Lab/Cor Materials, LLC Materials Analysis, Testing, and Consulting

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Materials Identification Analysis

This report contains the results of materials identification analysis for the two gasket samples submitted by Jane Smith on 8/29/2014.

LCM Sample ID	Client Sample ID	Results
14.999-01	End Cap	XRF: Sr, Fe, Cu, Ti, Ca, Si, Cl
		Glass Content (ASTM D5630) : 29.4 ± 0.1
		FTIR: Nylon
		DSC (ASTM D1519): melting point 222 °C,
		no glass transition
		Density (ASTM D792): 1.36
14.999-02	New O-Ring	FTIR: Ethylacrylamide
		XRF : S, Si, Cl, Br
		Density (ASTM D792): 1.37
		Shore A Hardness (ASTM D1415): 74

Comment

Samples were analyzed by Thermo Nicolet FTIR and Amptek XRF. End cap results are consistent with Nylon. XRF measurements detected common additives. FTIR spectral comparisons for both products are shown below.

ISO 17025 Chemical Testing Accredited

Project 14.999

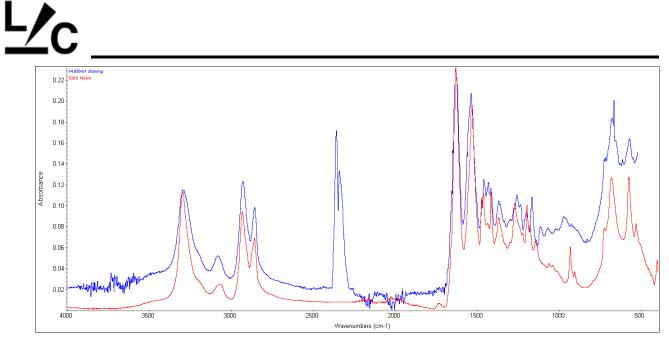


Figure 1: FTIR spectra showing good agreement between sample 14.999-01 (blue) and a nylon reference (red). The two end cap samples gave the same result.

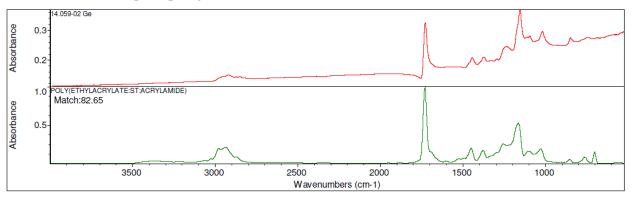


Figure 2: FTIR spectra below showing good agreement between sample 14.999-02 (red) and an ethylacrylamide polymer reference (green).

The results presented in this report relate only to the samples tested.

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