



2013-07-02

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Our Reference: File E351658, Project 12CA22770

Subject: E351658 – EPA 202 EVALUATION OF CONVECTION OVEN “MATCHBOX”, MODELS M1313 AND M1718.

Mr. Smith:

Per your request, Project 12CA22770 was opened for the evaluation of grease-laden vapors produced by the Models M1313 and M1718. The model M1718 was used for test purposes, and considered representative of all other models.

The scope of the project was to test this model in accordance with EPA Method 202 test guidelines to demonstrate compliance with NFPA96, the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, paragraph 4.1.1.2 conducted in accordance with UL710B, the Standard for Recirculating Systems, Sec. 17 for Complimentary Listing under UL's KNLZ category. The test was conducted at our facility in Northbrook, IL on May 14th, 2012. This letter will report the results of the EPA202 test.

For the record, the test was conducted on the Model M1718 conveyor oven “Matchbox”, cooking 12 in. pepperoni pizzas (Tombstone, with 19 pepperonis per pizza) as specified in Appendix A. Please see the attached page (Appendix A) for the test method and results of the tests. The results are considered to comply with UL710B, Section 17 and NFPA96, paragraph 4.1.1.2 since the measured values were less than the 5-mg/m³ limit.

Should you have any questions or comments concerning the above, please feel free to contact the undersigned.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC or any authorized licensee of UL.

Sincerely,

Handwritten signature of William G. Morler in black ink.

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APPENDIX: A

TEST FOR EVOLUTION OF SMOKE OR GREASE-LADEN AIR:

The Appliance Innovation Inc. Model M1718 conveyor oven was tested using the method derived from EPA Method 202.

A 12 in. by 6 in. rectangular, 108 in. tall sheet metal stack was constructed on top of a sheet metal hood and mounted above the exhaust vent of the induction cooker. A sampling port was located approximately 80 in. downstream from the hood exhaust, at which point it was determined there was laminar flow. The hood exhaust was maintained at 500 CFM throughout the duration of testing. The sampler was assembled and an out of stack filter was used. A pre-leak check was conducted and determined to be < 0.02 ft/min. Sampling was done at 8 traverse points.

The oven with integral system was operated normally by cooking the following foods:

12 in. pepperoni pizza (Tombstone, with 19 pepperonis per pizza), each cooked for 3 minutes with 0 seconds between loads for 8 hours (total of 160 pizzas). Oven was set to maintain 525 °F

During the cooking operation, it was noted whether or not visible effluents evolved from the air exhaust of the hood. Gauge, meter and temperature readings were taken and recorded every 10 min. After cooking, the condition of the duct was noted and a post-leak check was conducted and determined to be < 0.02 ft³/min.

After being allowed to cool, the sampling equipment was disassembled; the filter was removed, and placed into a sample container labeled No. 1. The liquid in impingers Nos. 1, 2, and 3 were volumetrically measured and transferred to sample container No. 3. The silica gel and impinger No. 4 was transferred to sample container No. 5. The nozzle, probe and impingers were rinsed three times with water and the rinse was added to container No. 3. These parts were also rinsed three times with acetone and transferred to container No. 4. All additional inter surfaces of the sampling terrain glassware were rinsed with methylene chloride three times; the rinse was transferred to container No. 6. A blank of acetone approximately equivalent to the amount used for rinses was aliquoted into container No. 2, the same was done for the distilled de-ionized water and methylene chloride except that these were aliquoted into their own individual containers labeled No. 7 and 8 respectively. All containers were properly labeled and sealed, then the liquid levels in all the containers were marked.

The analysis phase was done in accordance with EPA Method 202, using the out of stack filter.

RESULTS:

There was no visible smoke emitted from the exhaust of the hood during the normal cooking operation of the Model M1718. There was no noticeable amount of smoke accumulated in the test room after 8 hours of continuous cooking.

The total amount of grease-laden effluents collected by the sampling equipment for the Model M1718 was found to be 0.49 mg/m³, which is less than 5 mg/m³ limit.