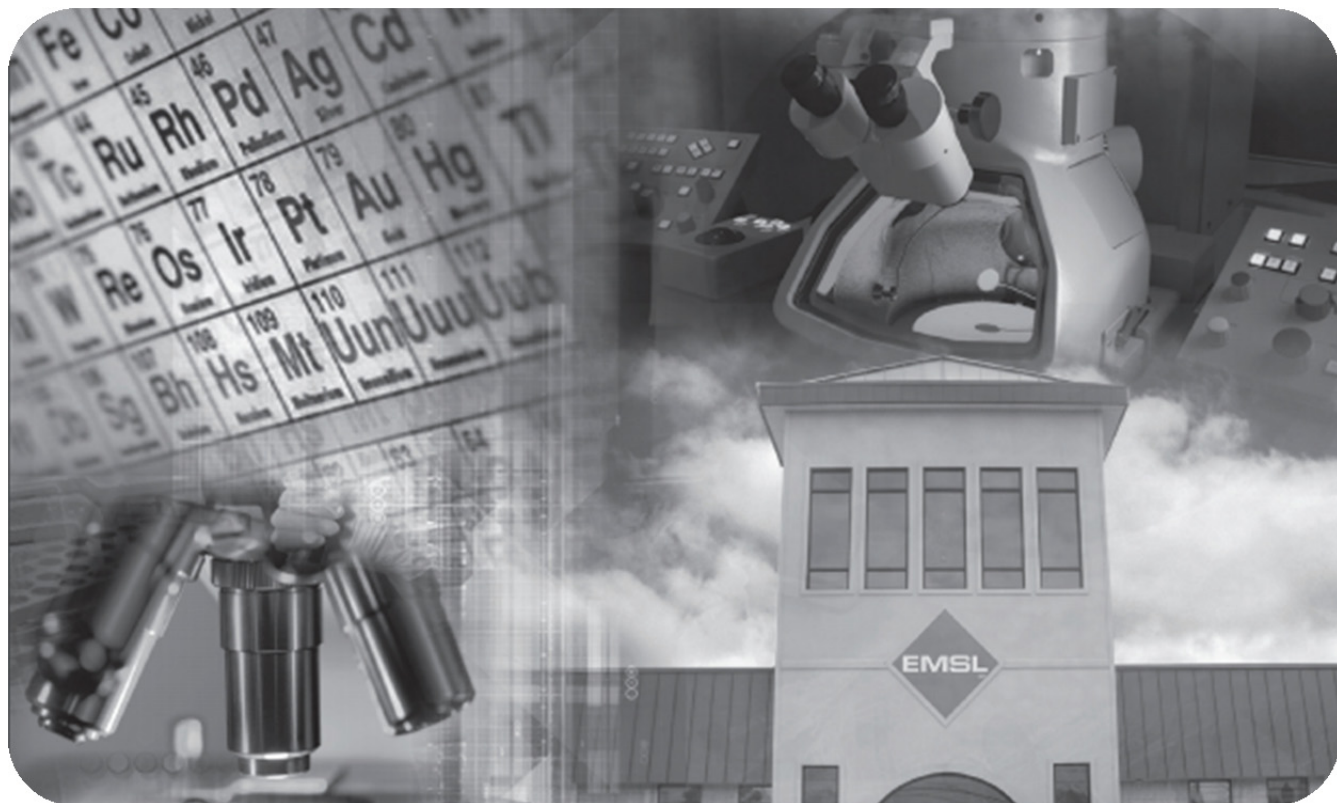




EMSL ANALYTICAL, INC.

# ASBESTOS TESTING REPORT



## Beautycounter– Talc

EMSL ORDER ID: 041810424      April 20, 2018

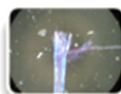
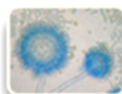
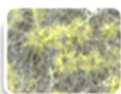
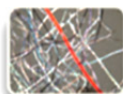
### Prepared For:

Kwaku Agyekum, Ph.D.  
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# Asbestos Testing Report

## INTRODUCTION

On April 3<sup>rd</sup>, 2018 EMSL Analytical Inc. in Phoenix, AZ received one (1) sample from Kwaku Agyekum, Ph.D. of Beautycounter. The sample was received under Chain of Custody (COC) and arrived in good condition. The sample consisted of one talc sample. The sample was then transferred to the EMSL Analytical Inc.'s corporate headquarters in Cinnaminson, NJ for preparation and analysis. The sample was logged in following normal laboratory procedures and assigned a unique laboratory ID (041810424). The sample was submitted for Polarized Light Microscopy analysis (PLM) via EPA 600/R-93/116 with gravimetric reduction and milling preparation & Transmission Electron Microscopy (TEM) via EPA 600/R-93/116 with gravimetric reduction and milling preparation. Due to the lack of any interference matrices and the already fine particle size of the material submitted for analysis, the lab determined that neither milling nor gravimetric reduction was required for this sample.

## SCOPE OF WORK

This method is designed for the analysis of asbestos in bulk materials.

## METHODOLOGY

For PLM, the sample was initially examined under low magnification using stereomicroscopy. Initial observations note gross material appearance (homogeneity, fibrous/non-fibrous) and physical characteristics (color, texture, friable/non-friable). Representative sub-samples were then selected and placed on separate clean microscope slides with refractive index oil and cover slips. Preparation involves using various techniques, including, but not limited to, teasing, crushing, dissolution, etc. Polarized light microscopy (PLM) is used for the positive identification of suspect fibers and quantitation.

The slides were analyzed on a Leica Polarized Light Microscope that includes a 360 degree rotating stage, analyzer, central stop dispersion objective, crosshair eyepiece reticule, gypsum retardation compensator plate, 10x–40x objective lenses, and sub–

stage polarizer. Positive identification of asbestos requires the determination of optical property characteristics and comparison to the six regulated asbestos types: chrysotile, amosite (grunerite), crocidolite (riebeckite), anthophyllite, tremolite and actinolite asbestos. Final asbestos concentration percentages are generated using a 1000 point count method which provides an aerial estimate of asbestos percentage.

For TEM analysis the sample was then further prepared by suspending approximately 50 mg of the sample residue into fiber free water and filtering an aliquot onto a 0.2 µm MCE membrane filter. The filter was then prepared using a direct preparation technique, placed on indexed Copper TEM grids, and analyzed by Transmission Electron Microscopy (TEM). The sample was analyzed on a calibrated JEOL 100 CXII TEM outfitted with 4Pi Revolution Energy Dispersive X-Ray Analysis System (EDXA) system and an Olympus Digital Camera. Fifteen grid openings were analyzed. Fibrous structures  $\geq 0.5$  µm in length, with substantially parallel sides and an aspect ratio of 3:1 were identified, counted, and measured. Confirmation of chrysotile was made by Selected Area Electron Diffraction (SAED) while confirmation of amphibole was made by SAED and Energy Dispersive X-Ray Analysis (EDXA).

## FINDINGS & CONCLUSIONS

No asbestos was detected by PLM via EPA 600/R-93/116 and no asbestos was detected by TEM EPA 600/R-93/116.

Representative images of the sample both taken as received and under a stereomicroscope are found in Appendix B.

## DETECTION LIMITS AND LIMITATIONS

This examination is limited to the conditions and practices observed and information provided to EMSL Analytical, Inc. The method used, conclusions and recommendations are based on our experience. They are subject to the limitations and variability inherent

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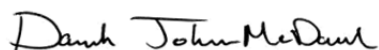
to the approach used. This examination is limited to the defined scope and does not purport to set forth all hazards, nor indicate that other hazards do not exist.

Under normal conditions, the practical detection limit for PLM with 1000 point count is <0.1 percent. Detection limits can vary with sample type, the amount of sample analyzed as well as the method of preparation and quantitation technique employed. Results are reported as “less than 0.1%” (<0.1%) if the asbestos concentration is detected at levels below the detection limit. The detection limit for Transmission Electron Microscopy (TEM) via EPA 600/R-93/116 is based on fiber dimensions, the density of the asbestos type(s) detected and the area analyzed. Interferences for this method include but are not limited to: Non-regulated asbestos minerals such as the two polymorphs of chrysotile, lizardite and antigorite; Non-regulated amphiboles such as winchite and richterite, and pyroxenes; cleavage fragments of the regulated asbestos types which may at times have morphologies and aspect ratios similar to the true asbestiform varieties; clay minerals that can have similar morphology to asbestos such as sepiolite and palygorskite; and all non-asbestos particulate, fibrous or not, which can partially or completely obscure asbestos fibers. Samples that were tested for this report are subject to the limitations expressed herein.

*I certify that this report is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than any special conditions detailed above. In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this report has been authorized by the Laboratory Manager or his designee, as verified by the following signature.*

If you have any questions please do not hesitate to contact us.

Sincerely,



---

Darrah Johnson-McDaniel, Ph.D.

Assistant Asbestos Laboratory Manager

**EMSL Analytical, Inc.**

200 Route 130 North | Cinnaminson, NJ 08077

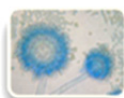
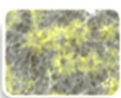
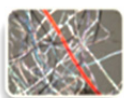
Phone: 856-303-2576 | Fax: 856-786-5974 | Toll Free: 800-220-3675

Email: [djohnsonmcdaniel@emsl.com](mailto:djohnsonmcdaniel@emsl.com)



EMSL ANALYTICAL, INC.

## LABORATORY REPORT CERTIFICATE





# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order: 041810424

Customer ID: BEAU29

Customer PO:

Project ID:

**Attention:** Kwaku Agyekum  
Beautycounter  
2803 Colorado Avenue  
Santa Monica, CA 90404

**Phone:** (888) 988-9108

**Fax:**

**Received:** 04/10/2018 7:00 PM

**Analysis Date:** 04/19/2018

**Collected:**

**Project:** Talc Testing

## Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using the 1,000 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 041810424-0001	Talc	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Juli Patel (1)

Benjamin Ellis, Laboratory Manager  
or other approved signatory

Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. The limit of detection as stated in the method is 0.1%. EMSL Analytical Inc suggests that samples reported as <0.1% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc. bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc liability is limited to the cost of sample analysis. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 04/19/2018 14:23:08



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 858-1292

Email: CinnAsblab@emsl.com

Attn: Kwaku Agyekum  
Beautycounter  
2803 Colorado Avenue  
Santa Monica, CA 90404

Phone: (888) 988-9108

Fax:

Project: Talc Testing

Customer ID: +12BEACO12

Customer PO:

Received: 4/10/18 12:00 AM

EMSL Order: 041810424

Analysis Date: 4/16/2018

Report Date: 4/19/2018

**TEM EPA 600/R-93/116:***Analysis of Bulk Material Utilizing Analytical Electron Microscopy (Section 2.5.5.2)*

Client Sample ID	Location	Mineral Type(s)	# of Structures Detected	Analytical Sensitivity %	Asbestos Weight %	Comments
EMSL Sample ID						
1	Talc	No Asbestos Detected		0.01	< 0.01	
041810424-0001						

**F Craig**

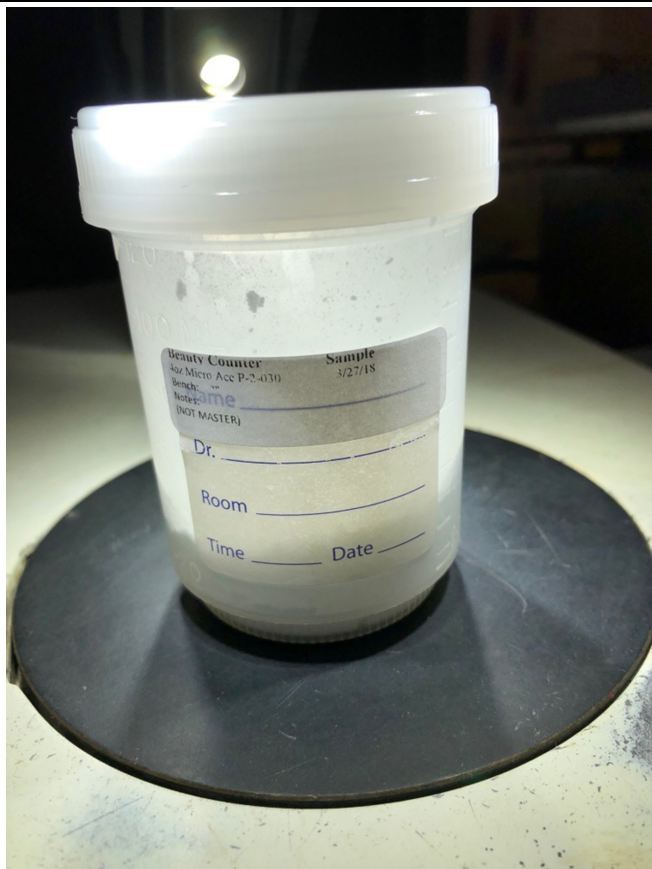
Analyst

Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client

## SAMPLE IMAGES AND SUPPORTING DOCUMENTATION

041810424-0001

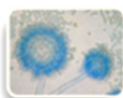
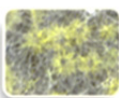
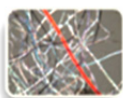


Representative images of the sample as received (left) and under a stereomicroscope (right).



EMSL ANALYTICAL, INC.

## LABORATORY ACCREDITATION



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United States Department of Commerce  
National Institute of Standards and Technology



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**Certificate of Accreditation to ISO/IEC 17025:2005**

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NVLAP LAB CODE: 101048-0

**EMSL Analytical, Inc.**  
Cinnaminson, NJ

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:*

**Asbestos Fiber Analysis**

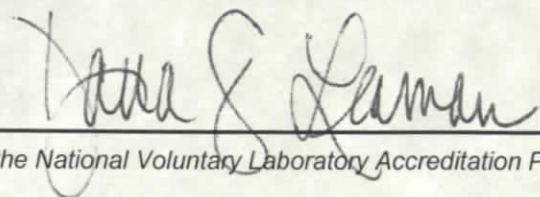
*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

---

2017-07-01 through 2018-06-30

Effective Dates



  
For the National Voluntary Laboratory Accreditation Program



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005**

**EMSL Analytical, Inc.**

200 Route 130 North  
Cinnaminson, NJ 08077

Mr. Ben Ellis

Phone: 800-220-3675 Fax: 856-786-5973

Email: [bellis@emsl.com](mailto:bellis@emsl.com)

<http://www.emsl.com>

**ASBESTOS FIBER ANALYSIS**

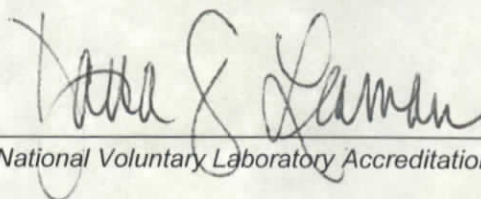
**NVLAP LAB CODE 101048-0**

**Bulk Asbestos Analysis**

<u>Code</u>	<u>Description</u>
18/A01	EPA -- Appendix E to Subpart E of Part 763 -- Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

**Airborne Asbestos Analysis**

<u>Code</u>	<u>Description</u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

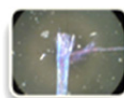
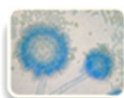
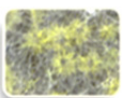
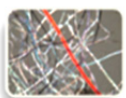


For the National Voluntary Laboratory Accreditation Program

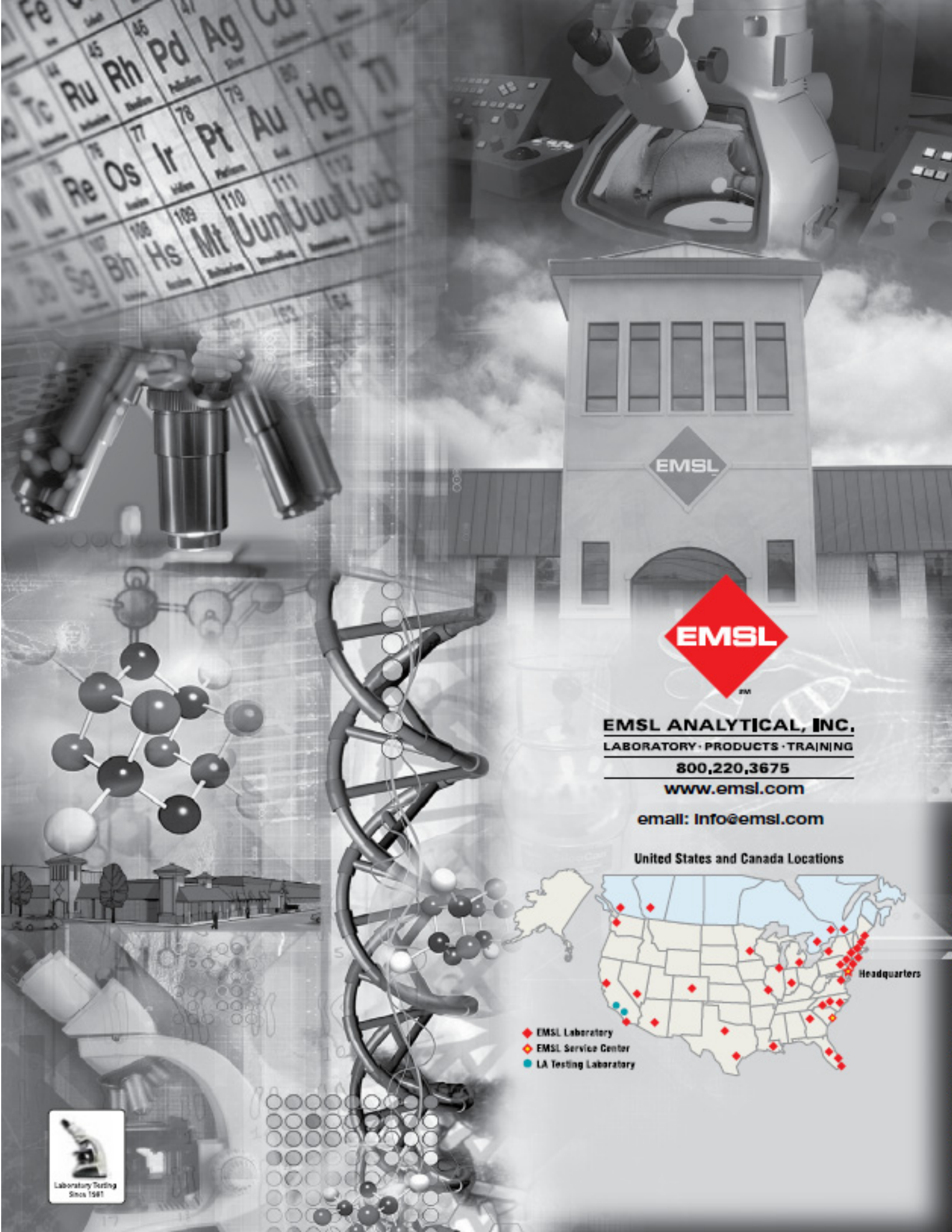


EMSL ANALYTICAL, INC.

## CUSTOMER CORRESPONDANCE







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United States and Canada Locations

