



MICROSTAT LABORATORIES
RIVER'S EDGE TECHNICAL SERVICE

Specialists in Materials Testing and Technical Services

TEST REPORT

For
Tempo Plastics Company, Inc.

Organic analysis of rubberized polystyrene (with anti-stat),
dry molded #5627 4#/ft³ density sample using a Fourier
Transformed Infrared Spectrometer and Liquid Particle
Counting (LPC)

Report #: 2006-045
May 8, 2006

SUMMARY

The sample tray was received and processed for FTIR analysis of rubberized polystyrene (#5627 RMER 4.0 density “Dry Mold” w/antistat) copolymer for Silicone and liquid particle analysis by liquid particle counter (LPC). No measurable silicone, phthalates (DOP) or amides were detected. The particle count data is included below in Table 1.

FTIR Analysis

A surface area of 415 cm² (one entire tray) was extracted by rinsing with hexane into a cleaned aluminum pan. A blank was also prepared by placing hexane in a second cleaned aluminum pan. The solvent was then gently evaporated from the aluminum pan. The residue in the aluminum pan was reconstituted with hexane, transferred to the attenuated total reflectance (ATR) crystal and analyzed by FTIR. Reference standard curves have been established for silicone, phthalates (DOP) and amides. The sample spectrum was examined for the presence of the peaks seen. For example, in a silicone reference spectrum, if all of the peaks are seen, then the concentration is determined by comparing the absorbency of the 800 cm⁻¹ band to a Beer’s Law curve generated from standards of varying concentrations. This process is repeated for amides and DOP.

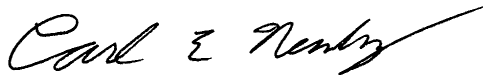
Liquid Particle Counting (LPC) Analysis-Zero-Stress Method

The sample was placed in a clean glass pan along with 1000 ml of ultrapure deionized water (also used as a method blank). Then the sample was allowed to remain in the 1000 ml of water for 1 min, while being sloshed about ten times. Afterwards, the sample was removed and flipped over and sloshed ten more times in one minute. The sample was then removed and three 20 ml aliquots were taken using a Liquid Particle Counter. The results are reported in counts/cm². The surface area of the sample was estimated to be 415 cm².

Table 1
Particle Generation Results of Polystyrene Sample.

Trial 1	Counts/cm²
≥0.5 <i>um</i>	2019
≥0.6 <i>um</i>	1602
≥0.7 <i>um</i>	1296
≥0.8 <i>um</i>	1049
≥0.9 <i>um</i>	839
≥1.0 <i>um</i>	676
≥1.25 <i>um</i>	442
≥1.50 <i>um</i>	336
≥2.0 <i>um</i>	223

The results provided in this report are accurate within the limits appropriate to each test standard. The results of this report are statistically significant only to the samples submitted for testing. MicroStat Laboratories has no controls, and assumes no responsibility for the tested product's functionality or use.



05/08/2006

Carl E Newberg

Date

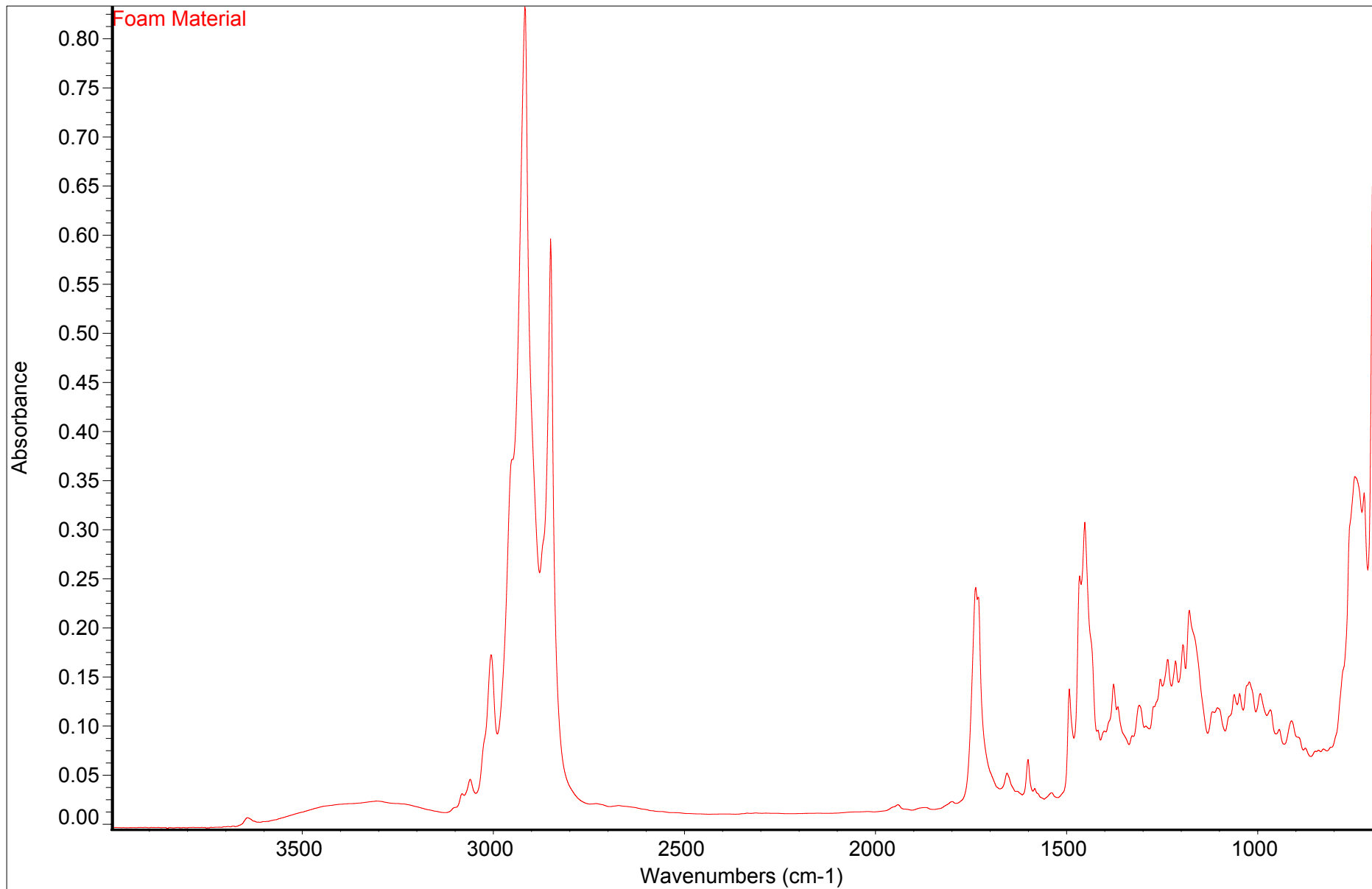


FIGURE:#1

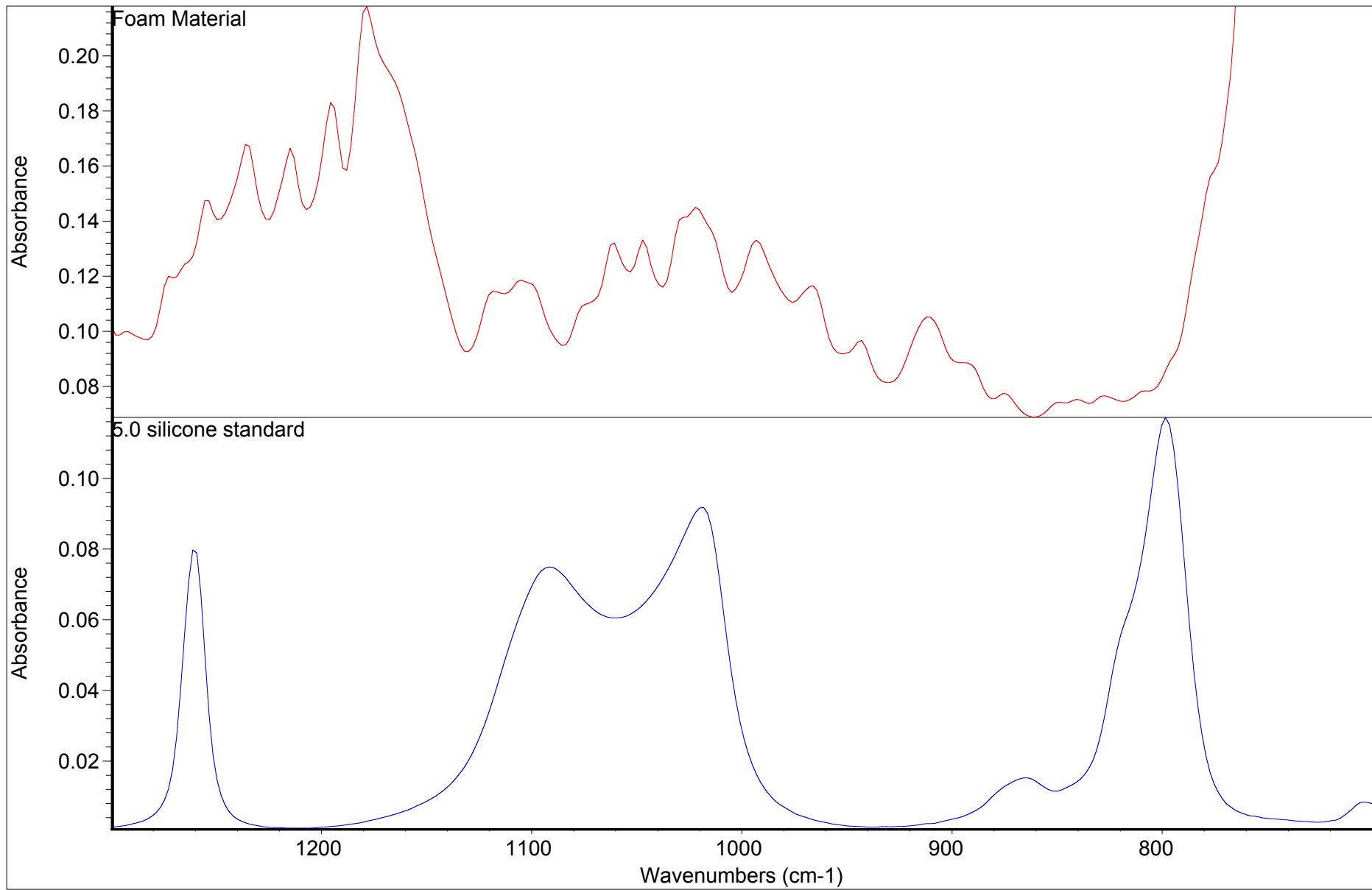


FIGURE:#2

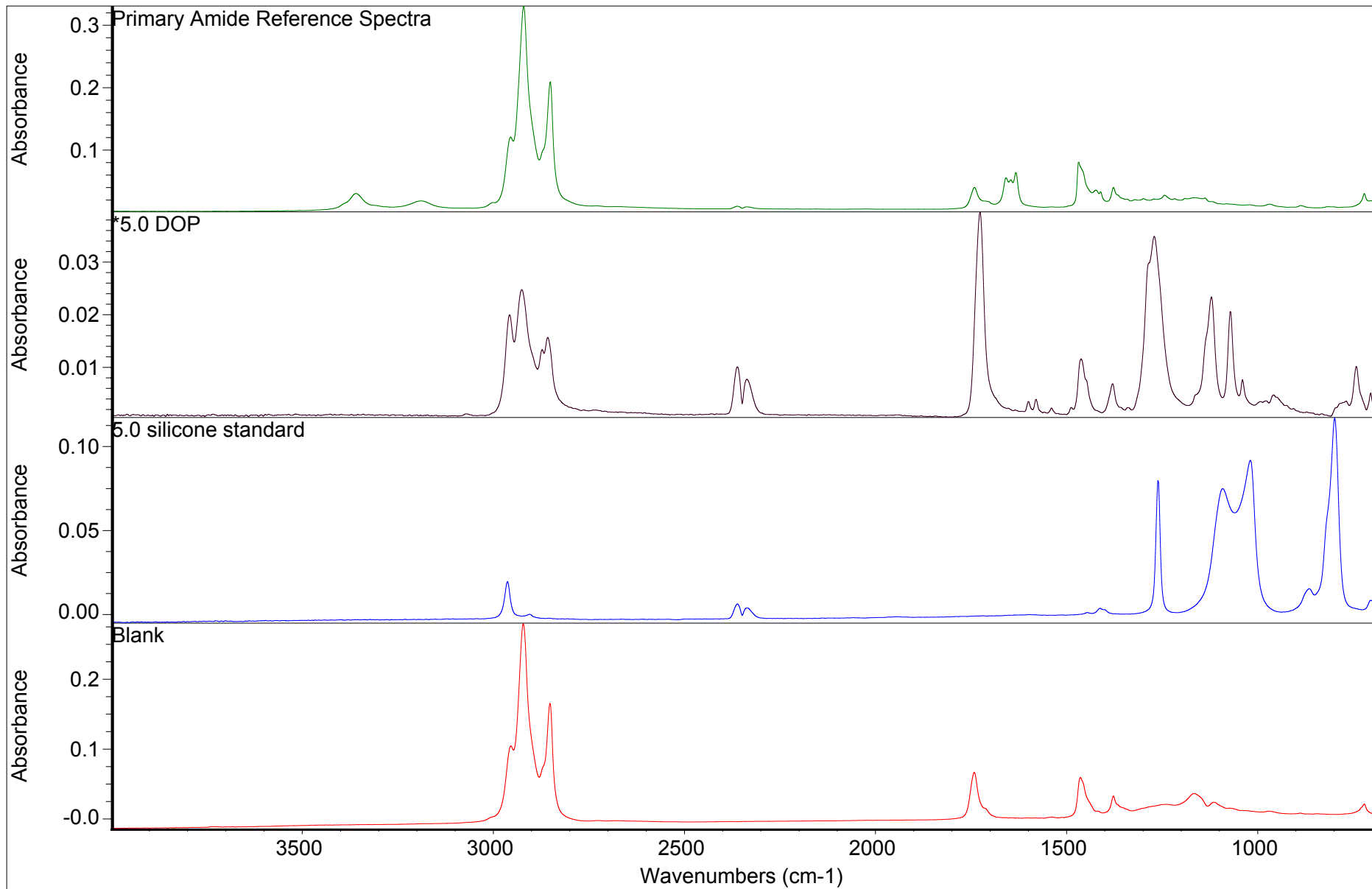


FIGURE:#3