



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.

Manufacturer	Frymaster
Model	Protector 22.0 kW
Appliance	14-inch Open Deep Fat Fryer - Electric

Report Number	5012.08.28
Test Date	May, 2007
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 fryer by applying the ASTM F1361-07 Standard Test Method.

Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	22.0
Measured Energy Input Rate (kW)	22.2
Difference (%)	0.23

Preheat to 350°F

Voltage (V)	208
Duration (min)	10.8
Energy Consumption (kWh)	0.96
Preheat Rate (°F/min)	25.4

Idle at 350°F

Voltage (V)	208
Idle Energy Rate (kW)	0.81

Heavy-Load Cooking Energy Efficiency ^a

Voltage (V)	208
Food Product	French Fries
Load Size (lb)	3.00
Cook Time (min)	2.01
Average Recovery Time (sec)	< 10
Cooking Energy Rate (kW)	16.6
Energy to Food (Btu/lb)	595
Energy to Appliance (Btu/lb)	684
Cooking-Energy Efficiency (%)	86.9 ± 2.2
Production Capacity (lb/hr)	83.0 ± 1.8

^a based on a minimum of three test replicates.



Frymaster Protector 22 kW
electric fryer.

Frymaster

8700 Line Avenue
Shreveport, LA
www.frymaster.com

Manufacturer	Frymaster
Model	Protector 22.0 kW
Appliance	14-inch Open Deep Fat Fryer - Electric

Report Number	5012.08.28
Test Date	May, 2007
Tested By	D. Cowen

Heavy-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Test Voltage (V)	208	208	208
Energy Consumption (Wh)	3,047	3,007	2,967
Total Energy (Btu)	10,399	10,263	10,126
Cook Time (min)	2.03	2.00	2.00
Total Test Time (min)	11.0	10.8	10.8
Weight Loss (%)	30.20	29.70	29.80
Initial Weight (lb)	15.000	15.000	15.000
Final Weight (lb)	10.467	10.540	10.524
Initial Moisture Content (%)	72.8	72.8	72.8
Final Moisture Content (%)	53.2	53.8	53.6
Initial Temperature (°F)	0	0	0
Final Temperature (°F)	212	212	212
Calculated Values			
Initial Weight of Water (lb)	10.920	10.920	10.920
Final Weight of Water (lb)	5.568	5.671	5.641
Sensible (Btu)	2,210	2,210	2,210
Latent – Heat of Fusion (Btu)	1,572	1,572	1,572
Latent – Heat of Vaporization (Btu)	5,191	5,092	5,121
Total Energy to Food (Btu)	8,973	8,874	8,903
Energy To Food (Btu/lb)	598	592	594
Total Energy to Fryer (Btu)	10,399	10,263	10,126
Energy to Fryer (Btu/lb)	693	684	675
Cooking-Energy Efficiency (%)	86.3	86.5	87.9
Electric Energy Rate (kW)	16.7	16.8	16.5
Production Rate (lb/h)	82.2	83.6	83.3
Average Recovery Time (sec)	< 10	< 10	< 10

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.