



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Frymaster
Model / Serial Number	FPGL 230 CA/1104EN0004
Appliance	14 inch gas fryer

Report Number	501311023
Test Date	September-2011
Tested By	D. Livchak

Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate, heavy-load cooking efficiency and production capacity of the fryer by applying the ASTM Standard Test Method F1361-07

Energy Input Rate

Rated Energy Input Rate (Btu/h)	75,000
Measured Energy Input Rate (Btu/h)	71,480
Difference (%)	4.7

Preheat to 340°F

Duration (min)	8.28
Gas Energy Consumption (Btu)	8,523
Control Energy Consumption (Wh)	17
Preheat Rate (°F/min)	32

Idle Energy Rate at 350°F

Idle Energy Rate (Btu/h)	3,950
Control Idle Energy Rate (W)	90

Standing Pilot Energy Rate

Pilot Energy Rate (Btu/h)	NA
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Heavy-Load Cooking Energy Efficiency*

Food Product	French Fries
Load Size (lb)	3.0
Cook Time (min)	2.8
Average Recovery Time (sec)	35
Gas Cooking Energy Rate (Btu/h)	53,439
Control Energy Rate (W)	90
Energy to Food (Btu/lb)	590
Energy to Appliance (Btu/lb)	1,019
Cooking Energy Efficiency (%)	57.9 ± 1.5
Production Capacity (lb/h)	52.8 ± 2.4

*Based on a minimum of three test replicates



Frymaster FPGL 230 CA Gas Fryer

Frymaster
780 Line Ave.
Shreveport, LA 71106-6814
www.frymaster.com

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Measured Values	Test #1	Test #2	Test #3
Test Date	9/8/11	9/8/11	9/8/11
Initial Weight of French Fries (lb)	15.000	15.000	15.000
Final Weight of French Fries (lb)	10.475	10.435	10.535
Initial Temperature of French Fries (°F)	0	0	0
Final Temperature of French Fries (°F)	212	212	212
Initial Moisture Content of French Fries (%)	65.6	65.6	65.6
Final Moisture Content of French Fries (%)	42.4	42.6	42.6
Cook Time (min)	2.83	2.83	2.83
Test Time (min)	17.19	17.28	16.69
Electric Energy Consumption (Wh)	27.0	27.0	26.0
Gas Energy Consumption (Btu)	15,357	15,255	14,950
Gas Heating Value (Btu/scf)	1,017	1,017	1,017

Calculated Values	Test #1	Test #2	Test #3
Average French Fry Weight Loss (%)	30.2	30.4	29.8
Specific Heat of French Fries (Btu/lb,F)	0.695	0.695	0.695
Sensible Energy (Btu)	2,210	2,210	2,210
Latent Fusion Energy (Btu)	1,417	1,417	1,417
Latent Vaporization Energy (Btu)	5,237	5,233	5,192
Total Energy to Food (Btu)	8,864	8,860	8,819
Energy to Food (Btu/lb)	591	591	588
Total Appliance Energy Consumption (Btu)	15,449	15,347	15,039
Energy to Appliance (Btu/lb)	1,030	1,023	1,003

Results	Test #1	Test #2	Test #3
Cooking Energy Efficiency (%)	57.4	57.7	58.6
Cooking Energy Rate (Btu/h)	53,602	52,969	53,745
Electric Energy Rate (W)	90	90	90
Production Capacity (lb/h)	52.4	52.1	53.9
Average Recovery Time (sec)	37	38	31

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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
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