b>	501310042
<b>Test Date</b>	November, 2010
<b>Tested By</b>	D.Livchak

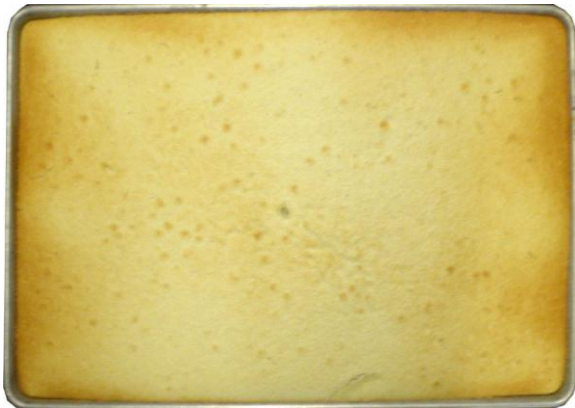
**Upper Center**



**Lower Center**



**Center**



**Bottom**



**Legal Notice**

This report was prepared as a result of work sponsored by the California Public Utilities Commission (Commission). It does not necessarily represent the views of the Commission, its employees, or the State of California. The Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Commission nor has the Commission passed upon the accuracy or adequacy of the information in this report.

**Disclaimer**

Neither Fisher-Nickel, inc. nor the Food Service Technology Center nor any of its employees makes any warranty, expressed or implied, or assumes any legal liability of responsibility for the accuracy, completeness, or usefulness of any data, information, method, product or process disclosed in this document, or represents that its use will not infringe any privately-owned rights, including but not limited to, patents, trademarks, or copyrights.

Reference to specific products or manufacturers is not an endorsement of that product or manufacturer by Fisher-Nickel, inc., the Food Service Technology Center or Pacific Gas & Electric Company (PG&E).

Retention of this consulting firm by PG&E to develop this report does not constitute endorsement by PG&E for any work performed other than that specified in the scope of this project.