AMA Analytical Services, Inc.
Focused On Results.

NVLAP TESTING
NVLAP Lab Code 101143-0
NY ELAP
Lab ID 10920

Analytical Report for:

Testing of Official Samples of Talc Containing Cosmetics for Asbestiform Fibers

Contract Number: 75F40119P10689

Assignment DFPG# 22-08, Batch No. 01212022 (Batch #1)
AMA COC No. 633185

US FDA
Office of Cosmetics & Colors
4300 River Road
College Park, MD 20740

AMA Analytical Services, Inc.

Focused On Results.

CERTIFICATE OF ANALYSIS

Chain of Custody: 633185
Client: US Food & Drug Administration
Address: Office of Cosmetics & Colors
4300 River Road
College Park, MD 20740
Attention: John Gasper

Job Name: Assignment DFPG #22-08
Job Location: Batch 1 (No. 01212022)
Job Number: CLIN 1001
PO Number: 75F40119P10689

Date Submitted: 2/22/2022
Date Analyzed: 3/7/2022-3/31/2022
Report Date: 6/9/2022
Date Sampled: Not Provided
Person Submitting: Martha Schwartz
Revised: 6/30/2022 (Revision #1)

SUMMARY OF ANALYSIS

AMA Sample ID	Client Sample ID	TEM LOD Using ASTM D5756 Mass Calculation	TEM LOQ Using ASTM D5756 Mass Calculation	% Chrysotile by TEM Using ASTM D5756 Mass Calculation	% Tremolite by TEM Using ASTM D5756 Mass Calculation	% Total Chrysotile & Tremolite by TEM Using ASTM D5756 Mass Calculation	% Asbestos by PLM	% Organics	% Acid Soluable	% Other	Comments
633185-1A	01212022-1	0.00000363%	0.00001450%	ND	ND	< 0.00001%	ND	3.43%	5.89%	90.68%	
633185-1B	01212022-1	0.00000305%	0.00001222%	ND	ND	< 0.00001%	ND	3.44%	7.26%	89.30%	
633185-1C	01212022-1	0.00000349%	0.00001396%	ND	ND	< 0.00001%	ND	3.44%	6.66%	89.90%	
633185-2A	01212022-2	0.00000270%	0.00001080%	ND	ND	< 0.00001%	ND	17.36%	15.86%	66.78%	
633185-2B	01212022-2	0.00000346%	0.00001384%	ND	ND	< 0.00001%	ND	17.36%	14.56%	68.08%	
633185-2C	01212022-2	0.00000315%	0.00001261%	ND	ND	< 0.00001%	ND	17.31%	15.07%	67.62%	
633185-3A	01212022-3	0.00000275%	0.00001100%	ND	ND	< 0.00001%	ND	8.80%	8.98%	82.22%	
633185-3B	01212022-3	0.00000253%	0.00001012%	ND	ND	< 0.00001%	ND	8.81%	9.92%	81.27%	
633185-3C	01212022-3	0.00000256%	0.00001025%	ND	ND	< 0.00001%	ND	8.83%	10.94%	80.23%	
633185-4A	01212022-4	0.00000270%	0.00001078%	ND	ND	< 0.00001%	ND	11.73%	12.76%	75.51%	
633185-4B	01212022-4	0.00000288%	0.00001153%	ND	ND	< 0.00001%	ND	11.76%	13.53%	74.70%	
633185-4C	01212022-4	0.00000265%	0.00001061%	ND	ND	< 0.00001%	ND	11.75%	12.71%	75.54%	
633185-5A	01212022-5	0.00000329%	0.00001314%	ND	ND	< 0.00001%	ND	19.50%	7.27%	73.23%	
633185-5B	01212022-5	0.00000347%	0.00001386%	ND	ND	< 0.00001%	ND	19.45%	8.18%	72.36%	
633185-5C	01212022-5	0.00000262%	0.00001050%	ND	ND	< 0.00001%	ND	19.43%	6.40%	74.17%	
633185-6A	01212022-6	0.00000260%	0.00001039%	ND	ND	< 0.00001%	ND	11.63%	7.38%	80.99%	
633185-6B	01212022-6	0.00000272%	0.00001086%	ND	ND	< 0.00001%	ND	11.72%	8.15%	80.13%	
633185-6C	01212022-6	0.00000256%	0.00001026%	ND	ND	< 0.00001%	ND	11.70%	7.50%	80.79%	
633185-7A	01212022-7	0.00000268%	0.00001072%	ND	ND	< 0.00001%	ND	29.04%	6.20%	64.76%	
633185-7B	01212022-7	0.00000330%	0.00001318%	ND	ND	< 0.00001%	ND	28.92%	7.29%	63.79%	
633185-7C	01212022-7	0.00000302%	0.00001209%	ND	ND	< 0.00001%	ND	29.01%	7.21%	63.78%	
633185-8A	01212022-8	0.00000251%	0.00001006%	ND	ND	< 0.00001%	ND	15.87%	7.02%	77.11%	
633185-8B	01212022-8	0.00000242%	0.00000969%	ND	ND	< 0.00001%	ND	15.90%	7.44%	76.67%	
633185-8C	01212022-8	0.00000269%	0.00001078%	ND	ND	< 0.00001%	ND	15.85%	5.92%	78.23%	
633185-9A	01212022-9	0.00000238%	0.00000951%	ND	ND	< 0.00001%	ND	5.80%	7.31%	86.90%	
633185-9B	01212022-9	0.00000271%	0.00001085%	ND	ND	< 0.00001%	ND	5.78%	7.68%	86.54%	
633185-9C	01212022-9	0.00000292%	0.00001166%	ND	ND	< 0.00001%	ND	5.79%	8.98%	85.23%	
633185-10A	01212022-10	0.00000244%	0.00000976%	ND	ND	< 0.00001%	ND	0.21%	7.50%	92.29%	
633185-10B	01212022-10	0.00000337%	0.00001349%	ND	ND	< 0.00001%	ND	0.29%	9.99%	89.72%	
633185-10C	01212022-10	0.00000275%	0.00001099%	ND	ND	< 0.00001%	ND	0.32%	7.65%	92.03%	
633185-11A	01212022-11	0.00000256%	0.00001025%	ND	ND	< 0.00001%	ND	1.90%	11.83%	86.27%	
633185-11B	01212022-11	0.00000239%	0.00000955%	ND	ND	< 0.00001%	ND	1.86%	10.82%	87.32%	
633185-11C	01212022-11	0.00000440%	0.00001759%	ND	ND	< 0.00002%	ND	1.83%	11.04%	87.13%	
633185-12A	01212022-12	0.00000325%	0.00001301%	ND	ND	< 0.00001%	ND	18.98%	5.27%	75.75%	
633185-12B	01212022-12	0.00000282%	0.00001129%	ND	ND	< 0.00001%	ND	18.87%	6.23%	74.90%	
633185-12C	01212022-12	0.00000308%	0.00001232%	ND	ND	< 0.00001%	ND	18.94%	6.98%	74.08%	
633185-13A	01212022-13	0.00000312%	0.00001250%	ND	ND	< 0.00001%	ND	21.36%	5.68%	72.96%	
633185-13B	01212022-13	0.00000378%	0.00001512%	ND	ND	< 0.00002%	ND	21.34%	5.06%	73.61%	
633185-13C	01212022-13	0.00000280%	0.00001118%	ND	ND	< 0.00001%	ND	21.38%	4.70%	73.93%	
633185-14A	01212022-14	0.00000411%	0.00001642%	ND	ND	< 0.00002%	ND	16.49%	6.63%	76.87%	
633185-14B	01212022-14	0.00000274%	0.00001094%	ND	ND	< 0.00001%	ND	16.57%	6.20%	77.23%	

AMA Analytical Services, Inc.
Focused On Results.

CERTIFICATE OF ANALYSIS

Chain of Custody: 633185
Client: US Food & Drug Adminitration
Address: Office of Cosmetics & Colors
4300 River Road
College Park, MD 20740
Attention: John Gasper

Job Name: Assignment DFPG #22-08
Job Location: Batch 1 (No. 01212022)
Job Number: CLIN 1001
PO Number: 75F40119P10689

Date Submitted: 2/22/2022
Date Analyzed: 3/7/2022-3/31/2022
Report Date: 6/9/2022
Date Sampled: Not Provided
Person Submitting: Martha Schwartz
Revised: 6/30/2022 (Revision #1)

SUMMARY OF ANALYSIS

AMA Sample ID	Client Sample ID	TEM LOD Using ASTM D5756 Mass Calculation	TEM LOQ Using ASTM D5756 Mass Calculation	% Chrysotile by TEM Using ASTM D5756 Mass Calculation	% Tremolite by TEM Using ASTM D5756 Mass Calculation	% Total Chrysotile & Tremolite by TEM Using ASTM D5756 Mass Calculation	% Asbestos by PLM	% Organics	% Acid Soluable	% Other	Comments
633185-14C	01212022-14	0.00000286%	0.00001146%	ND	ND	< 0.00001%	ND	16.66%	6.42%	76.91%	

LOD = Limit of Detection **LOQ** = Limit of Quantificatio **ND** = Not Detected **PLM** = Polarized Light Microscopy **TEM** = Transmission Electron Microscopy

Analytical Method(s): PLM by Modified NY ELAP 198.6
TEM by Modified NY ELAP 198.4/ASTM D5756

Analyst(s): **PLM** (b) (6)
TEM Andreas Saldivar

Technical Director: Andreas Saldivar

All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy

FDA Office of Cosmetics & Colors

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Record Changes Report

Date	Description
6/30/2022	1) p. 148, added measurement scale units “nm” to Elongated Mica Particle picture for sample 13A 2) p. 178, added QC Summary 3) p. 183, removed section for RB Analytical Bench Sheet(s)

Chain of Custody

AMA Analytical Services, Inc.
Focused On Results.
AIHA-LAP (#100470) NVLAP (#101143-0) NY ELAP (#10920)
4475 Forbes Blvd. • Lanham, MD 20706
(301) 459-2640 • (800) 346-0961 • Fax (301) 459-2643
www.amalab.com

(COC # Assigned upon arrival at lab.) **633185**

CHAIN OF CUSTODY
Asbestos in Talc/Cosmetics

Mailing/Billing Information:
Client Name: US Food & Drug Administration
Address: Office of Cosmetics and Colors
Address: 4300 River Road
Address: College Park, MD 20740
Phone #: _____ Fax #: _____

Submittal Information:
Job Name: Assignment DFPG #22-08
Job Location: Batch 1 (No. 01212022)
Job #: CLIN 1001 P.O. #: 75F40119P10689
Point of Contact: John Gasper Cell #: 240-402-1133
Collected by: _____ Cell #: _____

Reporting Info (Results provided as soon as technically feasible). If no TAT/Reporting Info is provided, AMA will assign defaults of 6-Weeks & email/fax to contacts of file.

TURN AROUND TIME (TAT):		REPORT TO:
After Hours (must be pre-scheduled)	**Normal Business Hours**	✓ Email: john.gasper@fda.hhs.gov
After Hours Service is not provided for Asbestos in Talc/Cosmetics Analysis	□ 10-Day (2-Weeks) □ 3-4 Weeks □ 6+ Weeks Due Date: 3/31/2022 thru 4/15/2022 ✓ 4-6 Weeks	✓ Email CC 1: steven.wolfgang.fda.hhs.gov □ Email CC 2: _____ □ Verbals _____

Sample Type
✓ FDA Modified Procedures for PLM-ELAP 198.6 & TEM ELAP 198.4 14 (QTY)

Data Package Level [Select One]: _____Standard (Certificate of Analysis & Signed COC) _____Level I (Standard + QA/QC Summary) _____Level II (I + Bench Sheets) ___✓___Level III (II + Case Narrative)

*If field data sheets are submitted, there is no need to complete bottom section ✓ All samples received in good condition unless otherwise noted.

Sample Information

Sample Number	No. of Aliquots to Prepare & Analyze	Sample Description (ie, color, container size, etc.) [samples must must be submitted blind such that AMA cannot determine the source of the material being submitted for analysis]	Comments/Instructions
Items #s 1 thru 14	3	14 '1-oz glass jars submitted in pink vacuum sealed bags with	
		custody seals intact (sealed by M. Schwartz 1/24/2022-2/14/2022)	
		See Attached FDA COC for additional details.	

	Print Name	Sign Name	Date	Time	Shipping Information
Relinquised by:					✓ UPS □ In-Person □ Other □ FedEx □ Drop Box □ USPS □ Courier
Received by:	(b) (6)		2/22/2022	10:00	1ZA49958A0395125009

FDA U.S. FOOD & DRUG ADMINISTRATION
OFFICE OF REGULATORY AFFAIRS

1DFC 6th Ave & Kipling St
Bldg 20, Door W-10
P.O. Box 25087
Denver, CO 80225-0087

February 16, 2022

AMA Analytical Services, Inc.
Attn: (b) (6)
4475 Forbes Blvd.
Lanham, MD 20706
Phone: 301-459-2640

Re: Samples for Asbestos Analysis, Batch #01212022

Dear (b) (6)

Enclosed in box are eleven (14) approx. 5-g samples of commercial talc-containing cosmetic products being submitted for analysis for asbestiform fibers by transmission electron microscope (TEM) per FDA Assignment DFPG #2-08, Contract No. #75F40119P10689. Also included in box is one chain of custody form to be completed by recipient for tracking of sample batch at AMA. Please analyze samples as agreed.

The fourteen (14) samples in this shipment constitute Batch 1 (No. 01212022) of the 50 samples that will be submitted to AMA for analysis in 2022.

If there are any questions, please contact: John Gasper: 240-402-1133 john.gasper@fda.hhs.gov

Best regards,

Martha H. Schwartz

Martha H. Schwartz
Chemist

Chemistry Branch
Denver Laboratory
Office of Regulatory Affairs
U.S. Food and Drug Administration
T: 303-236-9653
martha.schwartz@fda.hhs.gov

Enclosure: Chain of custody

FOOD AND DRUG ADMINISTRATION OFFICE OF REGULATORY AFFAIRS *Office of Regulatory Science*	Document Number: FORM-000796	Revision #: 00 Revised: 02/21/2020
Title: **Cosmetic Talc Sample Chain-of-Custody Form**		Page 1 of 3

Batch No: 01212022

Submitter: Martha H. Schwartz

Assignment No./ Contract No.: DFPG #22-08 / # 75F40119P10689

AMA COC No.: 633185

Date Sealed: 2/~~15~~16/22 mds 2/16/22 Sample Type: Official Samples

Description of Evidence		
Item #	**Quantity**	**Description of Item** (Lab#, Lot #, Condition)
01212022-1	1 vial	Approx. 5g of prepared talc-containing cosmetic sample

Adapted from: Technical Working Group on Biological Evidence Preservation. *The Biological Evidence Preservation Handbook: Best Practices for Evidence Handlers*. U.S. Department of Commerce, National Institute of Standards and Technology. 2013.

For the most current and official copy, check QMiS

FOOD AND DRUG ADMINISTRATION OFFICE OF REGULATORY AFFAIRS *Office of Regulatory Science*	Document Number: FORM-000796	Revision #: 00 Revised: 02/21/2020
Title: **Cosmetic Talc Sample Chain-of-Custody Form**		Page 2 of 3

Chain of Custody

Item #	Date	Released by (Print Name)	Released by (Signature)	Comments/Location
1-14	2/16/22	Martha H. Schwartz	Martha H. Schwartz	ORA/DENL

Chain of Custody

Item #	Date/Time	Received by (Print Name)	Received by	Comments/Location
1-14	2/22/2022	(b) (6)	(b) (6)	ATNA

Final Disposal Authority

Authorization for Disposal

Item(s) #: _____ on this document is/are no longer needed as evidence and is/are authorized for disposal by (check appropriate disposal method)

☐ Return to Submitter ☐ Destruction

Name of Authorizing Official: _____ Date: _____

Signature: _____

Adapted from: Technical Working Group on Biological Evidence Preservation. *The Biological Evidence Preservation Handbook: Best Practices for Evidence Handlers*. U.S. Department of Commerce, National Institute of Standards and Technology. 2013.

For the most current and official copy, check QMiS

FOOD AND DRUG ADMINISTRATION OFFICE OF REGULATORY AFFAIRS *Office of Regulatory Science*	Document Number: FORM-000796	Revision #: 00 Revised: 02/21/2020
Title: **Cosmetic Talc Sample Chain-of-Custody Form**		Page 3 of 3

Witness to Destruction of Evidence

Item(s) #: _____ on this document were destroyed by (Name) _____
in my presence on (date) _____.
Name of Witness to destruction: _____ Signature: _____Date: _____

Release to Lawful Owner

Item(s) #: _____ on this document was/were released by Evidence Custodian
_____ID#:_____ to
Name _____
Address: _____ City: _____State: _____
Zip Code: _____
Telephone Number: (_____) _____
Under penalty of law, I certify that I am the lawful owner of the above item(s).

Signature: _____ Date: _____

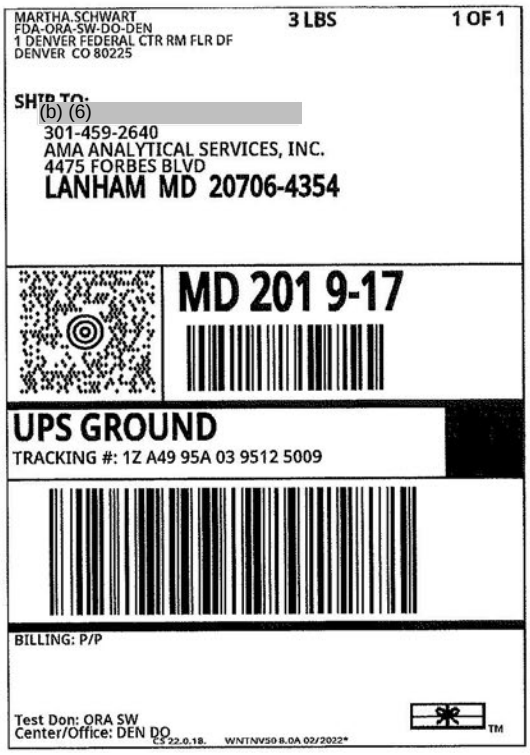
Copy of Government-issued photo identification is attached. ☐ Yes ☐ No

This form is to be retained as a permanent record by the Center for Food Safety and Applied Nutrition, Office of Cosmetics and Colors.

Adapted from: Technical Working Group on Biological Evidence Preservation. *The Biological Evidence Preservation Handbook: Best Practices for Evidence Handlers*. U.S. Department of Commerce, National Institute of Standards and Technology. 2013.

For the most current and official copy, check QMiS

UPS Delivery Confirmation



FOLD HERE

UPS CampusShip | UPS - United States https://www.campusship.ups.com/cship/create?ActionOriginPair=de...

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**

Customers with a Daily Pickup
Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup
Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations. Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages. Hand the package to any UPS driver in your area.

UPS Access Point™
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160 UNION BLVD
LAKEWOOD ,CO 80228

UPS Access Point™
THE UPS STORE
12051 W ALAMEDA PKWY
LAKEWOOD ,CO 80228

UPS Access Point™
ADVANCE AUTO PARTS STORE 7869
10850 W COLFAX AVE
LAKEWOOD ,CO 80215

1 of 1

2/17/2022, 9:22 AM

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number
1ZA4995A0395125009

Weight
3.00 LBS

Service
UPS Ground

Shipped / Billed On
02/17/2022

Delivered On
02/22/2022 10:00 A.M.

Delivered To
LANHAM, MD, US

Received By
(b) (6)

Left At
Inside Delivery

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 02/23/2022 1:22 P.M. EST

From: UPS
To: (b) (6)
Subject: UPS Status Notification, Tracking Number 1ZA4995A0395125009
Date: Wednesday, February 23, 2022 1:24:25 PM

Please see below for package information and current transit status.

Scheduled Delivery Date: Tuesday, 02/22/2022

UPS My Choice for home

Shipment Details

Tracking Detail

Your package is on time with a scheduled delivery date of 02/22/2022

Tracking Number:	1ZA4995A0395125009
Status:	Delivered
Scheduled Delivery:	02/22/2022
Shipped To:	LANHAM, MD, US
UPS Service:	UPS Ground
Number of Packages:	1
Weight:	3.0 LBS

Package Progress

Location	Date	Local Time	Description
LANHAM, MD, US	02/22/2022	10:00 AM	DELIVERED
Landover, MD, United States	02/22/2022	8:55 AM	Out For Delivery Today
Landover, MD, United States	02/22/2022	3:30 AM	Loaded on Delivery Vehicle

Landover, MD, United States	02/22/2022	3:18 AM	Processing at UPS Facility
Landover, MD, United States	02/21/2022	9:45 PM	Arrived at Facility
Laurel, MD, United States	02/21/2022	9:17 PM	Departed from Facility
Laurel, MD, United States	02/21/2022	2:24 PM	Arrived at Facility
Commerce City, CO, United States	02/18/2022	2:51 AM	Departed from Facility
Commerce City, CO, United States	02/17/2022	8:59 PM	Origin Scan
Commerce City, CO, United States	02/17/2022	3:17 PM	Pickup Scan
United States	02/17/2022	9:22 AM	Shipper created a label, UPS has not received the package yet.

Tracking results provided by UPS 02/23/2022 1:24 P.M. Eastern Time

NOTICE: UPS authorizes you to use UPS tracking systems solely to track shipments tendered by or for you to UPS for delivery and for no other purpose. Any other use of UPS tracking systems and information is strictly prohibited.

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Case Narrative

Client Name:	FDA Office of Cosmetics & Colors	**Contact:**	John Gasper
Contract Number:	75F40119P10689	**Phone:**	(240) 402-1133
Job Name/Location:	Assignment DFPG# 22-08 Batch No. 01212022 (Batch #1)	**Email:**	john.gasper@fda.hhs.gov
AMA COC Number:	633185	**Date Received:**	February 22, 2022

AMA Sample No.	Client Sample No.	Sample Description	Analytical Method
633185-1A	01212022-1	Nude colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-1B	01212022-1		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-1C	01212022-1		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-2A	01212022-2	Chocolate colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-2B	01212022-2		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-2C	01212022-2		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-3A	01212022-3	Light nude colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-3B	01212022-3		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-3C	01212022-3		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-4A	01212022-4	Cinnamon colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-4B	01212022-4		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-4C	01212022-4		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-5A	01212022-5	Cream colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-5B	01212022-5		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-5C	01212022-5		Mod. PLM ELAP 198.6/TEM ELAP 198.4

AMA Sample No.	Client Sample No.	Sample Description	Analytical Method
633185-6A	01212022-6	Pink colored, fine powder with a pearlescent appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-6B	01212022-6		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-6C	01212022-6		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-7A	01212022-7	Brown colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-7B	01212022-7		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-7C	01212022-7		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-8A	01212022-8	Brown colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-8B	01212022-8		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-8C	01212022-8		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-9A	01212022-9	Ivory colored, slightly clumpy powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-9B	01212022-9		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-9C	01212022-9		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-10A	01212022-10	White colored, fine powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-10B	01212022-10		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-10C	01212022-10		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-11A	01212022-11	White colored, fine powder with a matte appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-11B	01212022-11		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-11C	01212022-11		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-12A	01212022-12	Rose colored, fine powder with a pearlescent appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-12B	01212022-12		Mod. PLM ELAP 198.6/TEM ELAP 198.4

AMA Sample No.	Client Sample No.	Sample Description	Analytical Method
633185-12C	01212022-12		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-13A	01212022-13	Dark burgundy colored, slightly clumpy powder with a slight pearlescent appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-13B	01212022-13		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-13C	01212022-13		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-14A	01212022-14	Copper/bronze colored, fine powder with a pearlescent appearance	Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-14B	01212022-14		Mod. PLM ELAP 198.6/TEM ELAP 198.4
633185-14C	01212022-14		Mod. PLM ELAP 198.6/TEM ELAP 198.4

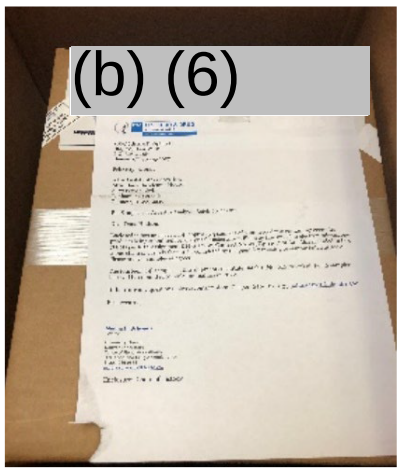
Summary of Samples Received 1

Requested Analyses: PLM Analysis for asbestos fibers conducted by Modified NY ELAP Method 198.6 and TEM Analysis for asbestos fibers conducted by Modified NY ELAP Method 198.4

Sample Receipt Description

The samples were received at AMA Analytical Services, Inc. on February 22, 2022, at 10:00 via UPS Tracking No. 1ZA49958A0395125009 by (b) (6), who assigned them to Chain of Custody (COC) No. 633185. This COC number served as the internal laboratory job number for tracking purposes. The set consisted of fourteen (14) powder samples submitted in ~1-oz glass jars; each jar was individually packaged in a vacuum and custody sealed plastic bag, and the jars for samples 7 through 14 additionally sealed with parafilm. Conditions were checked upon receipt and all sample containers and custody seals were intact. The samples were entered into the AMA laboratory database on February 23, 2022, at 12:14 by (b) (6). The samples were logged in for analysis in triplicate and each sample aliquot was assigned a unique laboratory identification number as shown in the table above. After sample login, the set was transferred to AMA's lockbox for storage.

The following pictures document the condition of samples upon receipt at AMA:





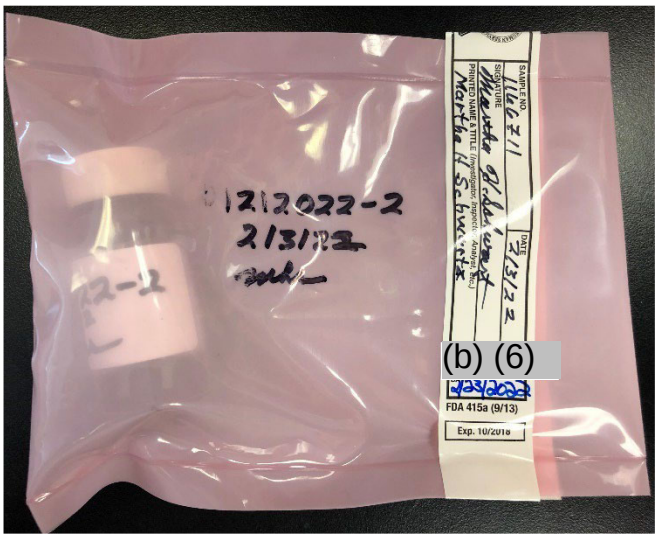
01212022
Batch 1
mda
2/15/22
01212022-H
2/4/22
mda

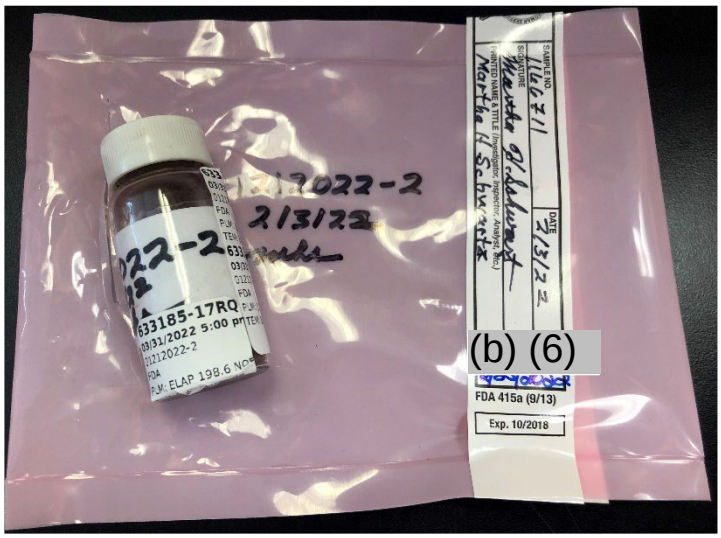

01202022-1
1/24/22
mda
01212022-H
2/4/22
mda
01212022-10
2/10/22
mda
01212022-8
2/9/22
mda
01212022-11
2/10/22
mda
01212022-2
2/3/22
mda
01212022-5
2/4/22
mda
01212022-9
2/9/22
mda
01212022-12
2/11/22
mda
01212022-14
2/14/22
mda
01212022-3
2/4/22
mda

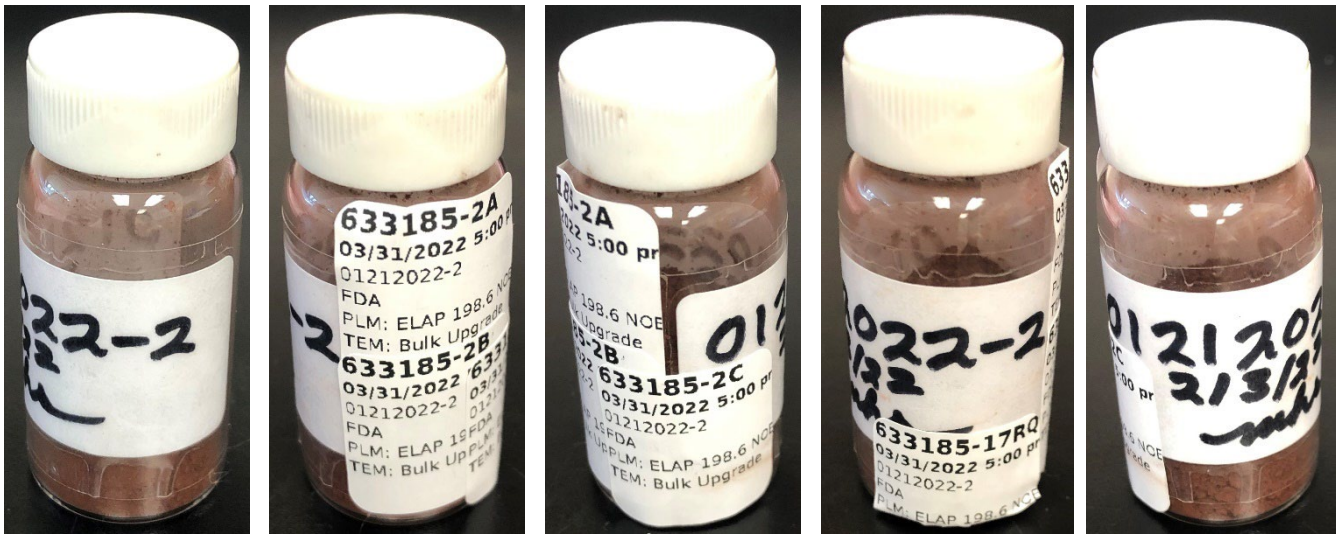
633185-1A, 1B, 1C/01212022-1

NOTE: COC paperwork indicated that the prefix for sample "1" should've been 012*1*2022, but the sample container was labeled 012*0*2022-1. AMA followed the prefix referenced in the COC on all laboratory documentation relating to this sample.

633185-2A, 2B, 2C/01212022-2

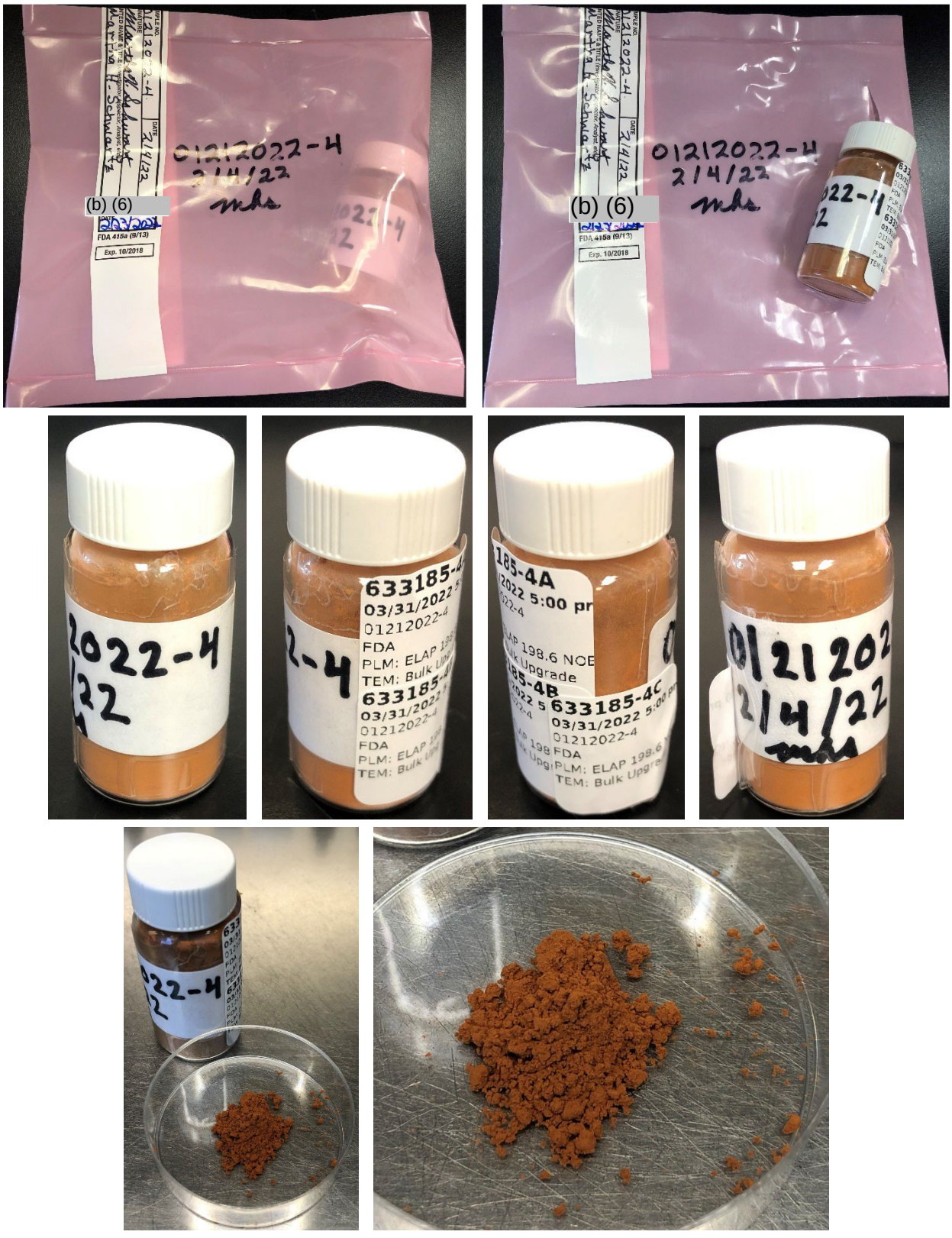




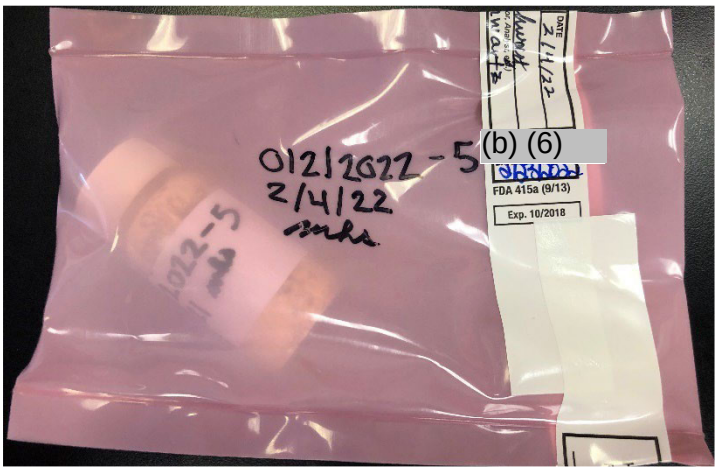


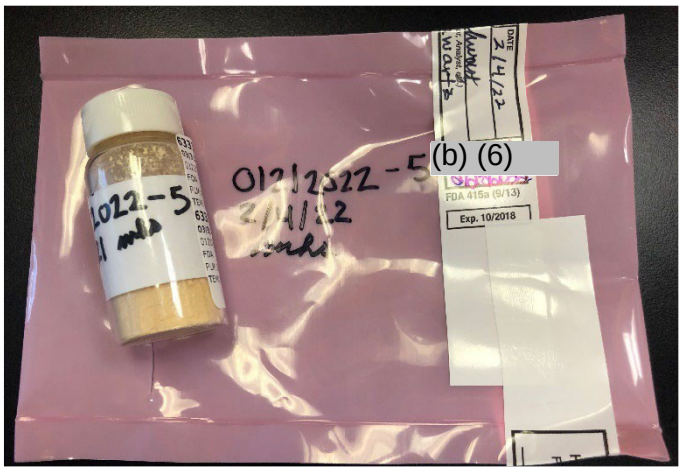
633185-3A, 3B, 3C/02212022-3

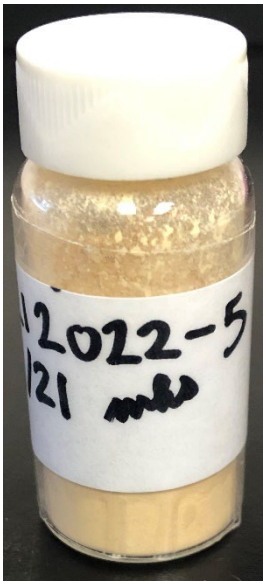
633185-4A, 4B, 4C/02212022-4

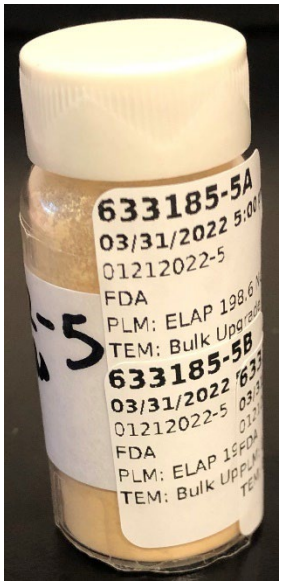


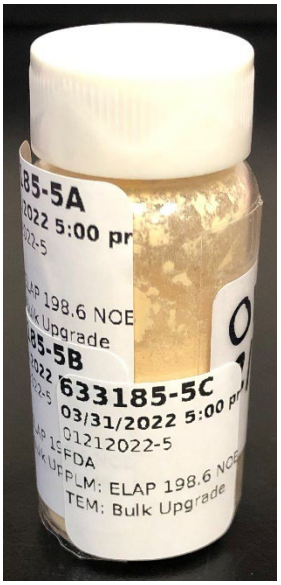
633185-5A, 5B, 5C/01212022-5

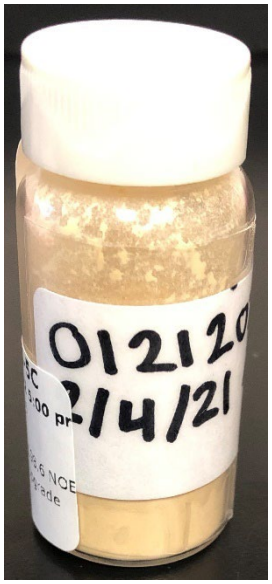


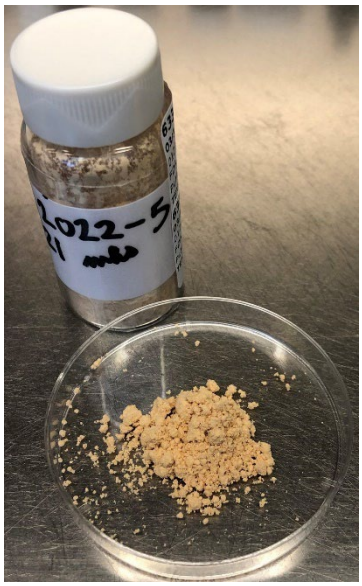


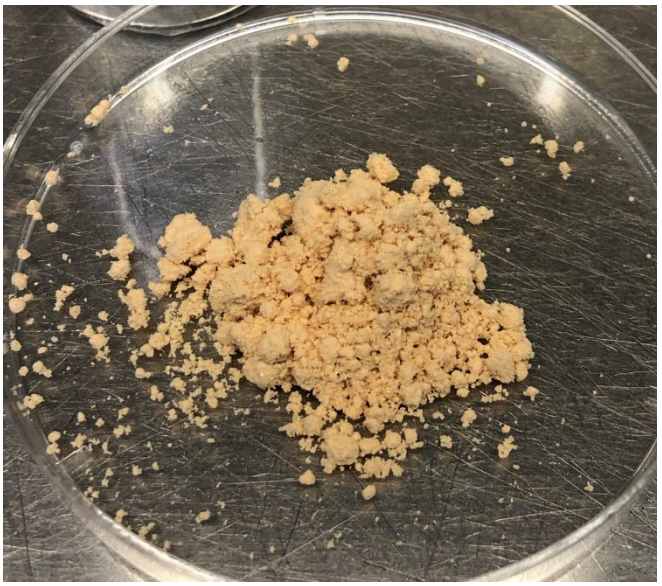












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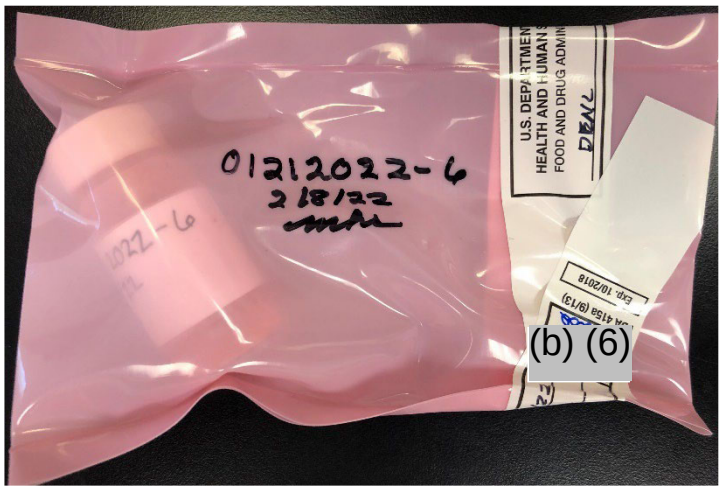
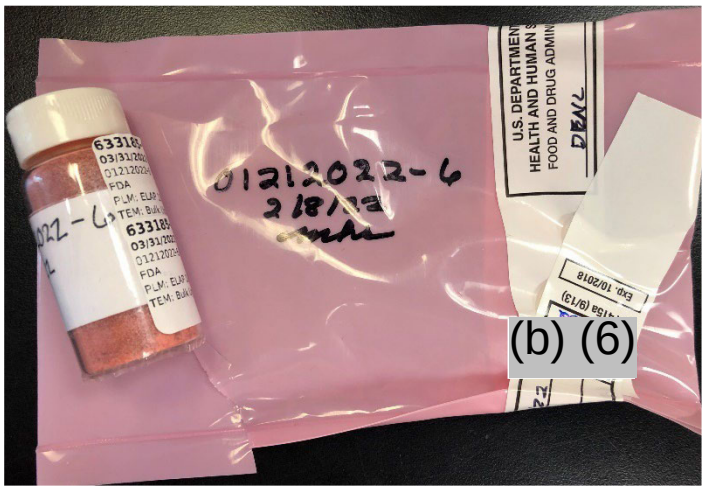
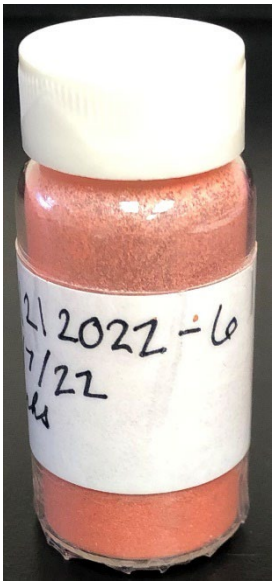
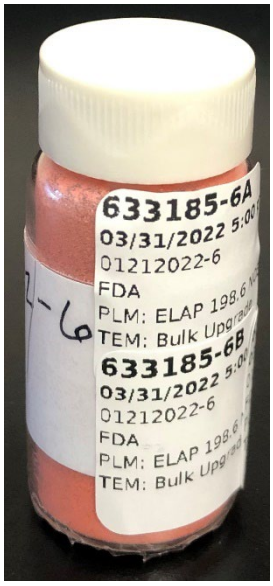
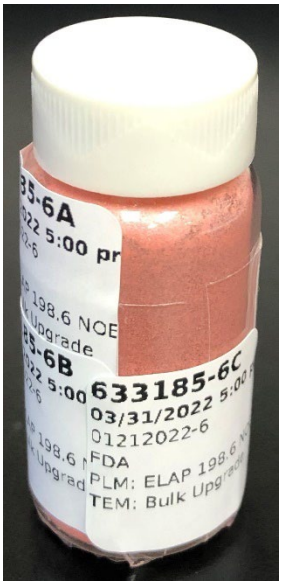
633185-6A, 6B, 6C/01212022-6



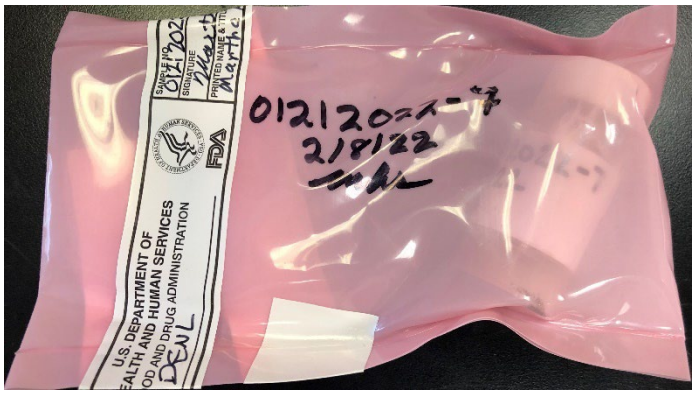


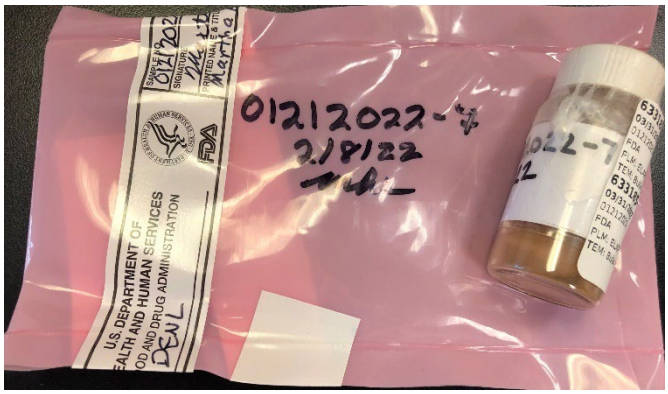


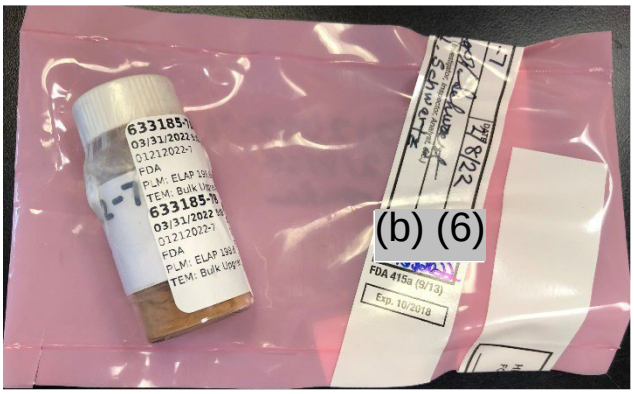


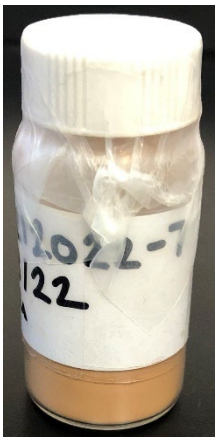


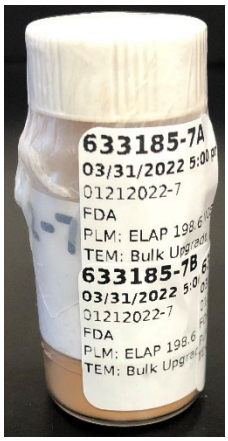
633185-7A, 7B, 7C/01212022-7

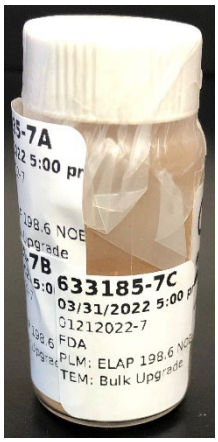


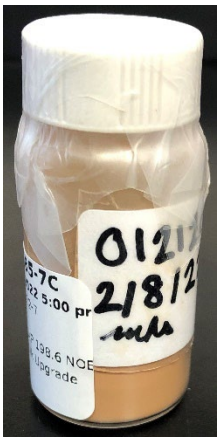




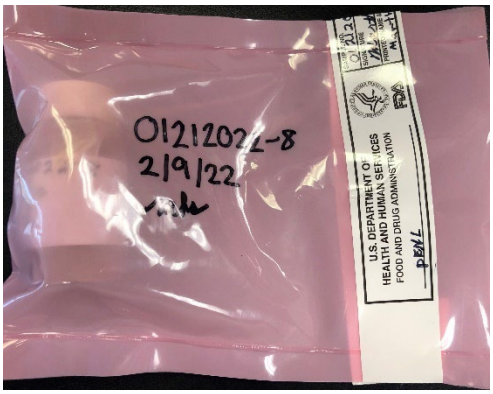


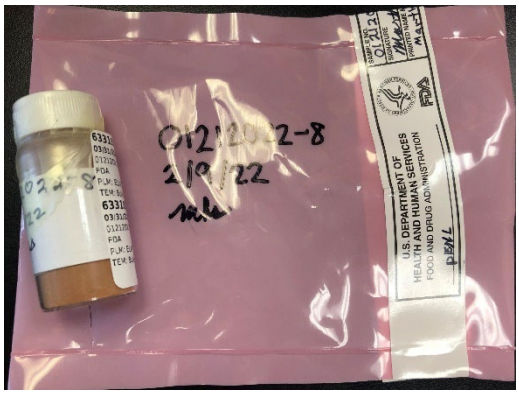


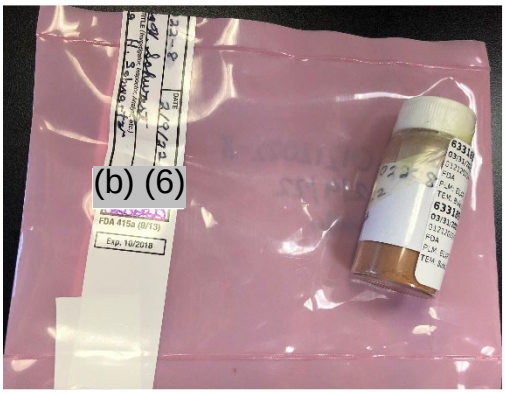


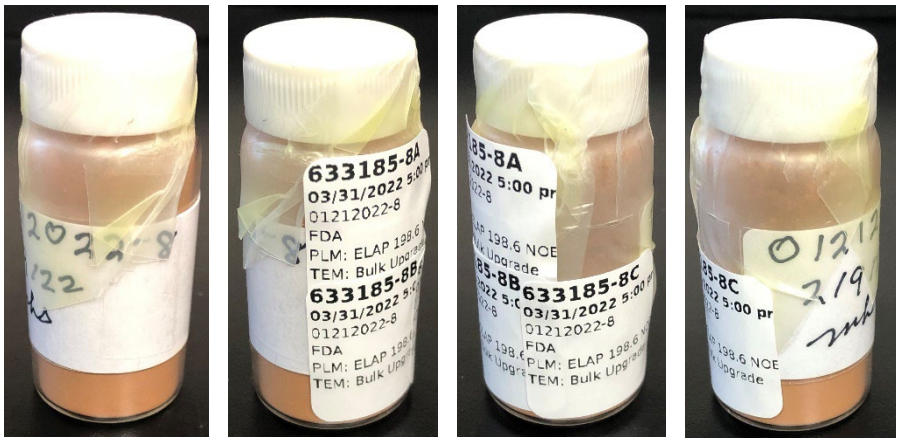


633185-8A, 8B, 8C/01212022-8



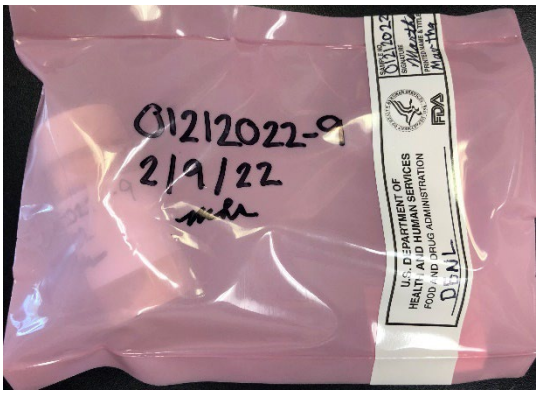


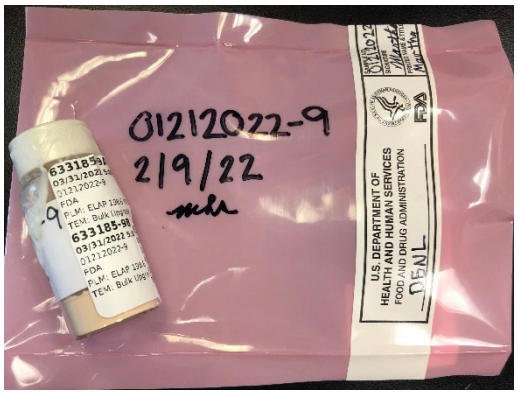


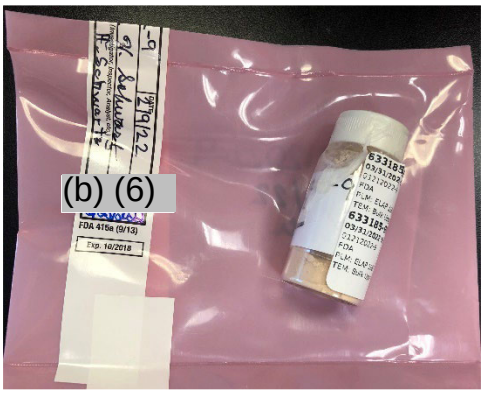


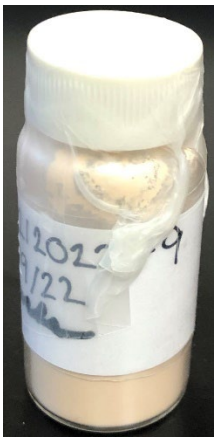
Asbestos · Lead · Mold · Nano

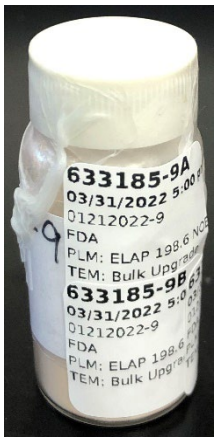
633185-9A, 9B, 9C/01212022-9

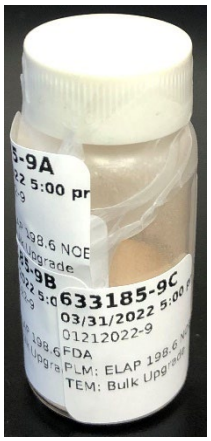


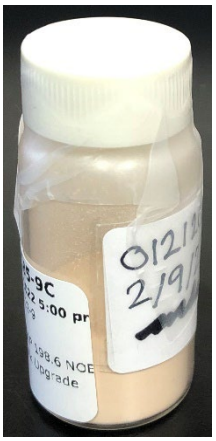


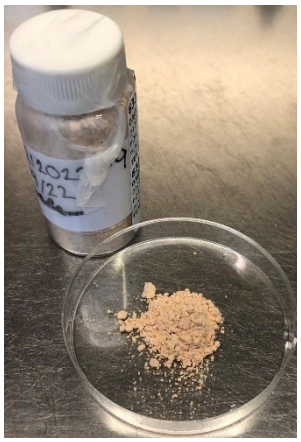


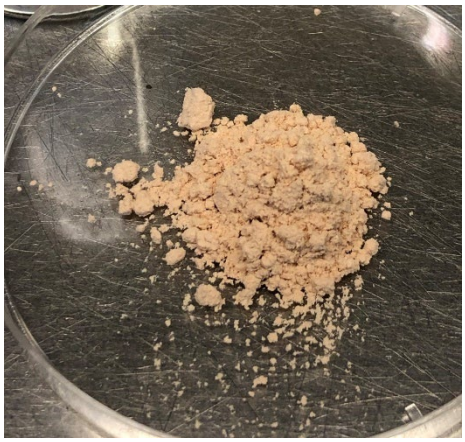




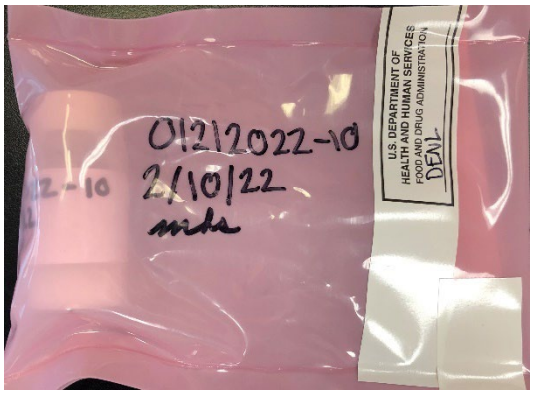


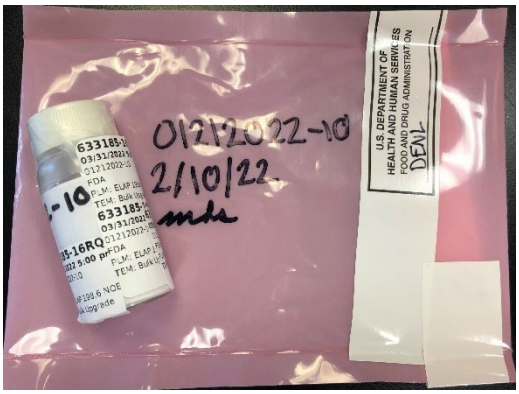


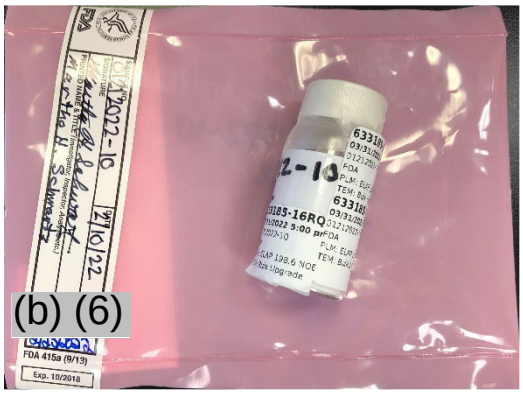


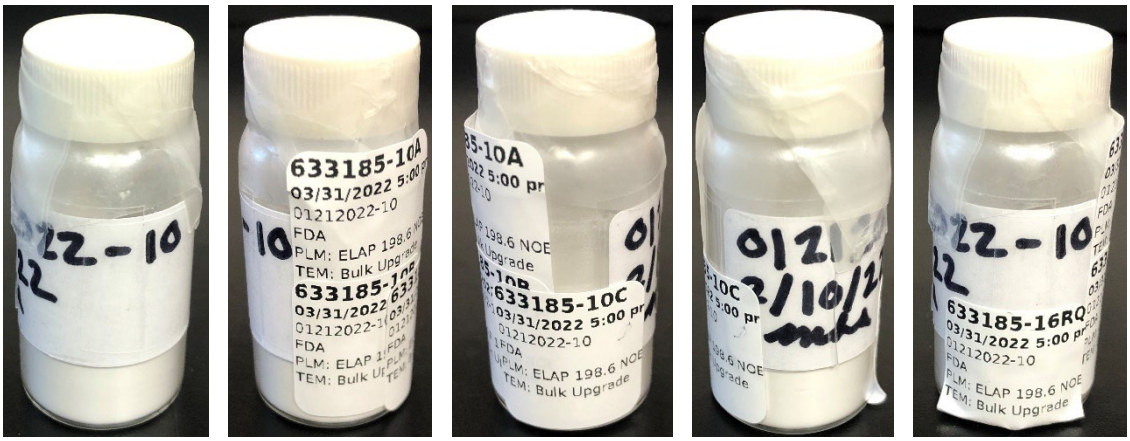


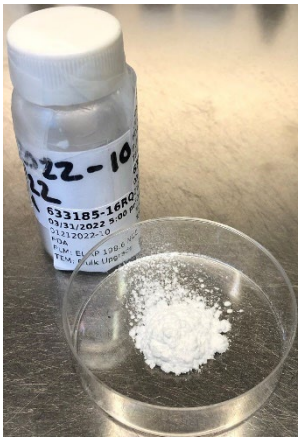
633185-10A, 10B, 10C/01212022-10

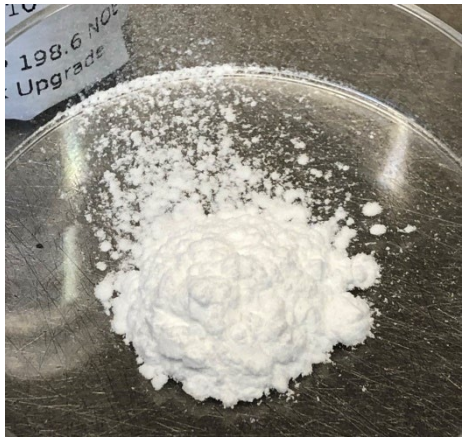




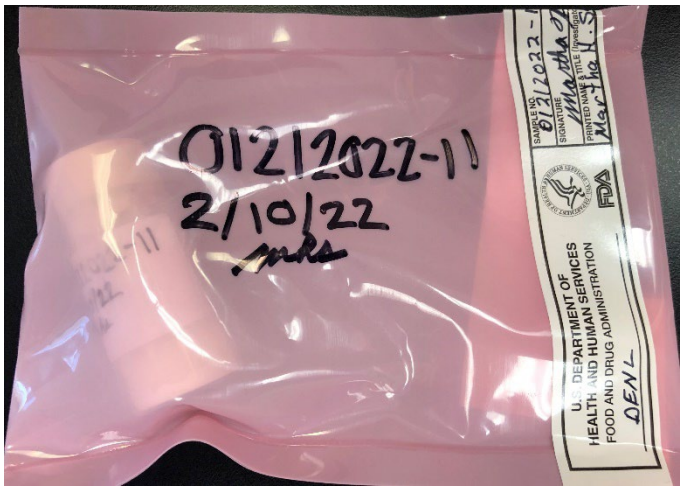


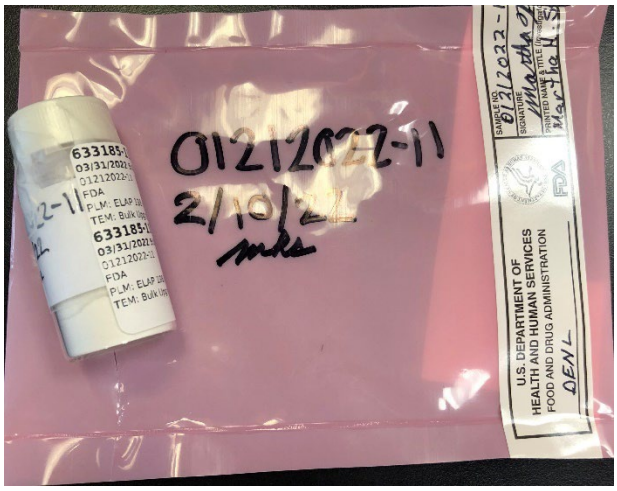


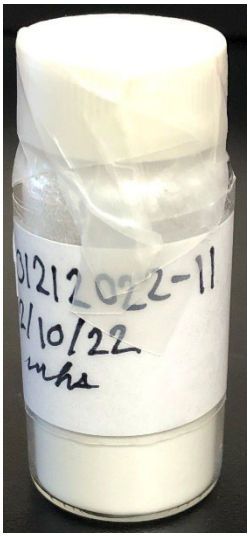


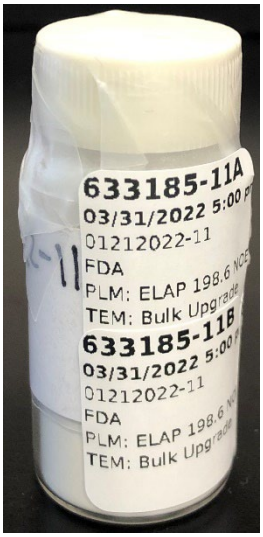


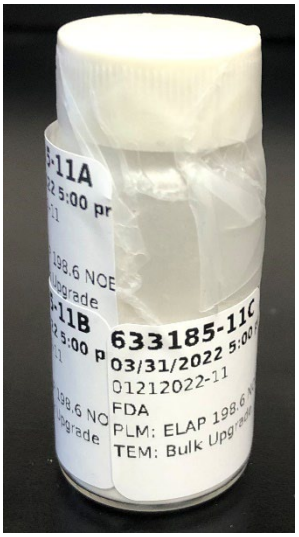
633185-11A, 11B, 11C/01212022-11

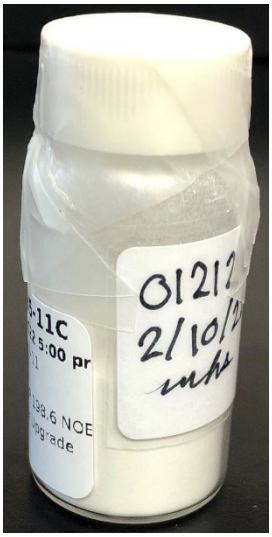


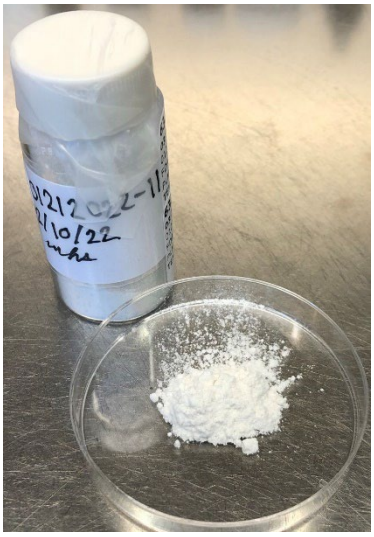


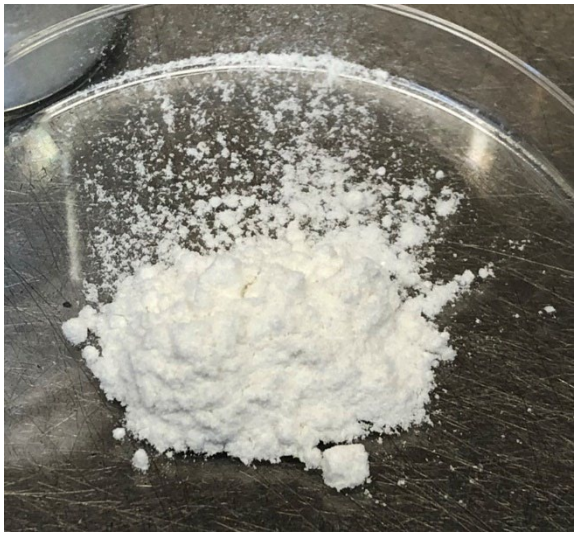




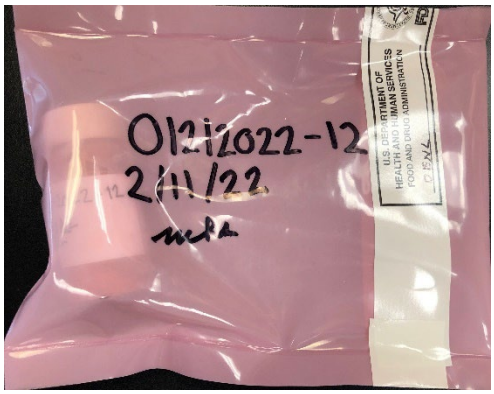


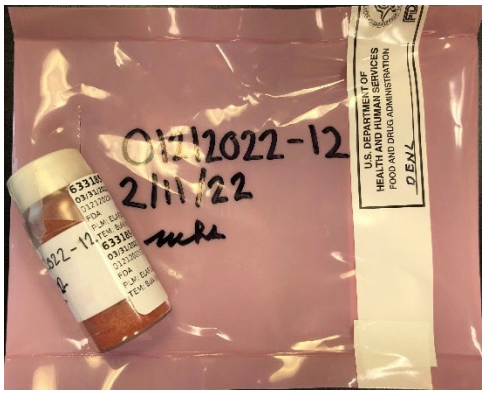


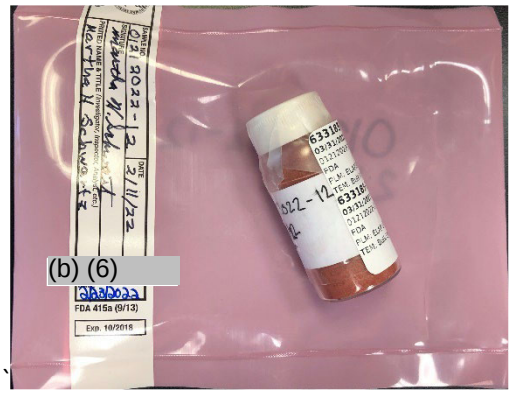


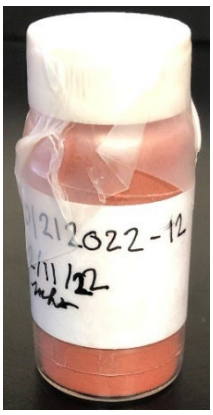


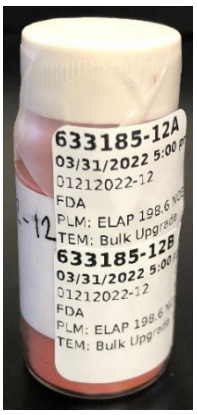
633185-12A, 12B, 12C/01212022-12

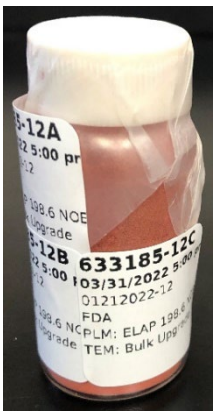


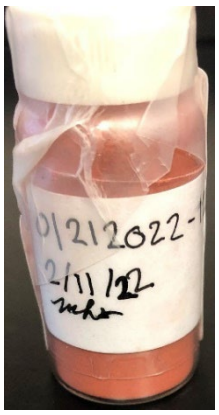


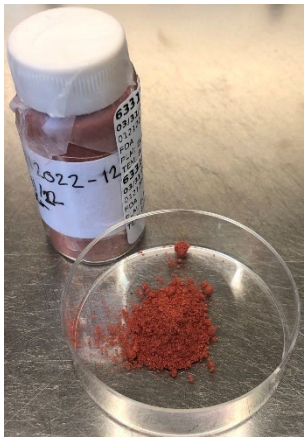




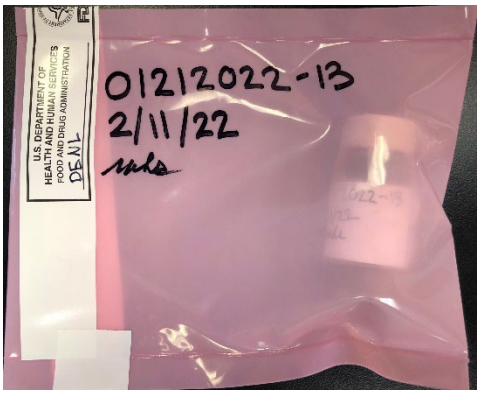


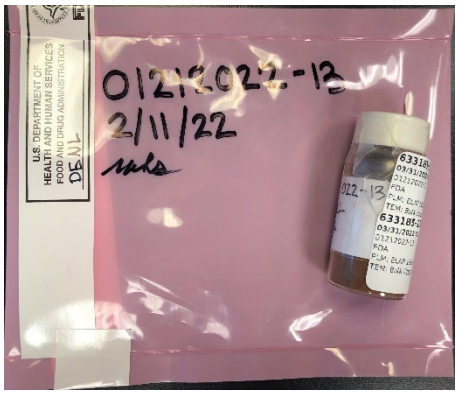


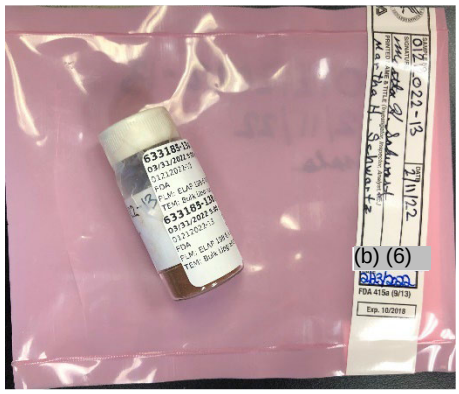


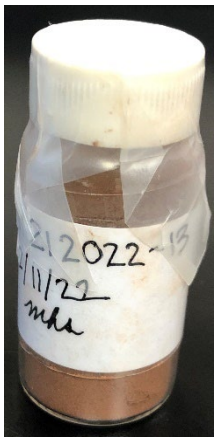


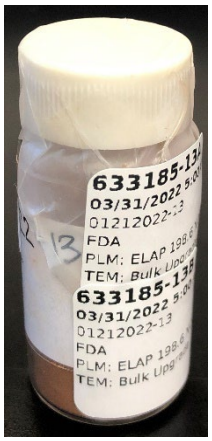
633185-13A, 13B, 13C/01212022-13

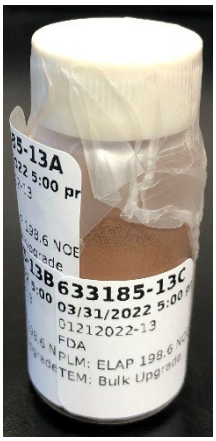


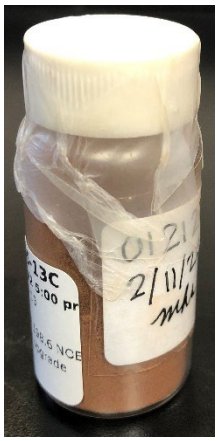


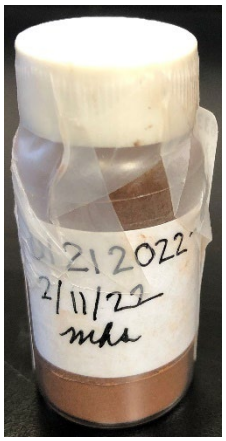


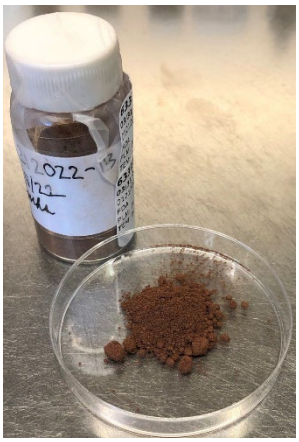




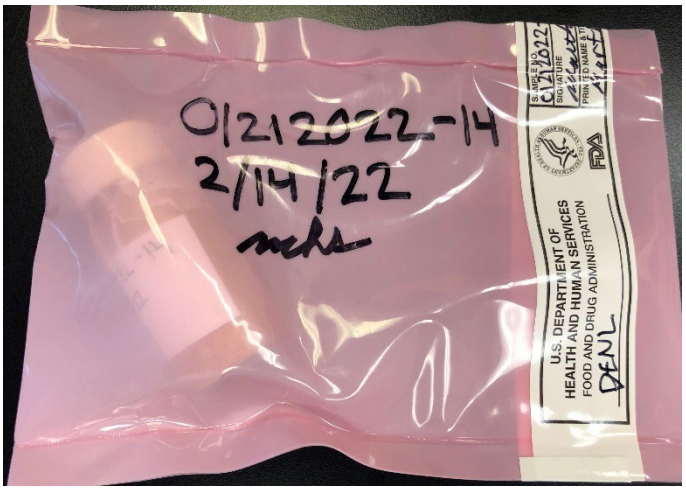








633185-14A, 14B, 14C/01212022-14



Sample Preparation

Samples were gravimetrically reduced and filtered by (b) (6) on: March 2, 2022 through March 4, 2022, for 633185-1A through 633185-3C, 633185-15DQC, 633185-17RQC, and NB22-169/170; on March 7, 2022 through March 9, 2022, for 633185-4A through 633185-7C, and NB22-175/176; on March 16, 2022 through March 18, 2022, for 633185-8A through 633185-11C, 633185-16RQC, and NB22-194/195; and on March 24, 2022 through March 28, 2022, for 633185-12A through 633185-14C, and NB22-209/210. PLM slide preparations were made by (b) (6) on: March 3, 2022, for 633185-1A through 633185-3C, 633185-15DQ, and 633185-17RQC; March 8, 2022, for 633185-4A through 633185-7C; March 17, 2022, for 633185-8A through 633185-11C, and 633185-16RQC; and March 25, 2022, for 633185-12A through 633185-14C. TEM grid preparations were made by: (b) (6) on March 7, 2022, for 633185-1A through 633185-3C, 633185-15DQC, 633185-17RQC, and NB22-169; (b) (6) on March 9, 2022, for 633185-4A through 633185-7C, NB22-175, and a re-preparation of 633185-4A; (b) (6) on March 21, 2022, for 633185-8A through 633185-11C, 633185-16RQC and NB22-194; and (b) (6) on March 28, 2022, for 6633185-12A through 633185-14C, and NB22-209. Sample preparation consisted of the following steps:

1) Label and weigh two 8mL glass vials for each sample in the set – one vial for the PLM preparation and one vial for the TEM preparation.
2) Weigh out 0.1 to 0.8-grams of material and place in the corresponding 8mL glass vial. Record weight.
3) Burn samples at 480° C for at least 12-hours.
4) Record Post-Ash weight.
5) Treat ashed sample with reagent grade hydrochloric acid.
6) Filter acid reduced material with a pre-weighed disposable filtration apparatus onto a 47mm 0.4µm PolyCarbonate filter.
7) Place disposable filtration apparatus with filter into drying oven for 3 hours and then record Post-Acid Reduced weight.
8) Make four PLM slide preparations from the PLM residue for each sample in 1.550 dispersion oil. Make additional preparations in 1.605, 1.625, 1.680 and 1.700 dispersion oil(s) as necessary for particle identification.
9) Weigh a portion of the material from the TEM residue and place it into the corresponding pre-weighed 100mL jar.
10) Fill the 100mL jar with deionized water
11) Sonicate the jar for ~5-minutes.
12) Filter 0.1mL to 2mL of the solution onto a 47mm 0.22µm MCE filter.
13) Dry the filter for ~10-minutes then collapse, carbon coat, and place on a 3 TEM grids.

TEM grid preparations were examined prior to analysis and were rejected if they met the following criteria:

1) Less than 50% of the carbon coating was intact
2) The grid was too dark due to incomplete dissolution of the filter
3) Heavy particulate loading in excess of 25%
4) Light particulate loading below 10%
5) Uneven distribution of particulate

<u>Problems Encountered During Preparation & Resolutions:</u>
The TEM grid preparation for 633185-4A (associated with EB-58086) was initially performed without separating the backing pad from the 0.22 µm MCE filter. A second TEM grid preparation (associated with EB-58090) was made after separating the backing pad from the filter.

No other problems were encountered during preparation. All gravimetric data was consistent among each group of aliquots and all other TEM grid preparations were deemed acceptable for analysis.

PLM Analysis

Analysis was performed in accordance with NY ELAP 198.6 protocols. The analysis was conducted using an Olympus BH-2 polarized light microscope (PLM) equipped with a dispersion staining objective. All four slide preparations for each aliquot were examined; each slide preparation consisted of two (2) coverslips for a total of eight (8) coverslips. 400-point count was performed for those samples on which asbestos was observed. If no asbestos was detected on any of the slides, the percentage of fibrous components was determined by visual estimation. The results of this analysis are detailed below in the *Discussion and Interpretation of Analytical Findings* section for each individual sample.

Point Counting

If asbestos was observed on the slide preparations, the amount of asbestos was quantified using point count techniques. Point counting is form of quantifying PLM samples. One of the oculars of each PLM microscope is etched with a crosshair. When point counting, whatever is under the crosshair is counted as one point of whatever the material is. Four (4) slide preparations with a total of eight (8) coverslips are prepared for each sample. The microscope mechanical stage is used to randomly move the slide. After each movement, whatever is under the crosshair, provided the point is not empty, is counted. Fifty (50) non-empty points are counted on each of the eight (8) coverslips for a total of four hundred (400) points. The total asbestos points counted are divided by the total points counted to calculate the percentage.

Example:

11 points of asbestos were counted out of the 400 total points

Slide percentage = (11pts/400pts) * 100%
Slide percentage = 2.75%

This number is not the final asbestos percentage. To calculate the final percentage, this number must be corrected to account for the material lost during gravimetric reduction preparation. See the *Calculations* section below for additional details.

TEM Analysis

Analysis was performed in accordance with modified NY ELAP Method 198.4 protocols. The analysis was performed using JEOL JEM-100CX II transmission electron microscopes (TEM) equipped with Thermo Fisher NSS System 7 Energy Dispersive X-Ray Analyzers (EDXA), at magnifications of 19,000x. All TEM scopes are equipped with a Selective Area Electron Diffraction (SAED) setting that allows the operator to view the diffraction pattern of any mineral substance. Twenty (20) grid openings over two (2) grids were examined for each aliquot.

Modifications to the NY ELAP 198.4 Method were:

1) The residue was not placed in alcohol and prepared using the quick drop method. To obtain a more uniform preparation, the residue was placed in a jar and filled with 100mL of deionized water. The jar was sonicated, and a portion of the solution was filtered onto a 47mm 0.22µm MCE filter.
2) Any amphibole or chrysotile particle(s) observed were not quantified by visual estimation. The length and width of the observed particle(s) were measured, and the mass of each amphibole and chrysotile particle was calculated using the ASTM D5756 method.
3) All particles identified as amphibole were included with the counts/concentrations, regardless of size and aspect ratio.

The results of this analysis are detailed below in the *Discussion and Interpretation of Analytical Findings* section for each individual sample.

Calculations

TEM ASTM D5756 Mass:

$M = \pi/4\ L * W^2 * D * 10^{-12}$

Where: M: Mass
L: Length
W: Width
D: Density

Gravimetric Reduction Percentages:

Organic: ((W1 – W2) * 100/W1

Acid Soluble: ((W2 – W3) * 100/W1

Other* Percent: ((W3/W1) * 100) – Calculated Asbestos %

*Other is defined as the non-asbestos, inorganic, acid insoluble portion of the sample

Where: W1: Weight of sample prior to ashing/acid wash
W2: Weight of sample after ashing
W3: Weight of sample after acid treatment

Asbestos Percent Calculation:

TEM

$$\frac{EFA(mm^2) * 100ml * MA(g) * RW(g)}{VF(ml) * IW(g) * AA(mm^2) * RJ(g)}$$

(The calculated TEM value is then multiplied by 100 to convert it to percent)

Where: EFA: Effective filter area
MA: Mass of asbestos
RW: Weight of residue
VF: Volume filtered
IW: Initial weight of the sample
AA: Area analyzed
RJ: Weight of residue placed into the jar

PLM

(ASB * W3)/W1

Where: W1: Weight of sample prior to ashing/acid wash
W3: Weight of sample after acid treatment
ASB: Calculated Point Count Result

Note: All reported concentrations were calculated using the gravimetric data from the TEM preparations.

Limit of Detection and Quantification

We used the mass of a 0.5 x 0.04-micron tremolite fiber as the basis for our calculations. Limit of detection (LOD) was defined as 1 fiber and limit of quantification (LOQ) was defined as 4 fibers.

Discussion and Interpretation of Analytical Findings

633185-1A, 1B, 1C/Client Sample: 01212022-1

PLM

All three aliquots of sample 01212022-1 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-1A	No Asbestos Detected
633185-1B	No Asbestos Detected
633185-1C	No Asbestos Detected

TEM

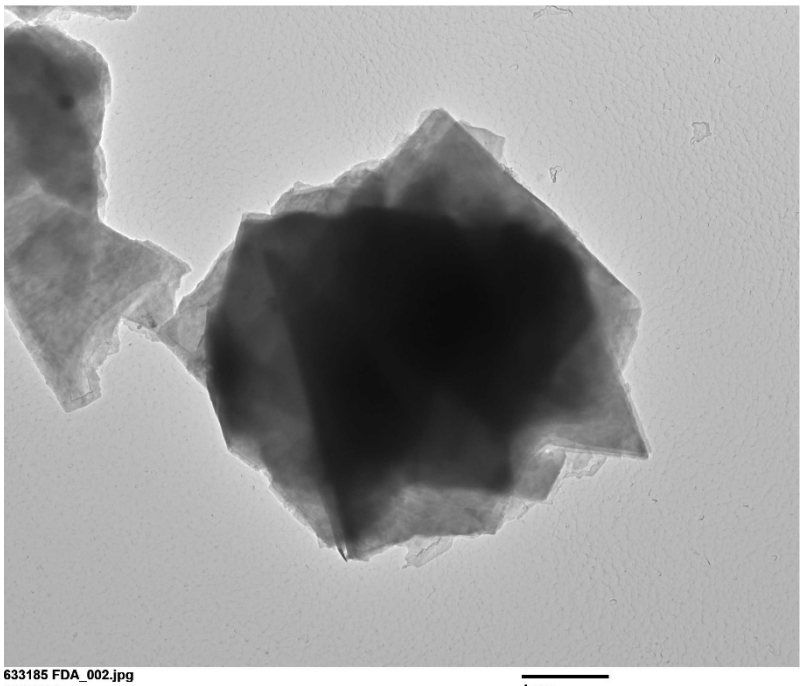
(b) (6) analyzed aliquot 1A on March 7, 2022. (b) (6) analyzed aliquots 1B and 1C on March 7, 2022. The primary particle observed was talc; mica and iron particles were also observed along with talc ribbons and particles containing phosphorus and calcium. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-1A	No Asbestos Detected
633185-1B	No Asbestos Detected

633185-1C No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-1A, Talc Particle



633185 FDA_002.jpg
633185-1a
Talc Particle
Cal: 0.003702 µm/pix
16:30 3/7/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

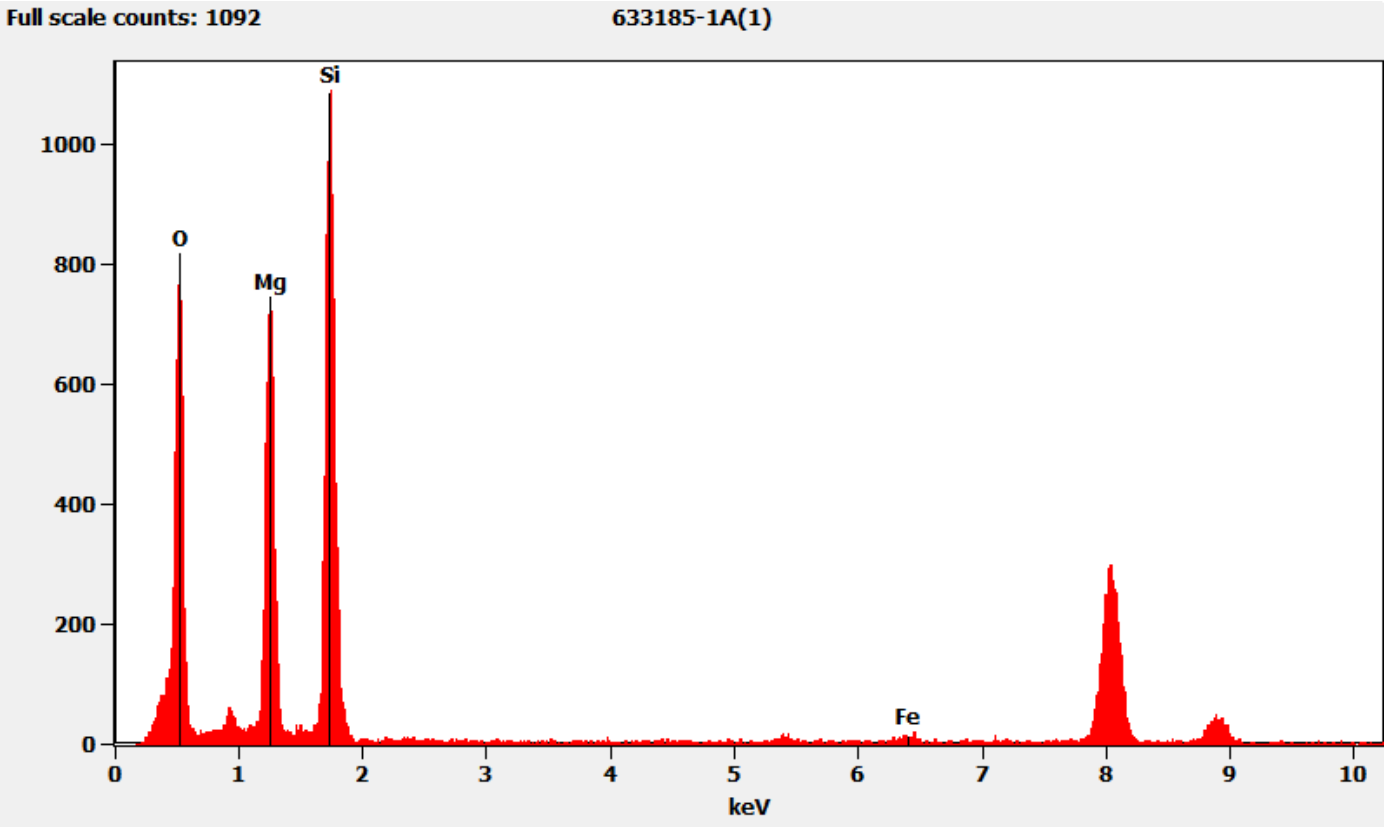
1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Particle Pictured Above

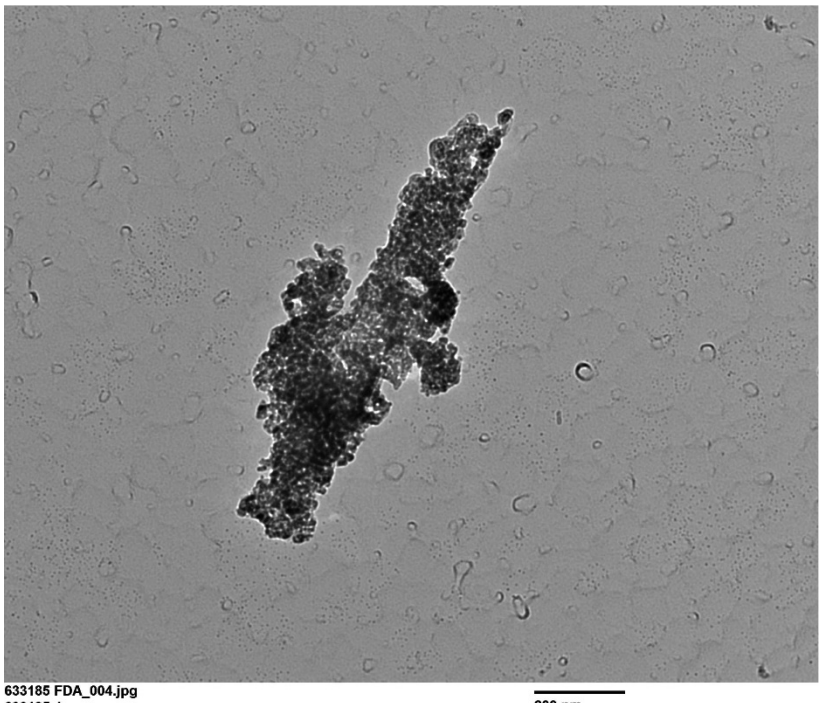
633185 FDA_001.jpg
633185-1a
Talc Particle Dif
16:29 3/7/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle Pictured Above



633185-1A, Iron Particle



633185 FDA_004.jpg
633185-1a
Fe Particle
Cal: 0.726816 nm/pix
16:34 3/7/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

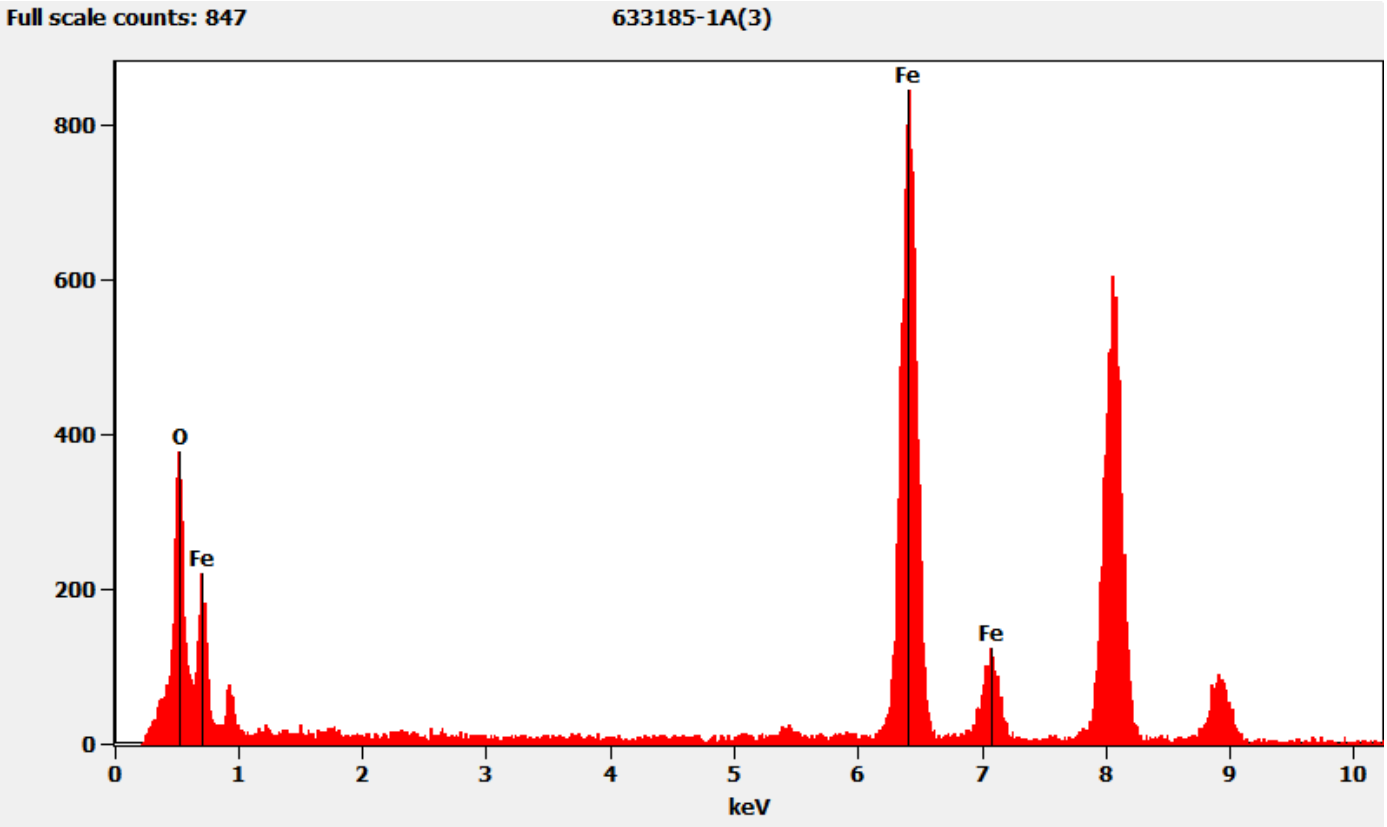
200 nm
HV=100kV
Direct Mag: 14000 x
AMA Analytical Services, Inc

Diffraction Pattern from the Iron Particle Pictured Above

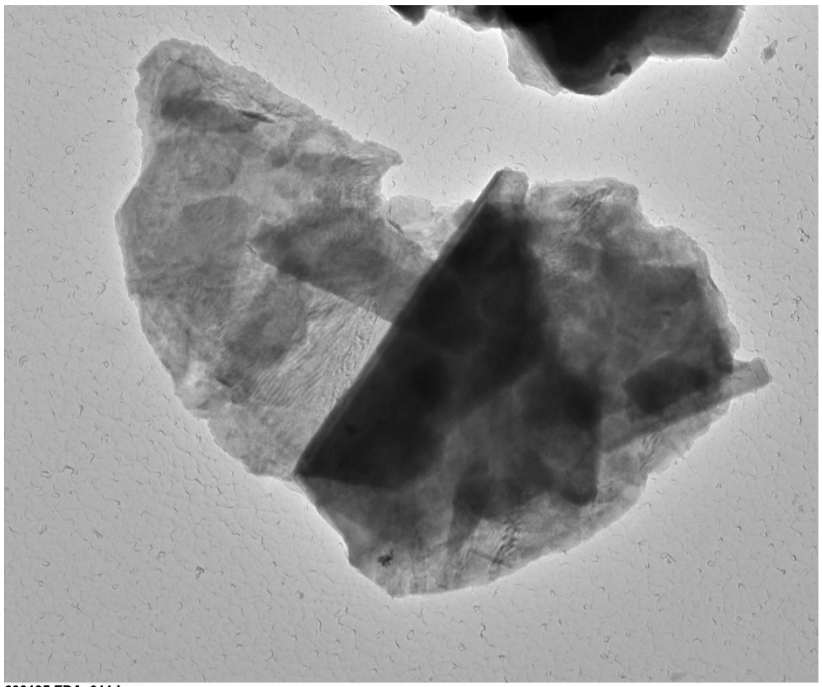
633185 FDA_003.jpg
633185-1a
Fe Particle Dif
16:33 3/7/2022
Microscopis (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Iron Particle Pictured Above



633185-1B, Mica Particle

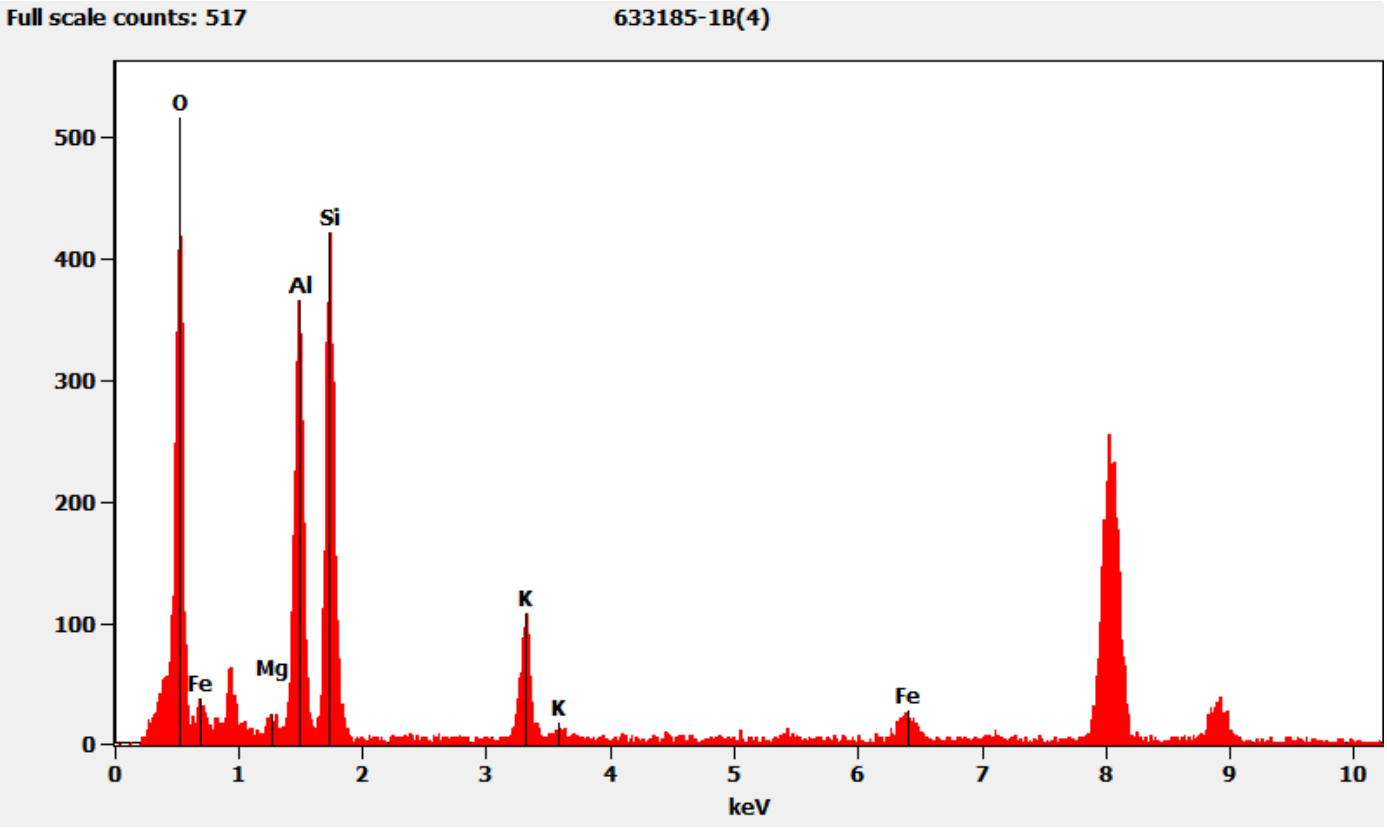


Hexagonal Diffraction Pattern from the Mica Particle Pictured Above

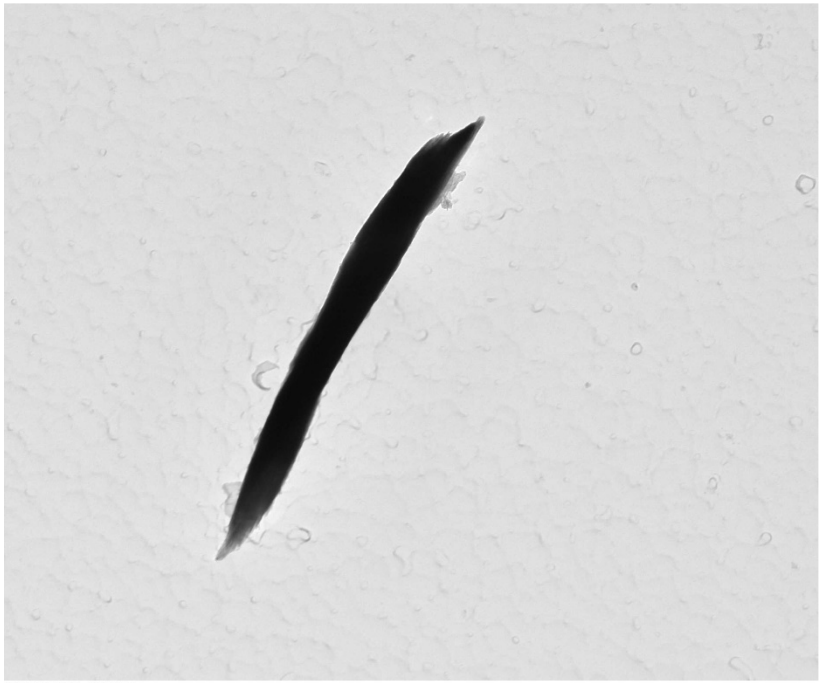
633185 FDA_010.jpg
633185-1B
Mica Particle
18:55 3/7/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above



633185-1A, Talc Ribbon



633185 FDA_007.jpg
633185-1a
Talc Ribbon
Cal: 0.001030 µm/pix
16:56 3/7/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

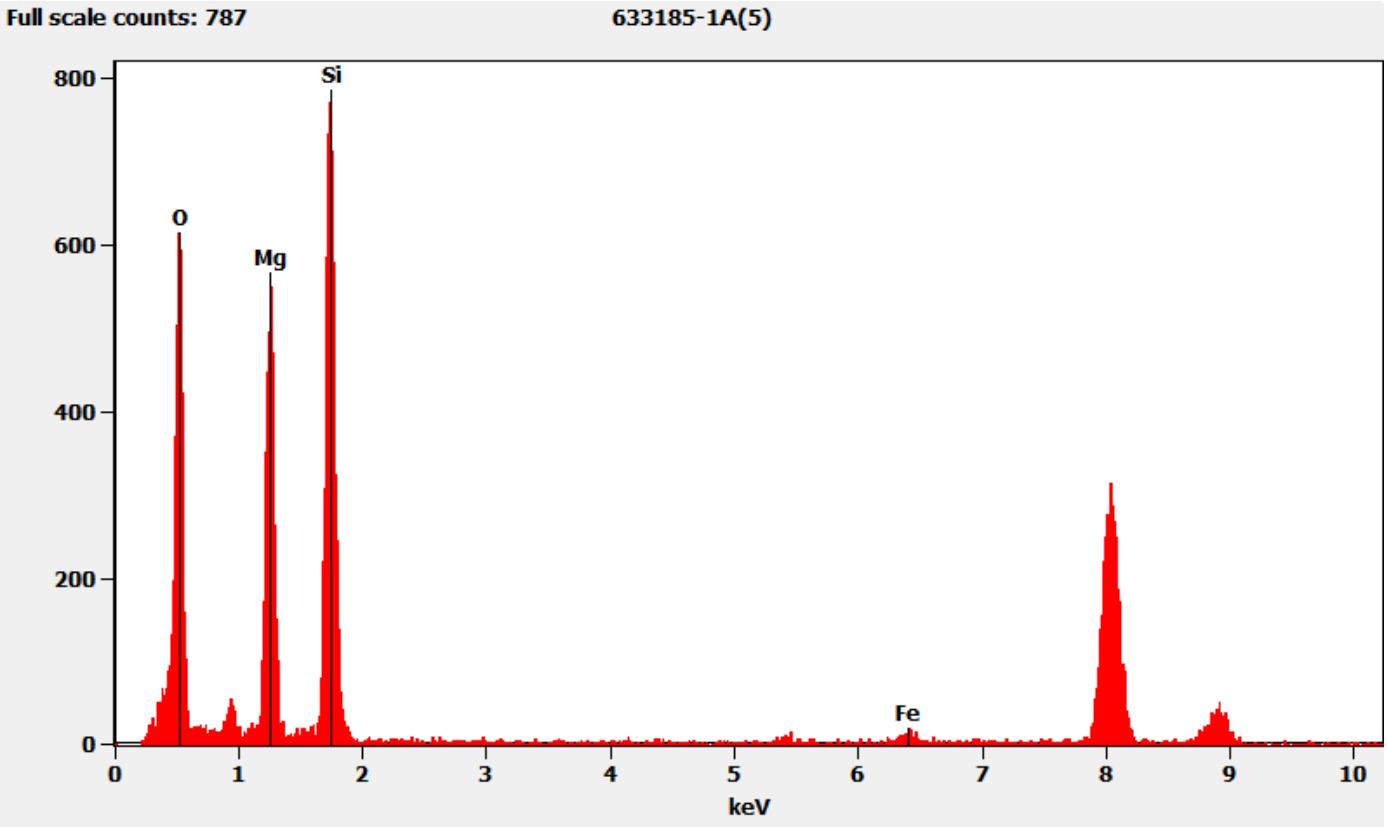
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Diffraction Pattern from the Talc Ribbon Pictured Above

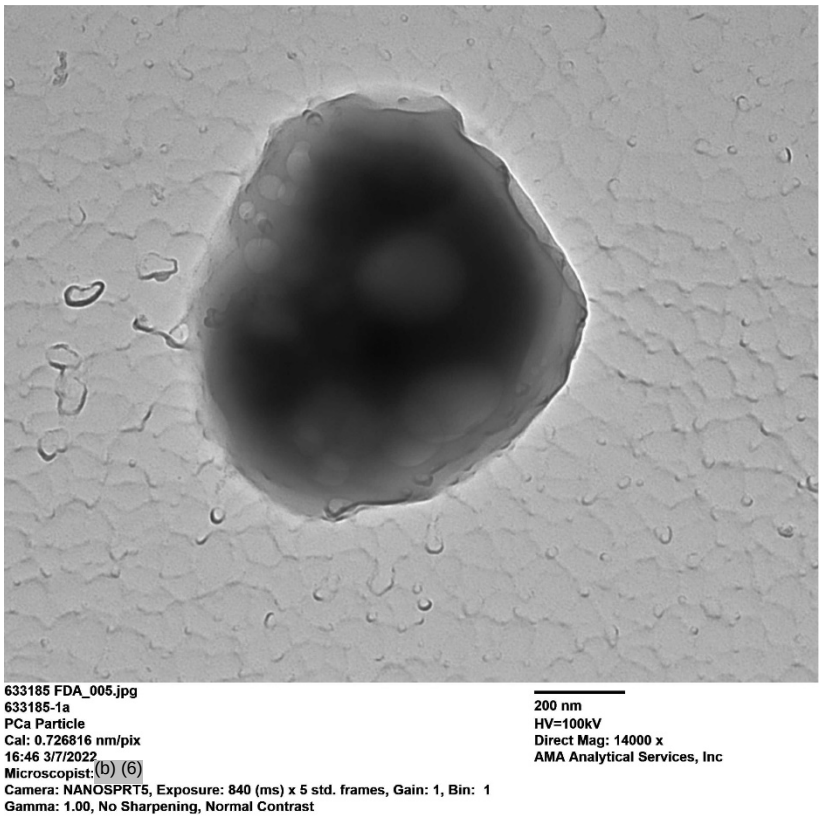
633185 FDA_008.jpg
633185-1a
Talc Ribbon Dif
16:57 3/7/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

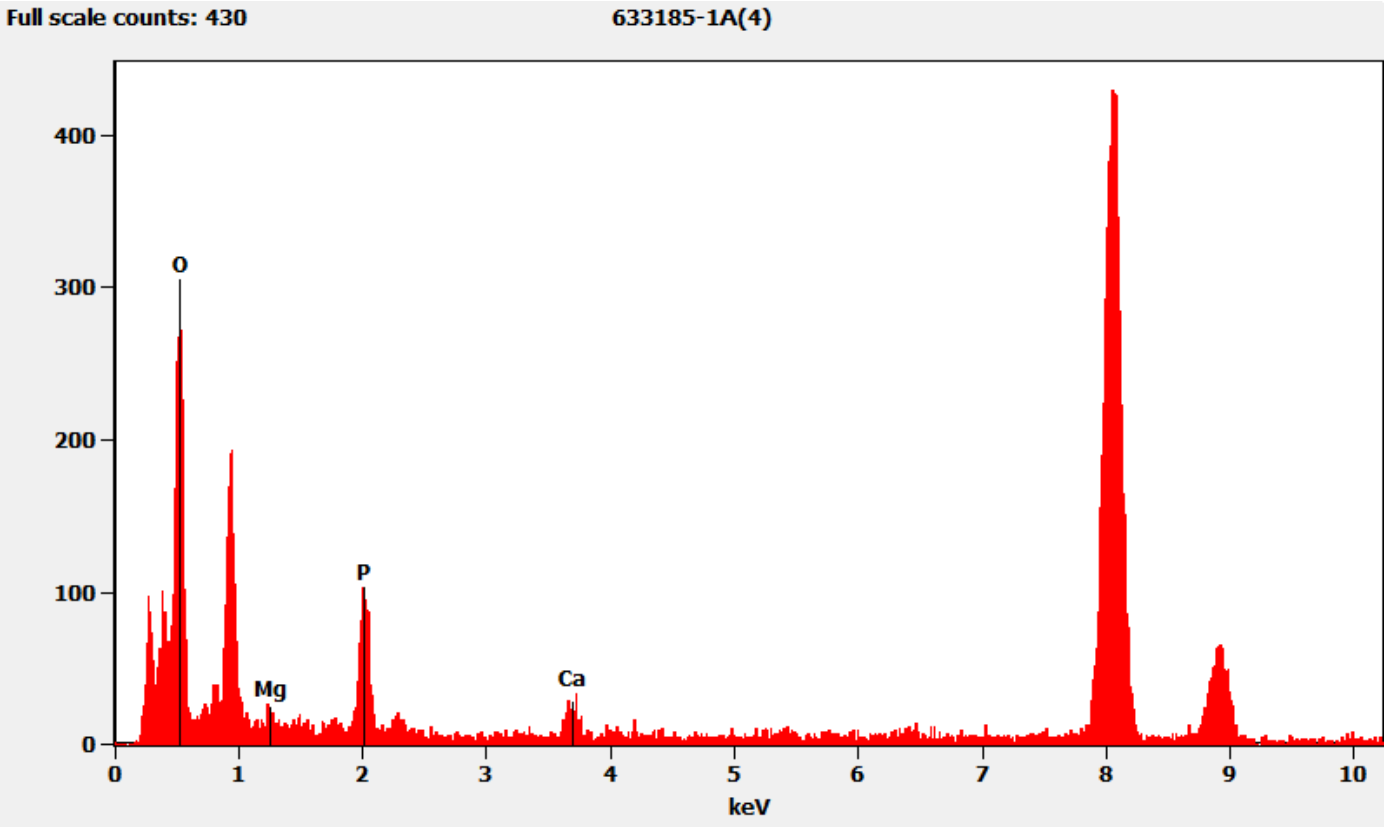
Chemistry from the Talc Ribbon Pictured Above



633185-1A, Particle Containing Phosphorus and Calcium



Chemistry from the Particle Containing Phosphorus and Calcium Pictured Above



633185-2A, 2B, 2C/Client Sample: 01212022-2

PLM

All three aliquots of sample 01212022-2 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-2A	No Asbestos Detected
633185-2B	No Asbestos Detected
633185-2C	No Asbestos Detected

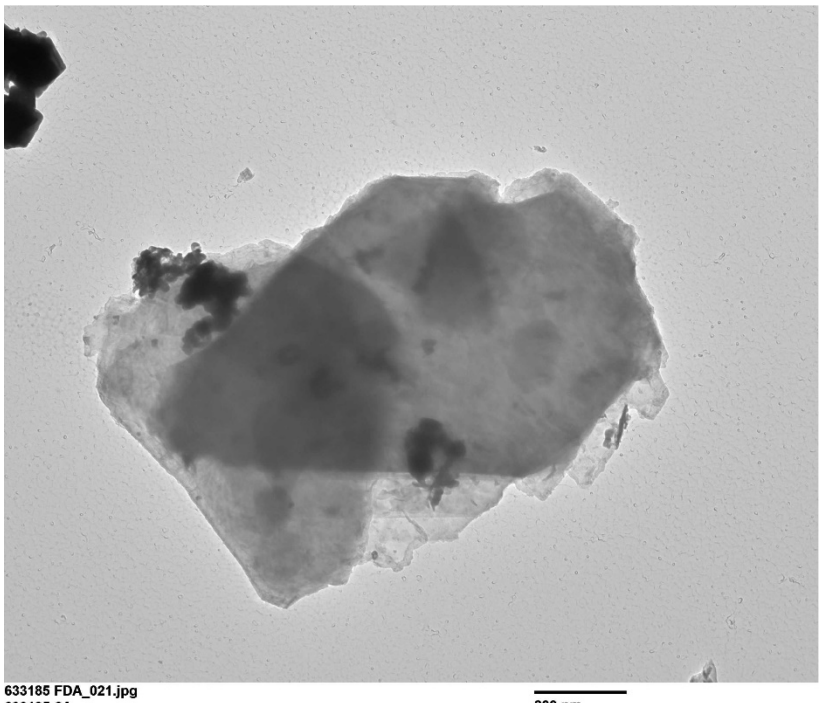
TEM

(b) (6) analyzed aliquots 2A, 2B, and 2C on March 8, 2022. The primary particle observed was talc; iron particles were also observed along with mica particles, copper particles, and talc ribbons. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-2A	No Asbestos Detected
633185-2B	No Asbestos Detected
633185-2C	No Asbestos Detected

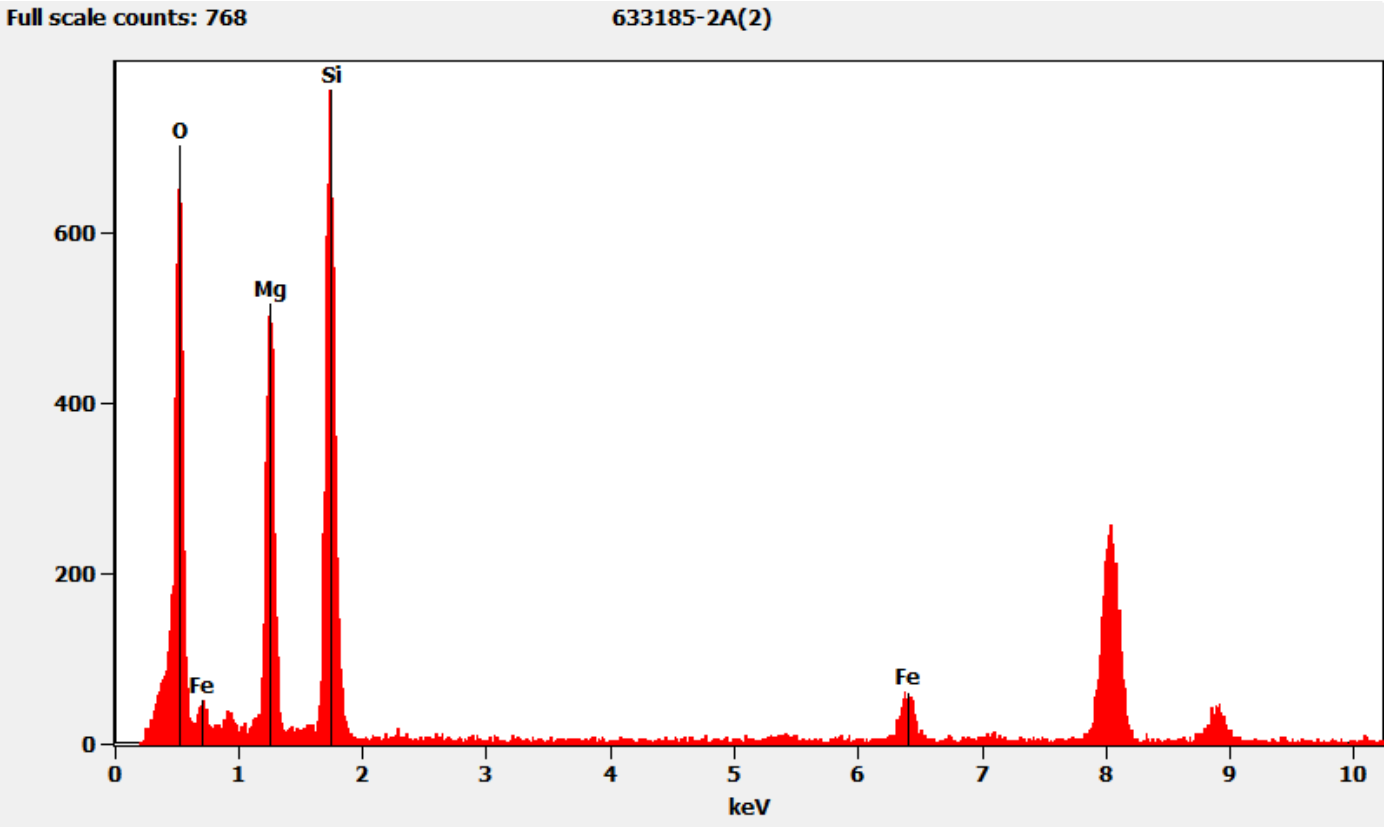
Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-2A, Talc Particle

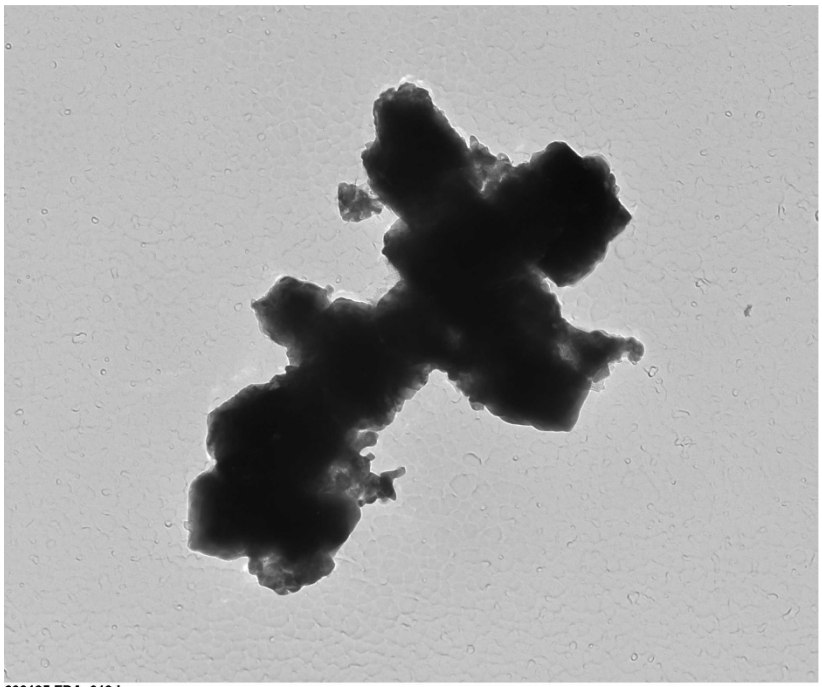


Hexagonal Diffraction Pattern from the Talc Particle Pictured Above

Chemistry from the Talc Particle Pictured Above



633185-2A, Iron Particle

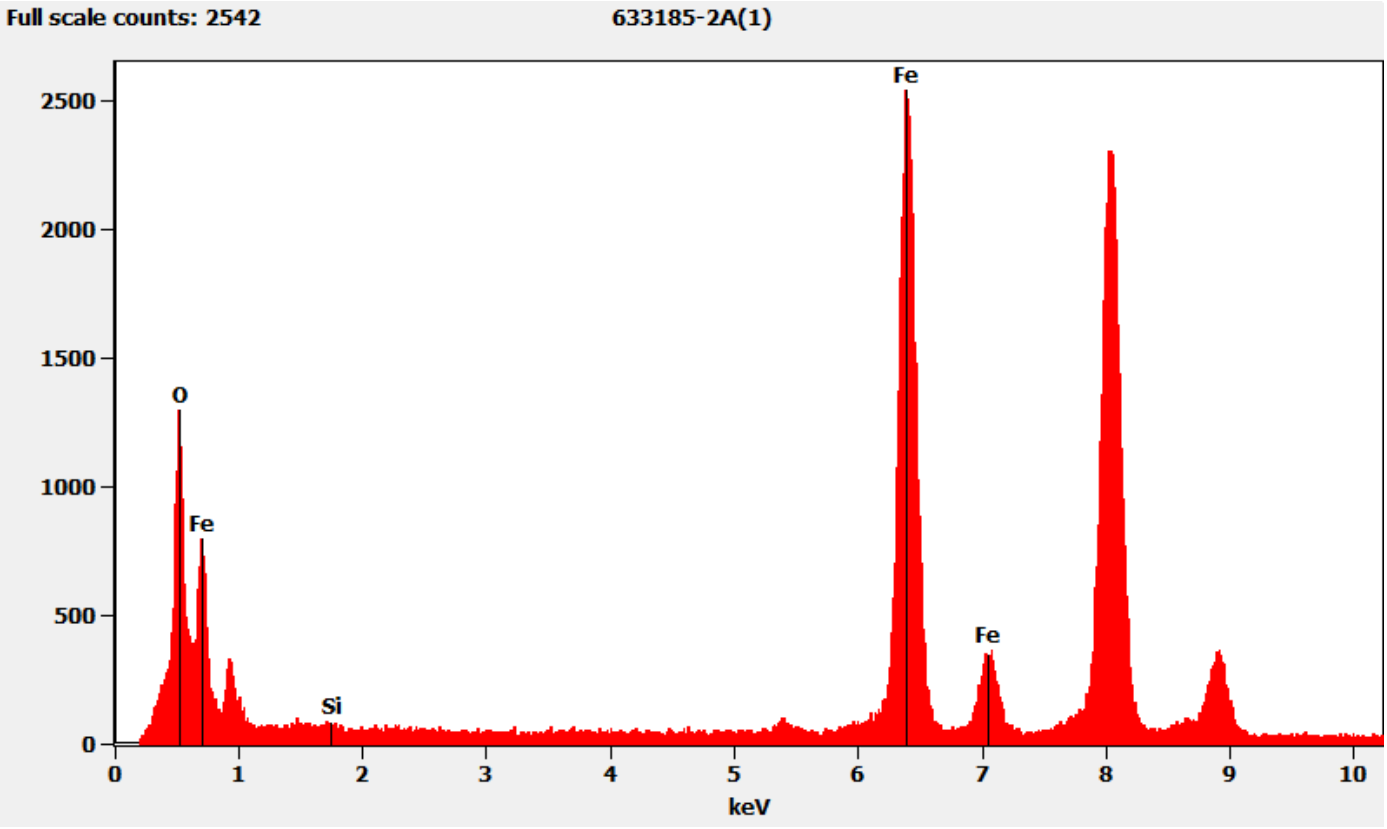


Diffraction Pattern from the Iron Particle Pictured Above

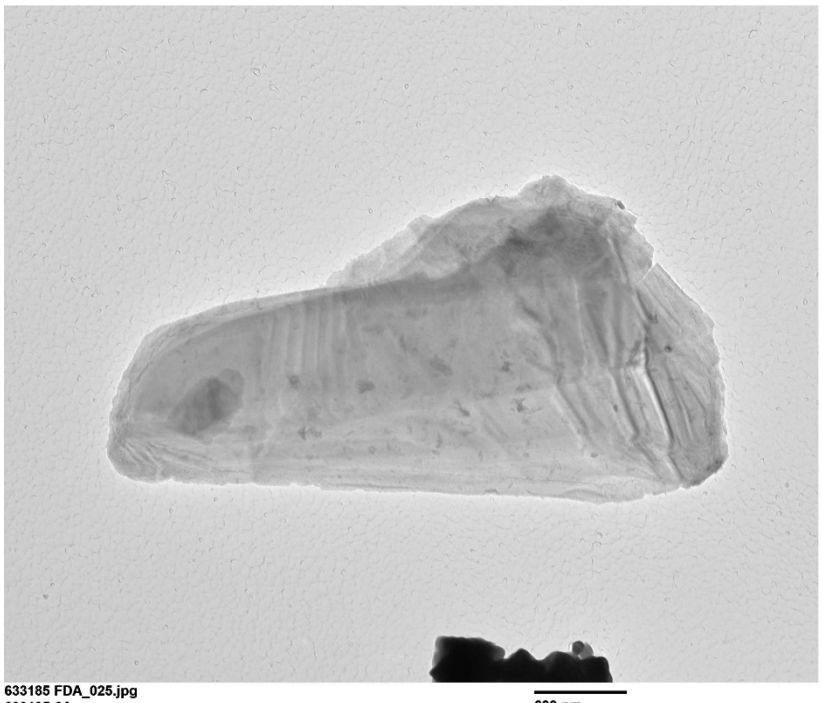
633185 FDA_018.jpg
633185-2A
Fe Particle Dif
13:46 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

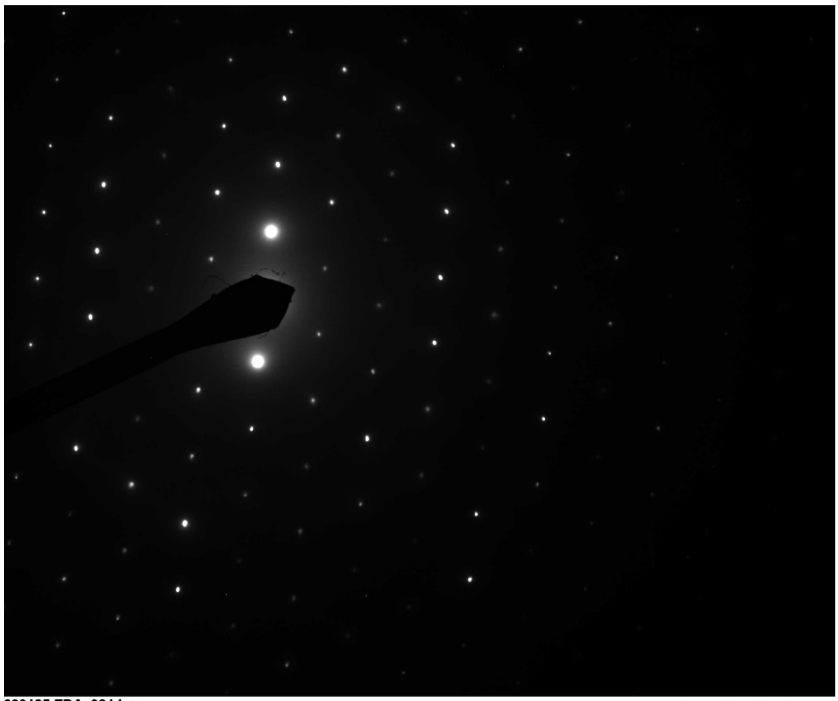
Chemistry from the Iron Particle Above



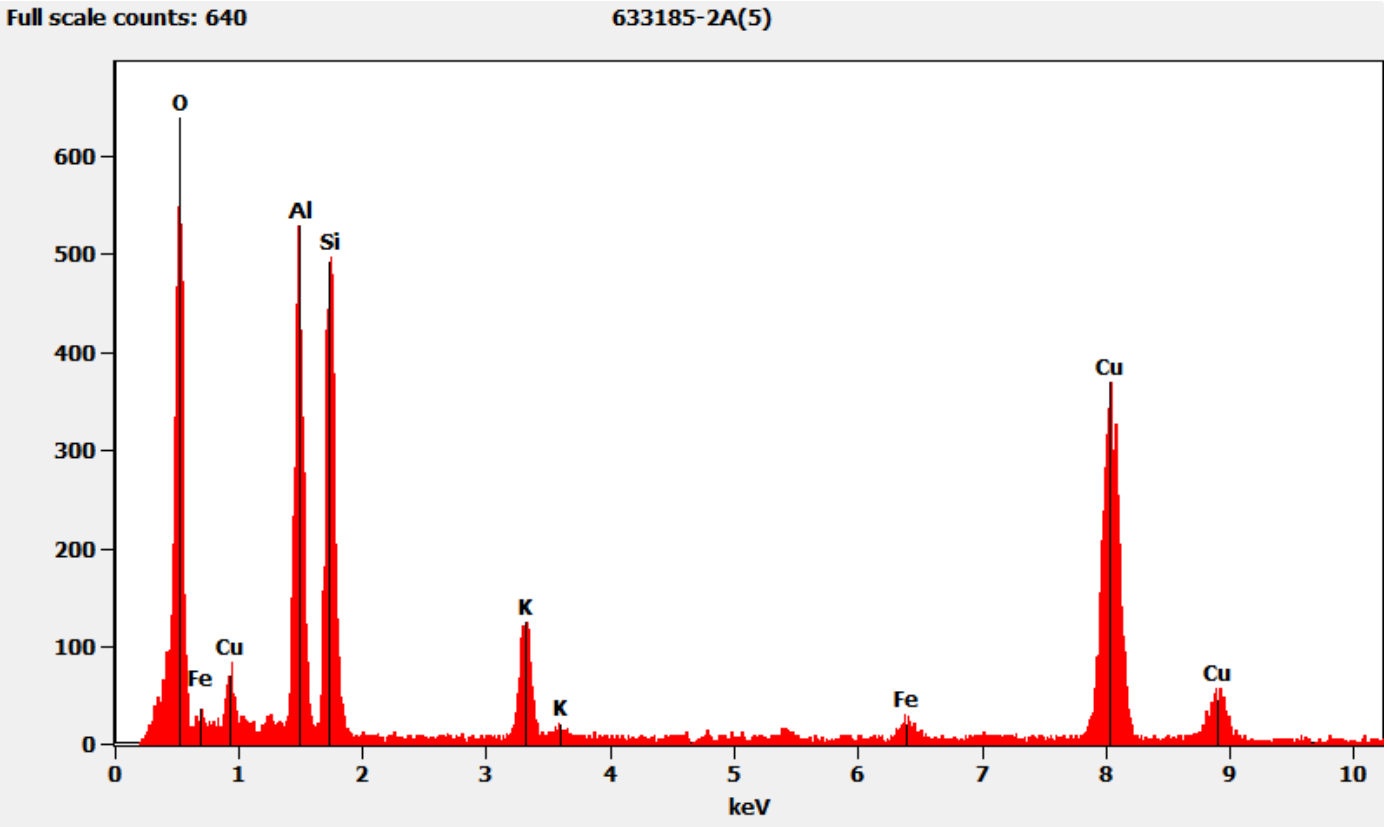
633185-2A, Mica Particle



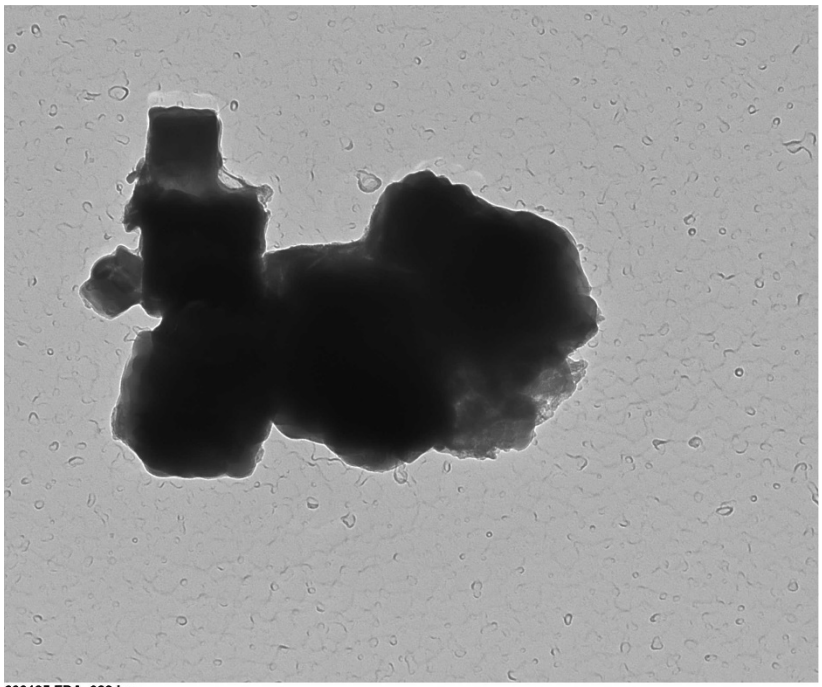
Hexagonal Diffraction Pattern from the Mica Particle Pictured Above



Chemistry from the Mica Particle Pictured Above



633185-1A, Iron and Copper Particle

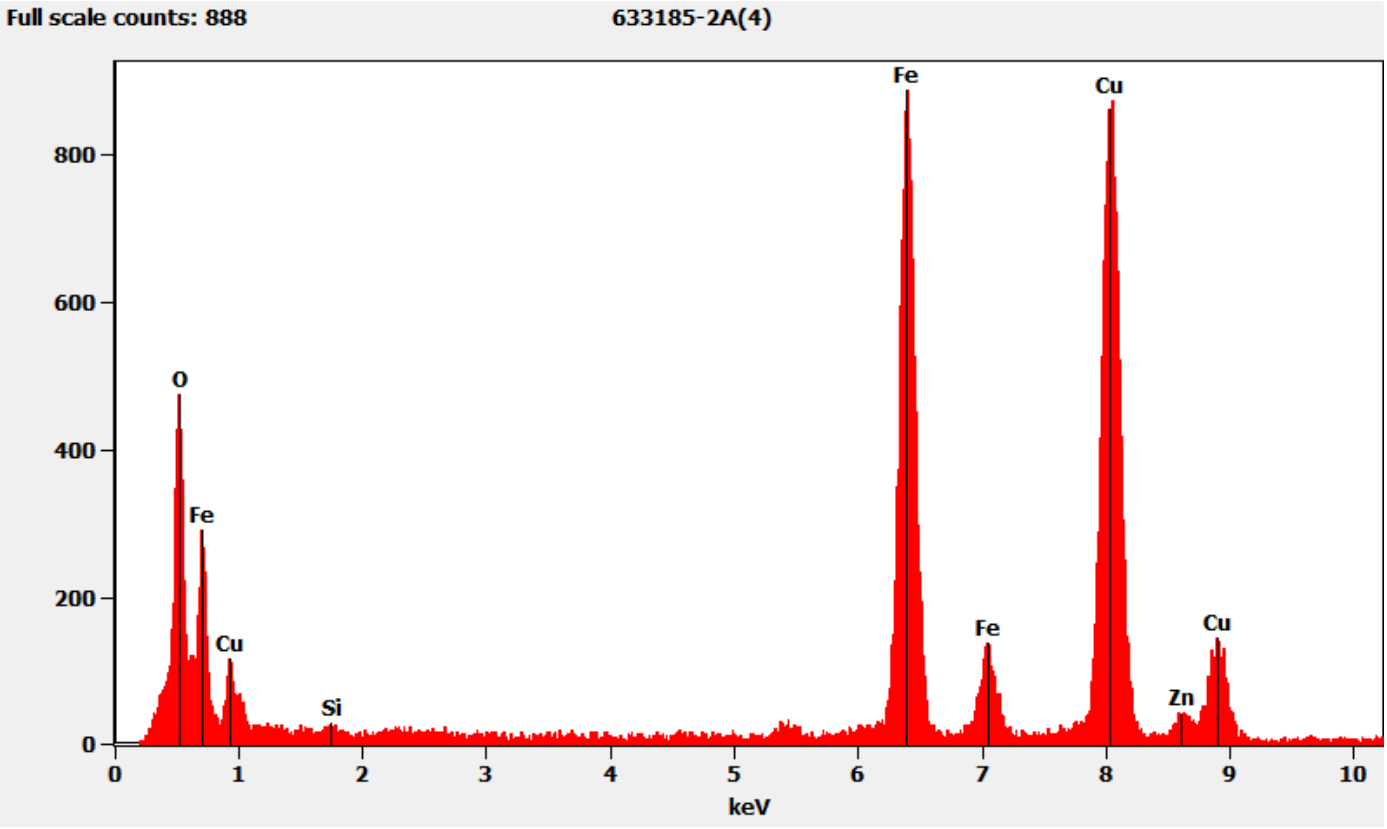


Diffraction Pattern from the Iron and Copper Particle Pictured Above

633185 FDA_022.jpg
633185-2A
Fe and Cu Particle Dif
14:30 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Iron and Copper Particle Pictured Above

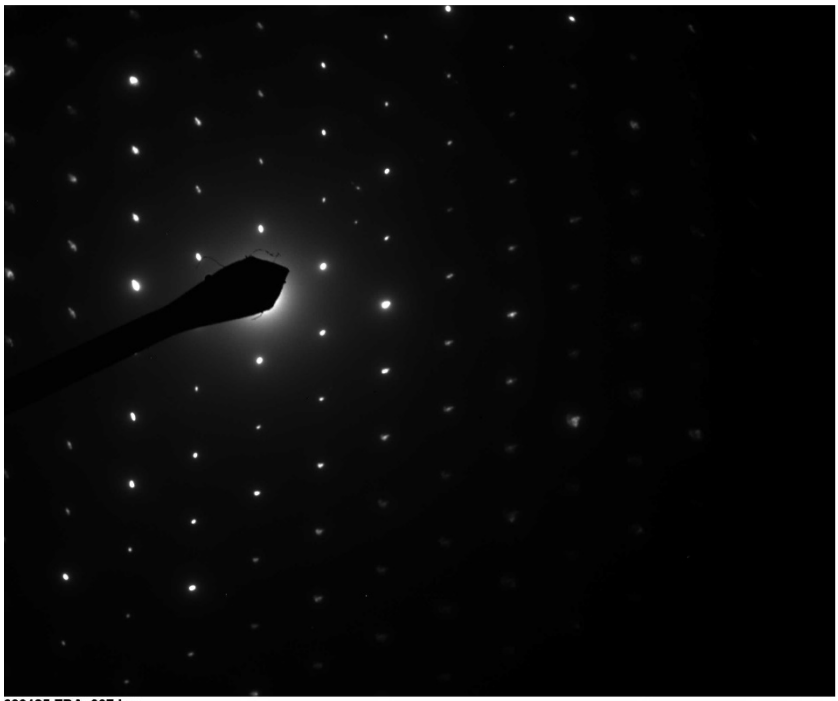


633185-2A, Talc Ribbon

633185 FDA_038.jpg
633185-2B
Talc Ribbon
Cal: 0.010296 µm/pix
18:43 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

2 µm
HV=100kV
Direct Mag: 1000 x
AMA Analytical Services, Inc

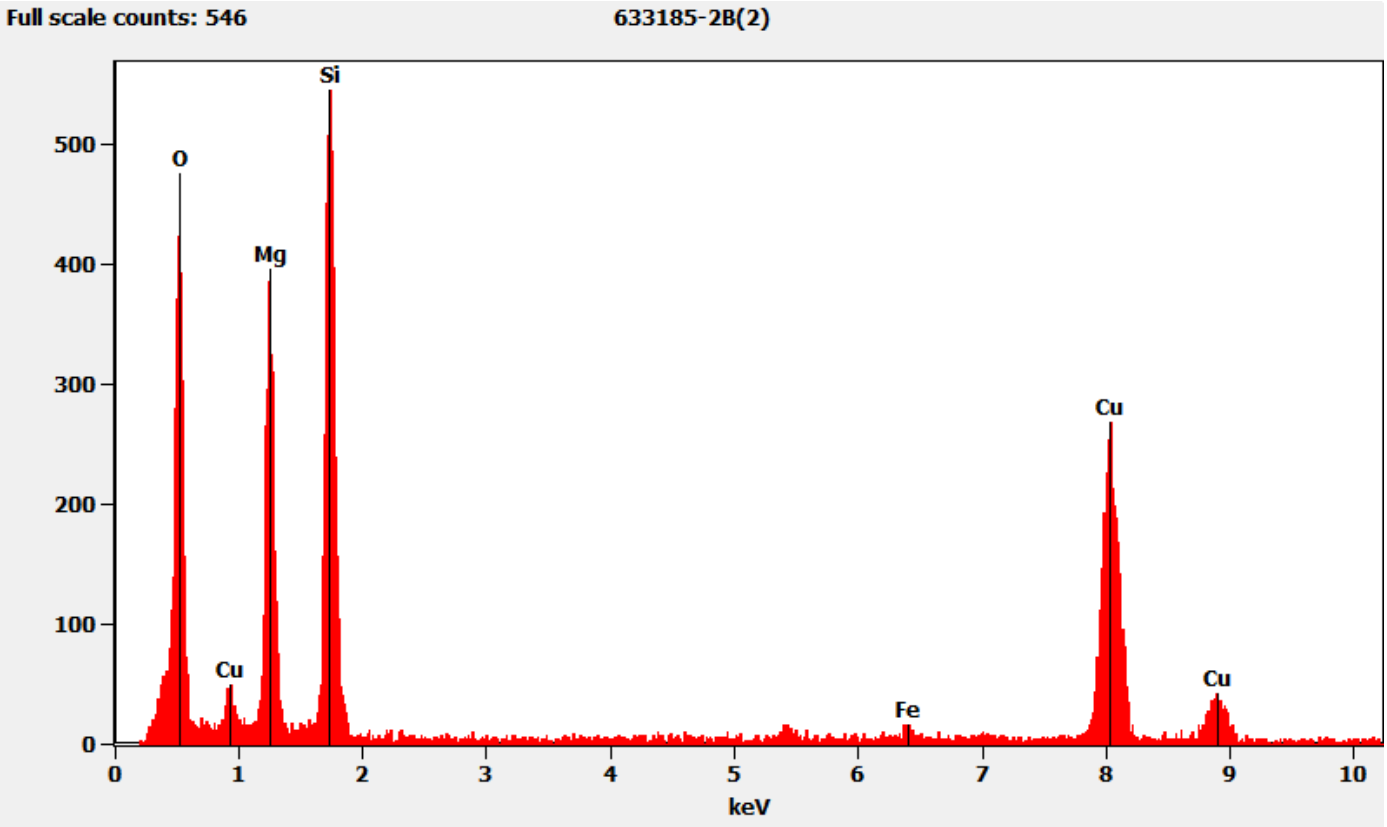
Diffraction Pattern from the Talc Ribbon Pictured Above



633185 FDA_037.jpg
633185-2B
Talc Ribbon
18:42 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Ribbon Pictured Above



633185-3A, 3B, 3C/Client Sample: 01212022-3

PLM

All three aliquots of sample 01212022-3 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-3A	No Asbestos Detected
633185-3B	No Asbestos Detected
633185-3C	No Asbestos Detected

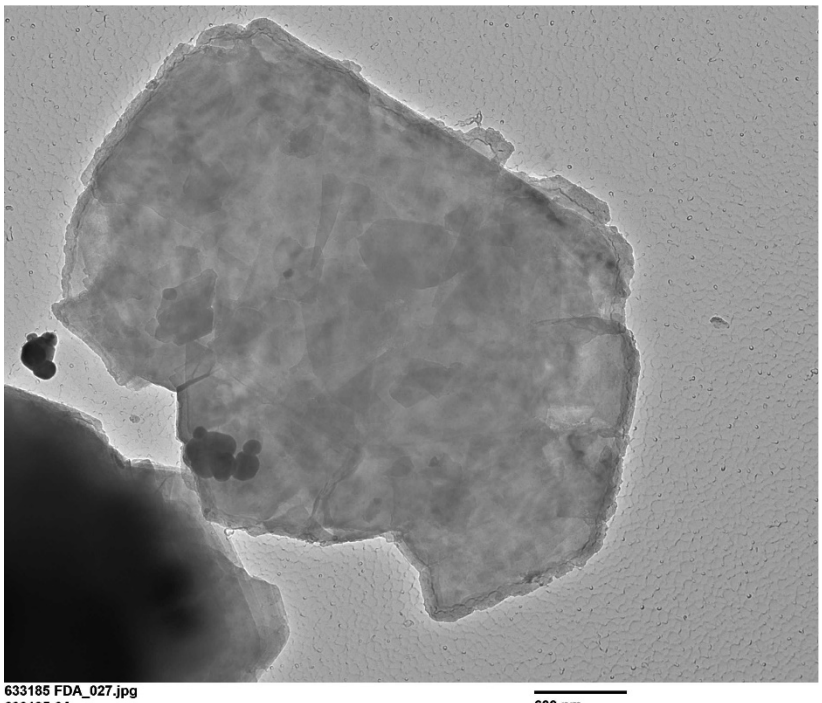
TEM

(b) (6) analyzed aliquot 3A on March 8, 2022, and aliquots 3B and 3C on March 9, 2022. The primary particle observed was talc; titanium particles were also observed along with mica particles, and talc ribbons/fibers. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-3A	No Asbestos Detected
633185-3B	No Asbestos Detected
633185-3C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

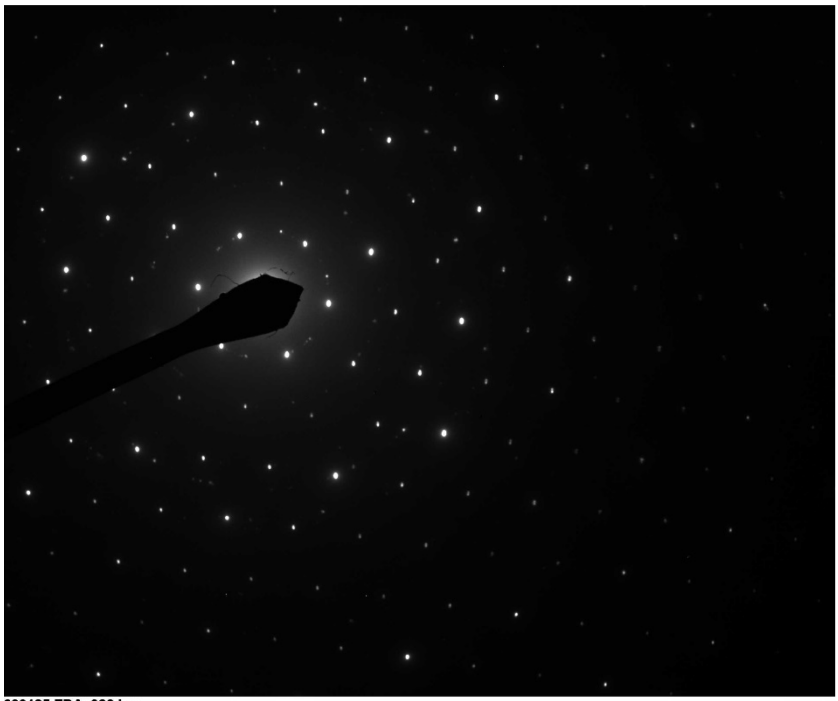
633185-3A, Talc Particle



633185 FDA_027.jpg
633185-3A
Talc Particle
Cal: 0.002145 µm/pix
16:10 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

600 nm
HV=100kV
Direct Mag: 4800 x
AMA Analytical Services, Inc

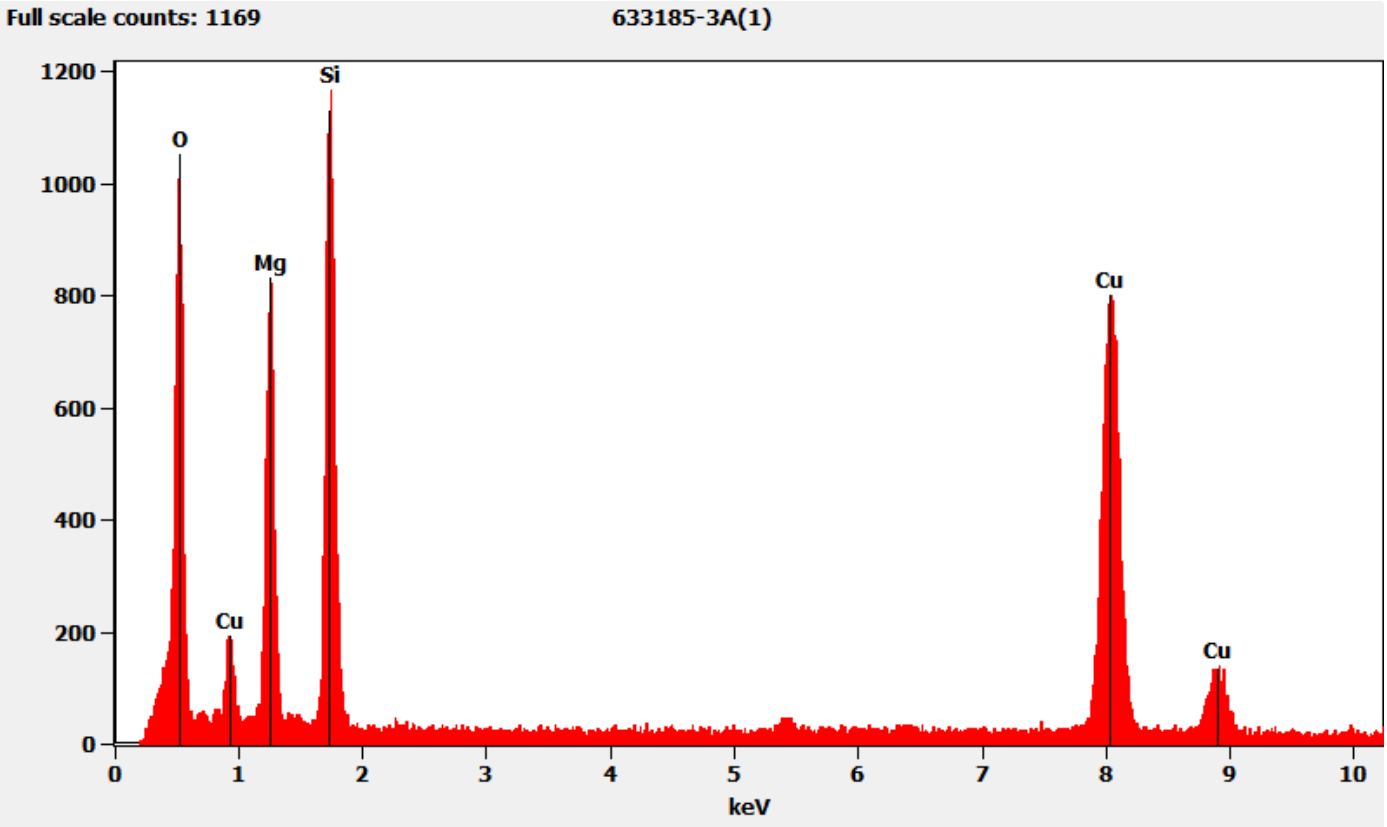
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



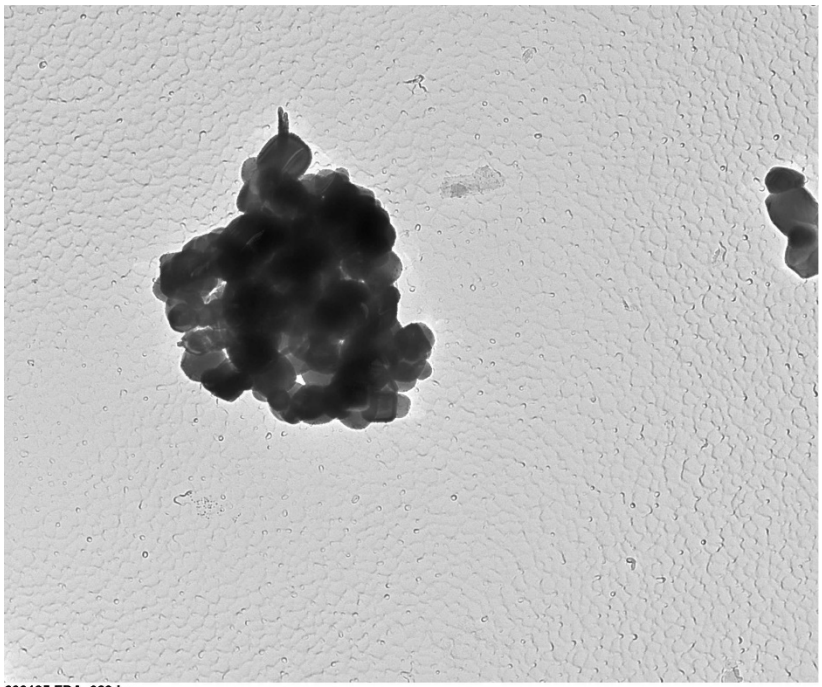
633185 FDA_026.jpg
633185-3A
Talc Particle Dif
16:08 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle Pictured Above

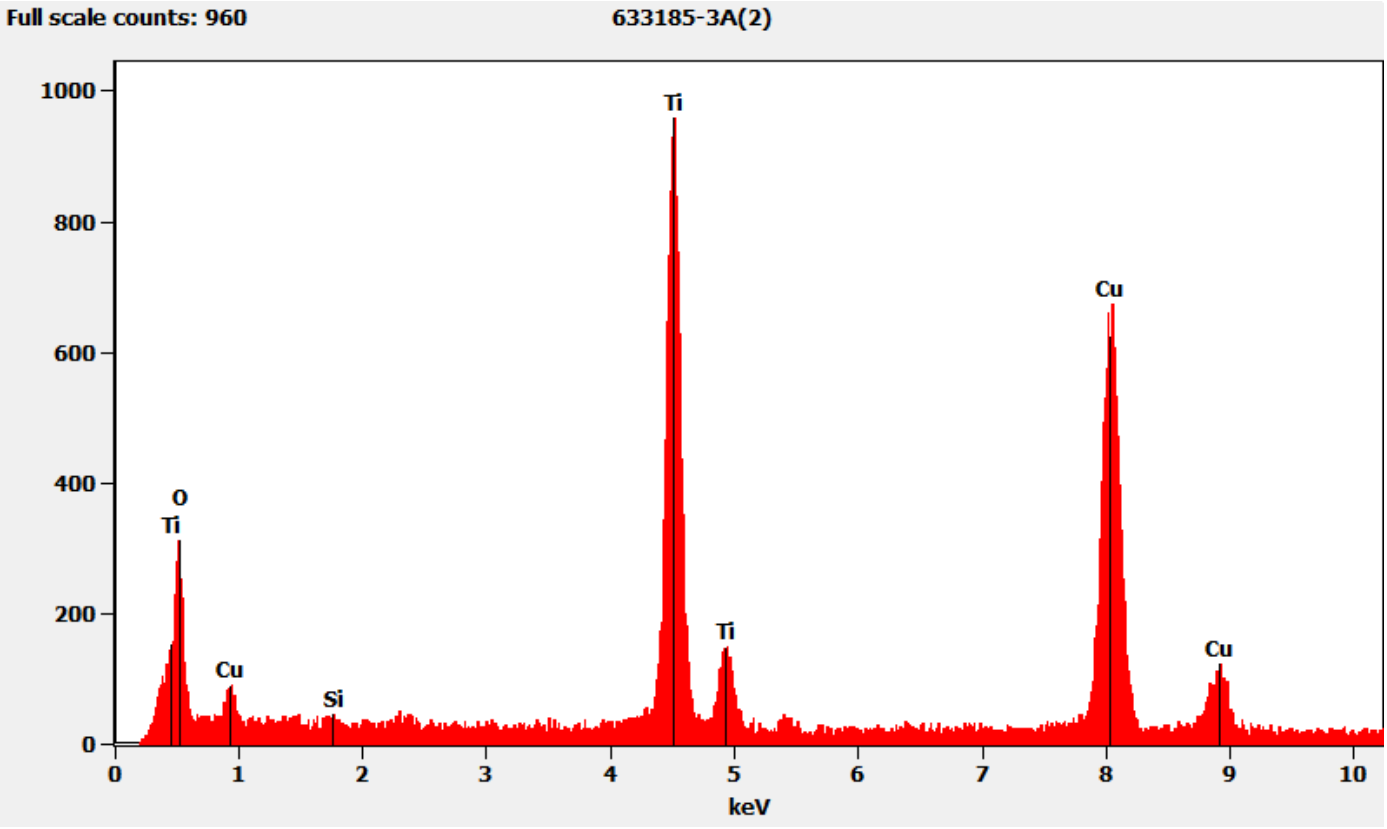


633185-3A, Titanium Particle

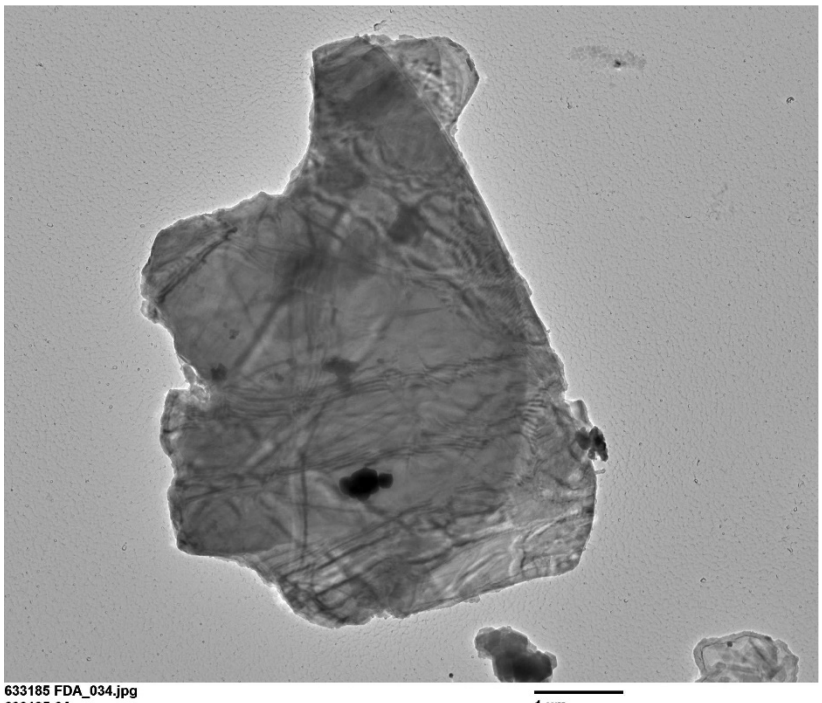


Diffraction Pattern from the Titanium Particle Pictured Above

Chemistry from the Titanium Particle Pictured Above



633185-3A, Mica Particle



633185 FDA_034.jpg
633185-3A
Mica Particle
Cal: 0.003702 µm/pix
16:57 3/8/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

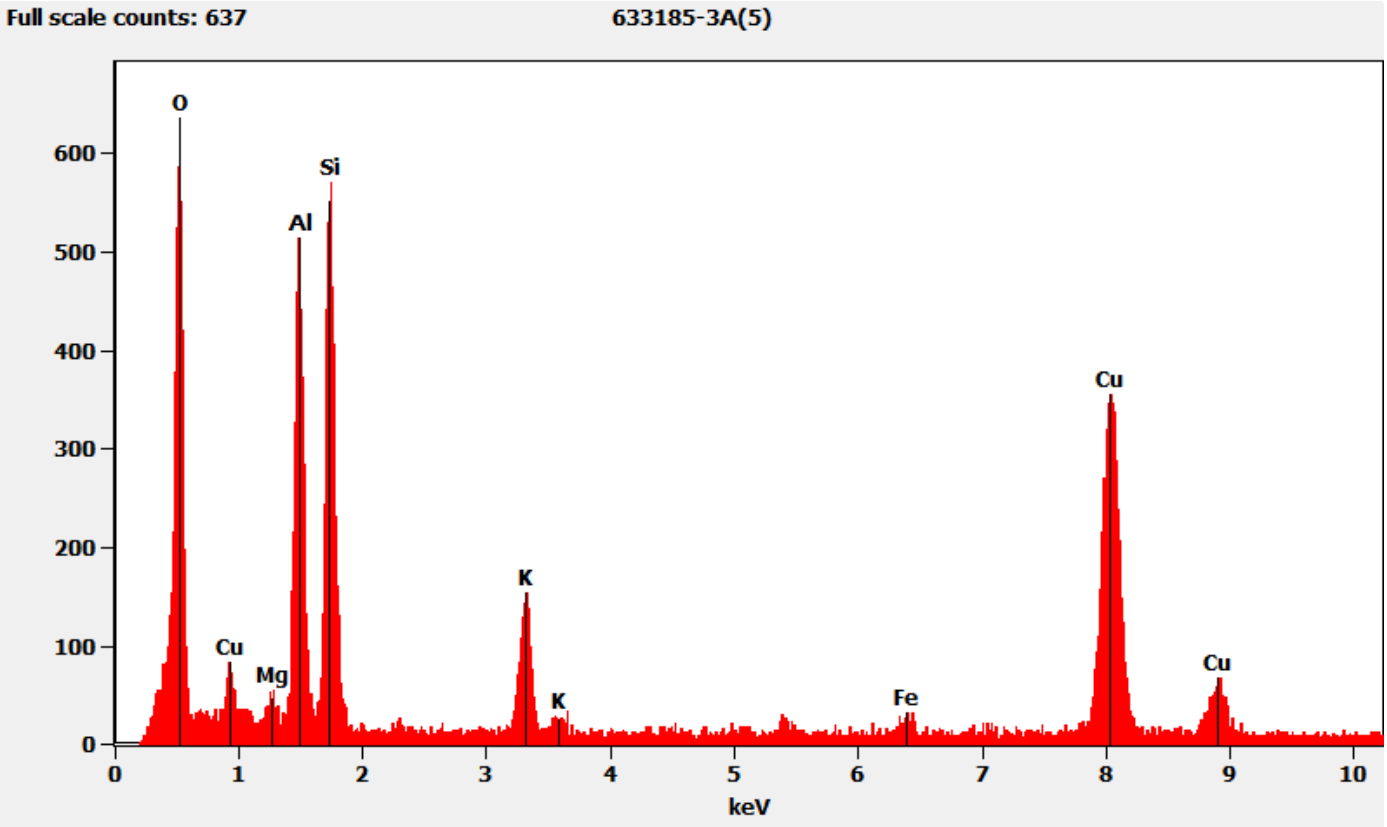
1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Mica Particle Pictured Above

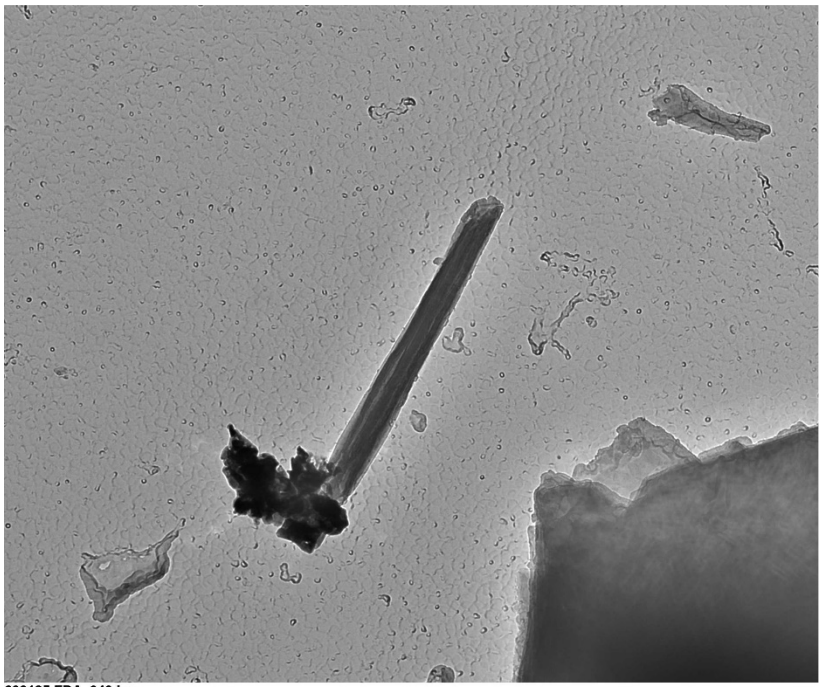
633185 FDA_033.jpg
633185-3A
Mica Particle Dif
16:56 3/8/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

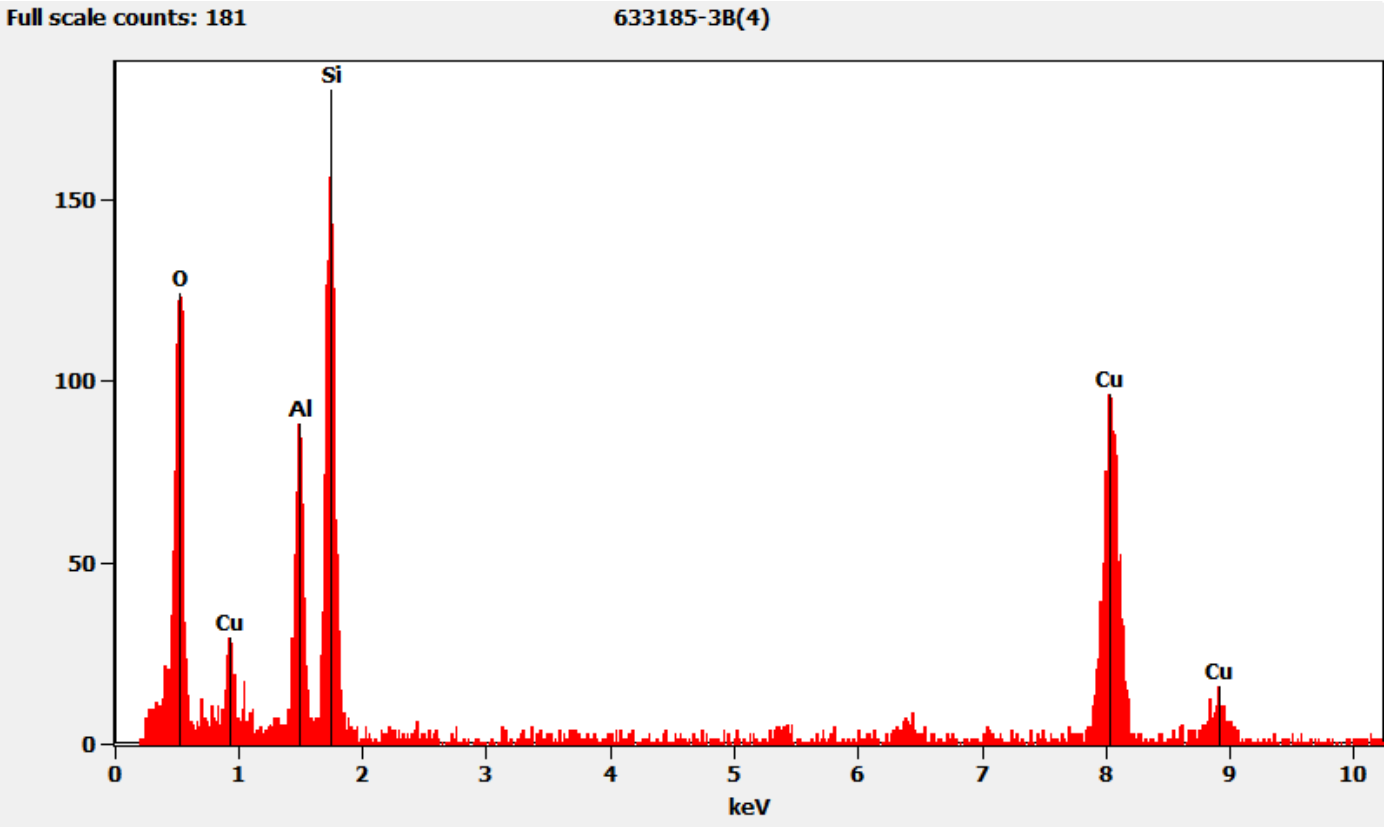
Chemistry from the Mica Particle Pictured Above



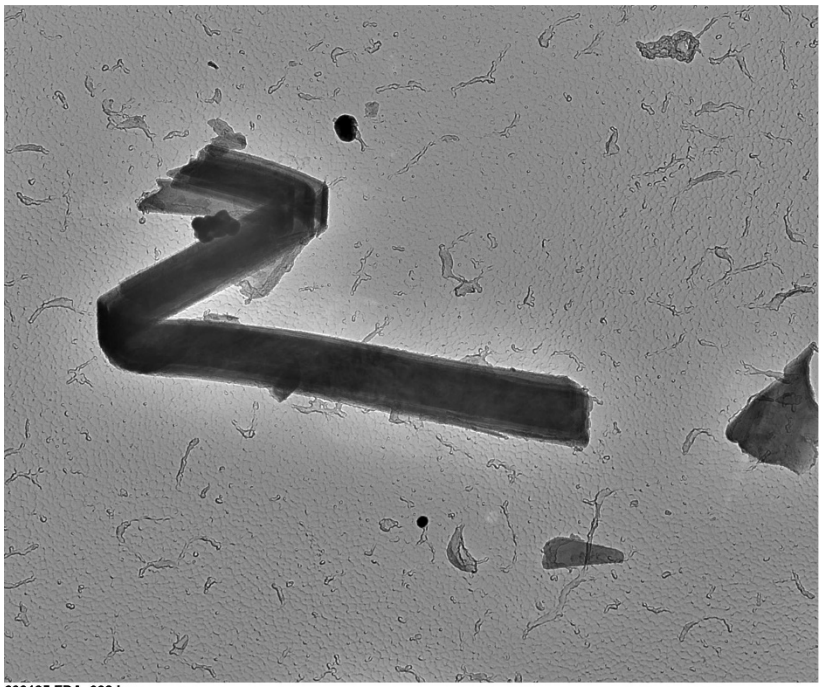
633185-3B, Elongated Particle Containing Aluminon and Silicon



Chemistry from the Elongated Particle Containing Aluminum and Silicon Pictured Above



633185-3A, Talc Ribbon

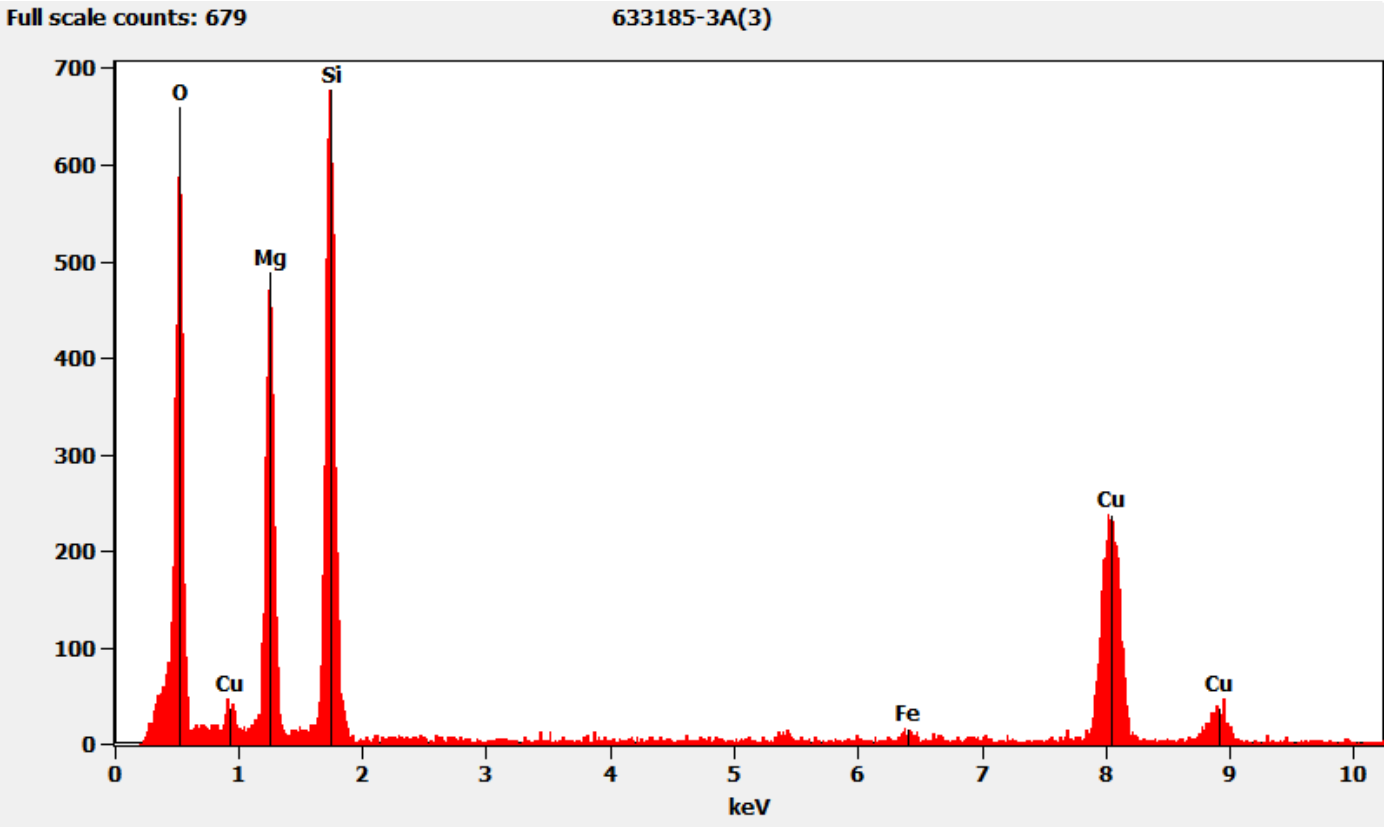


Diffraction Pattern from the Talc Ribbon Pictured Above

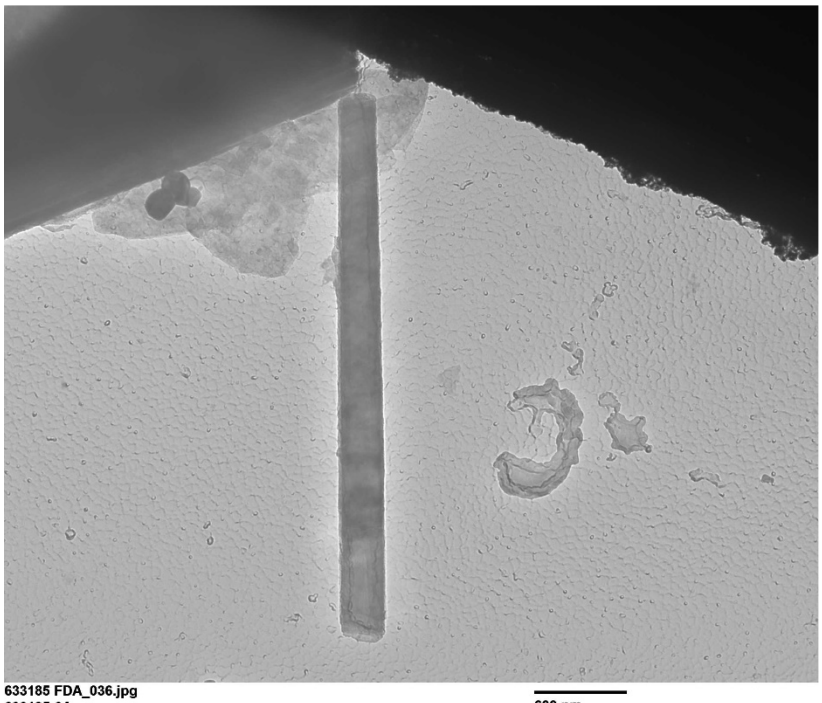
633185 FDA_030.jpg
633185-3A
Talc Ribbon Dif
16:32 3/8/2022
Microscopist: (b) (6)
Camera: NANOSPR T5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Ribbon Pictured Above



633185-3A, Talc Fiber



633185 FDA_036.jpg
633185-3A
Talc Fiber
Cal: 0.002145 µm/pix
17:21 3/8/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

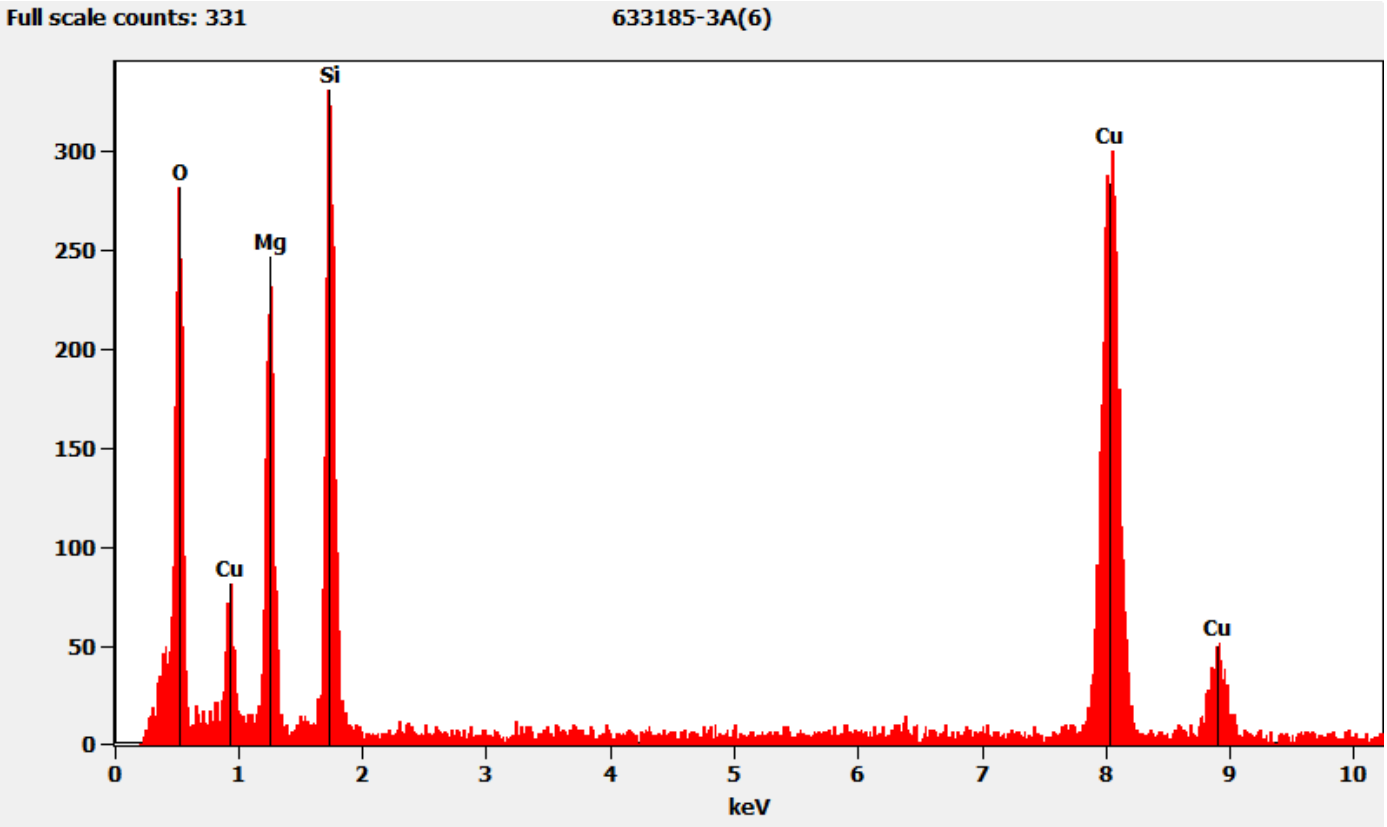
600 nm
HV=100kV
Direct Mag: 4800 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Fiber Pictured Above

633185 FDA_035.jpg
633185-3A
Talc Fiber Dif
17:20 3/8/2022
Microscopist (b) (6)
Camera: NA[illegible], Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Fiber Pictured Above



633185-4A, 4B, 4C/Client Sample: 01212022-4

PLM

All three aliquots of sample 01212022-4 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-4A	No Asbestos Detected
633185-4B	No Asbestos Detected
633185-4C	No Asbestos Detected

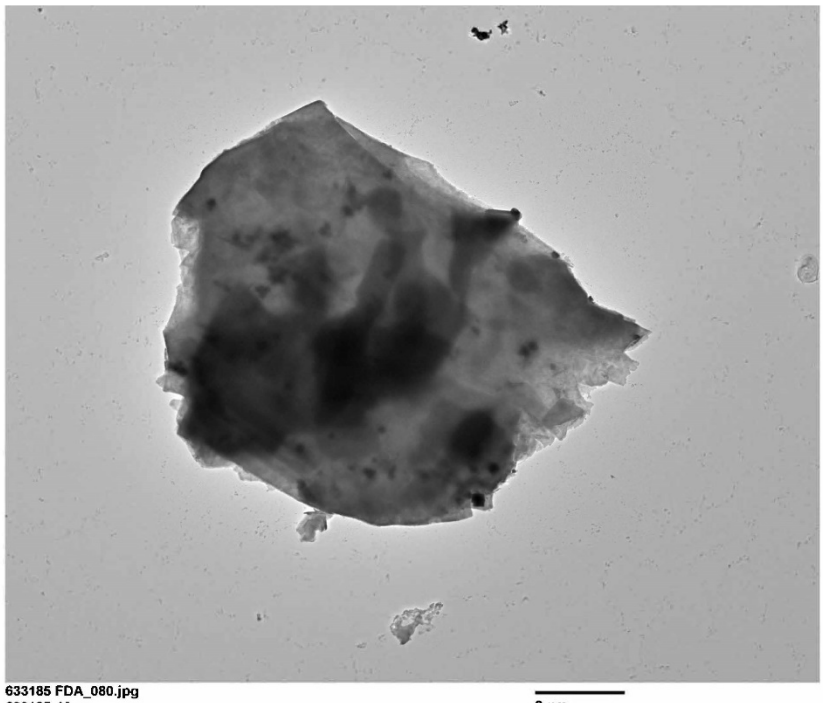
TEM

(b) (6) analyzed aliquot 4A on March 22, 2022. (b) (6) analyzed aliquots 4B and 4C on March 22, 2022. The primary particle observed was talc; iron particles were also observed along with mica particles and talc fibers. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

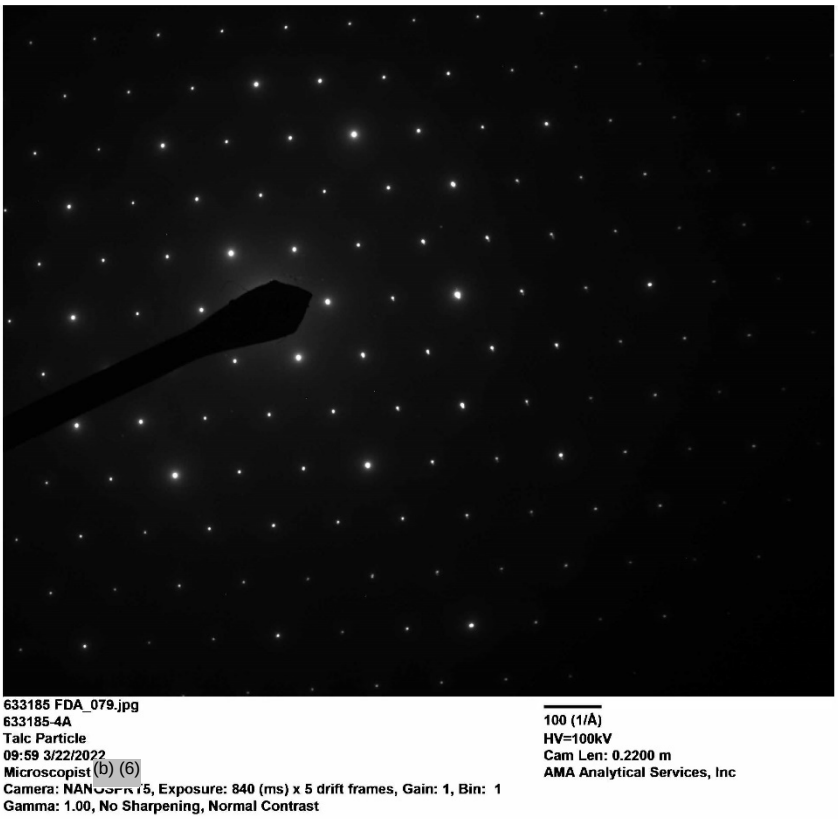
633185-4A	No Asbestos Detected
633185-4B	No Asbestos Detected
633185-4C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

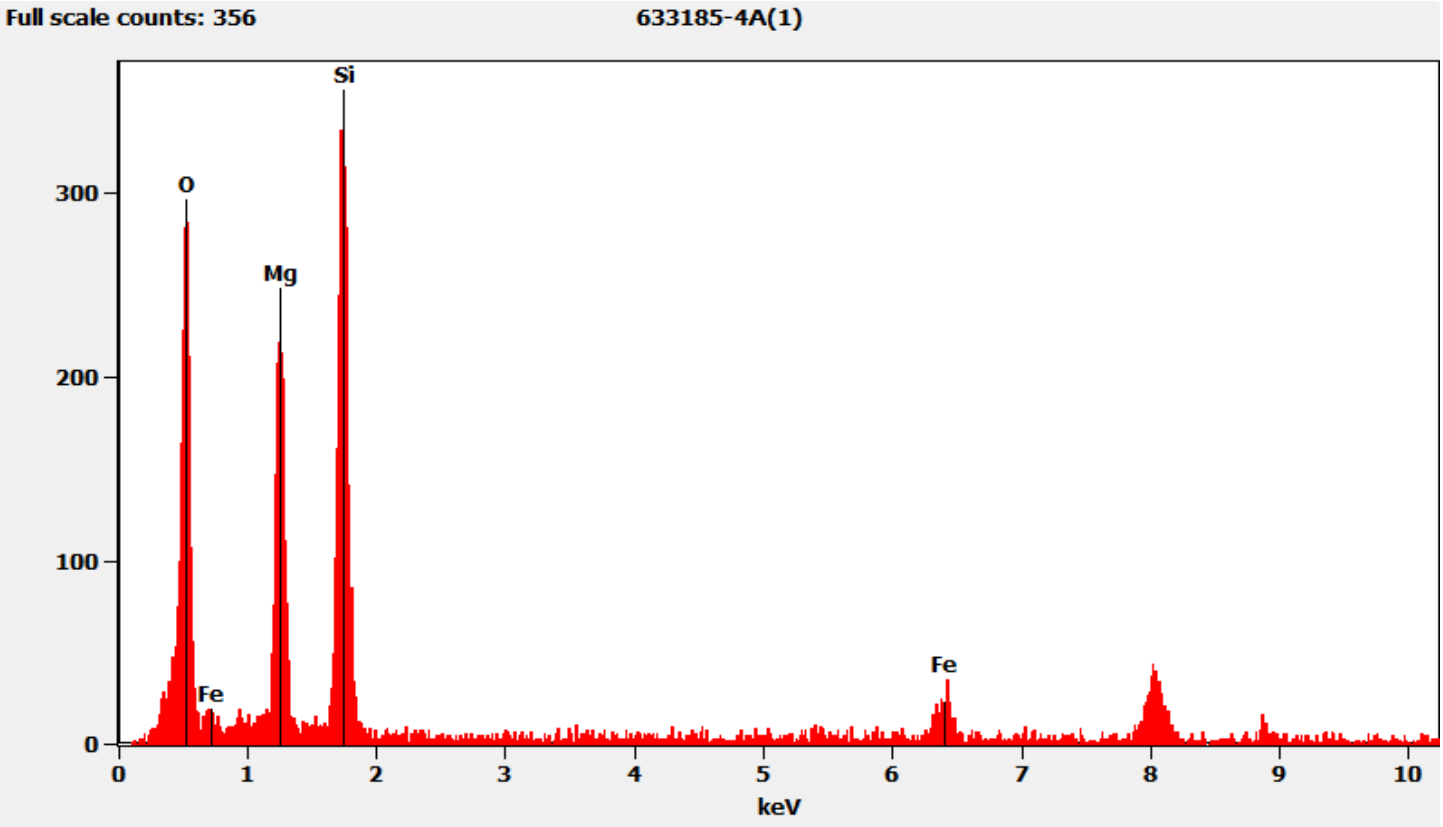
633185-4A, Talc Particle



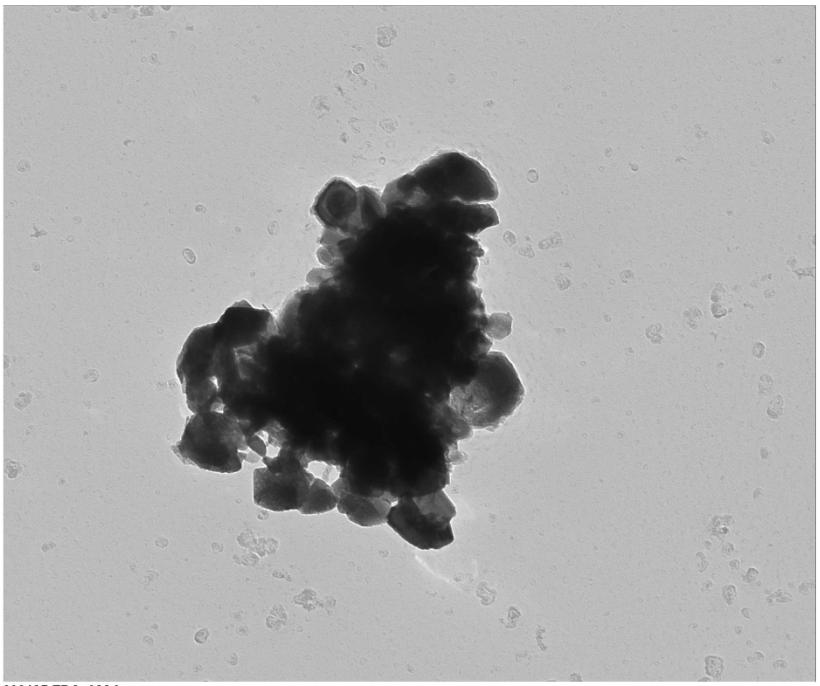
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



Chemistry from the Talc Particle Pictured Above



633185-4A, Iron Particles

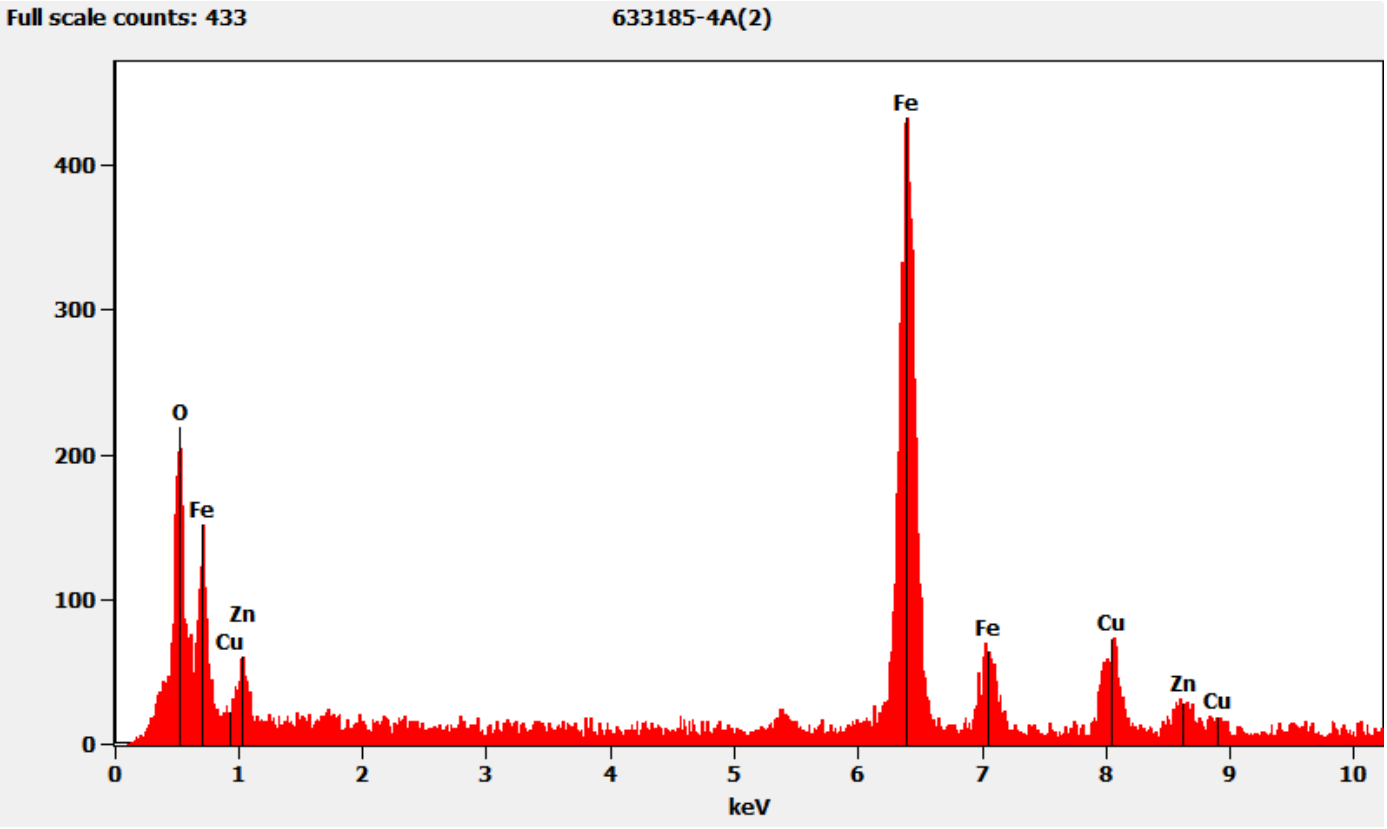


Diffraction from the Iron Particles Pictured Above

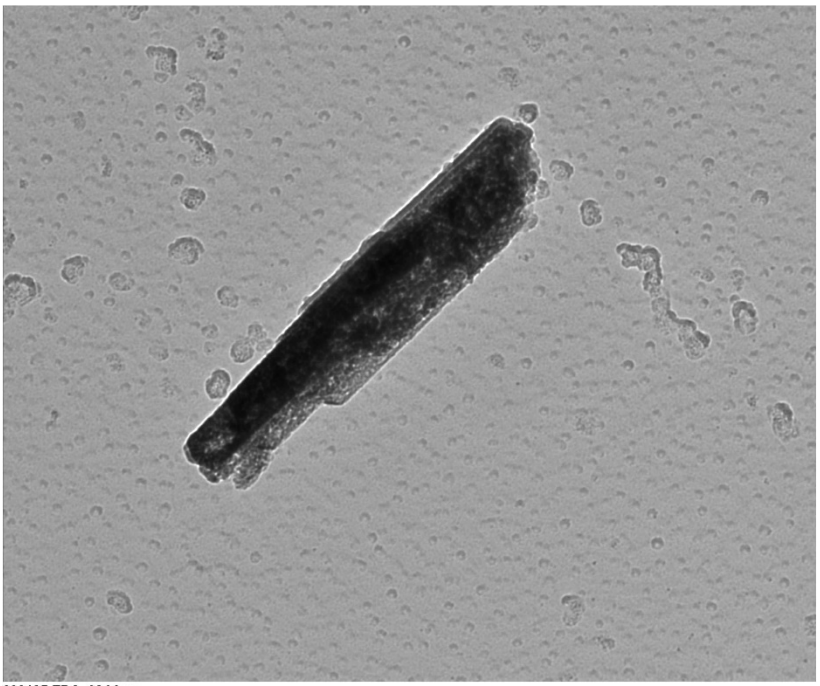
633185 FDA_081.jpg
633185-4A
Iron ParticlesIron Particles
10:08 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Iron Particles Pictured Above



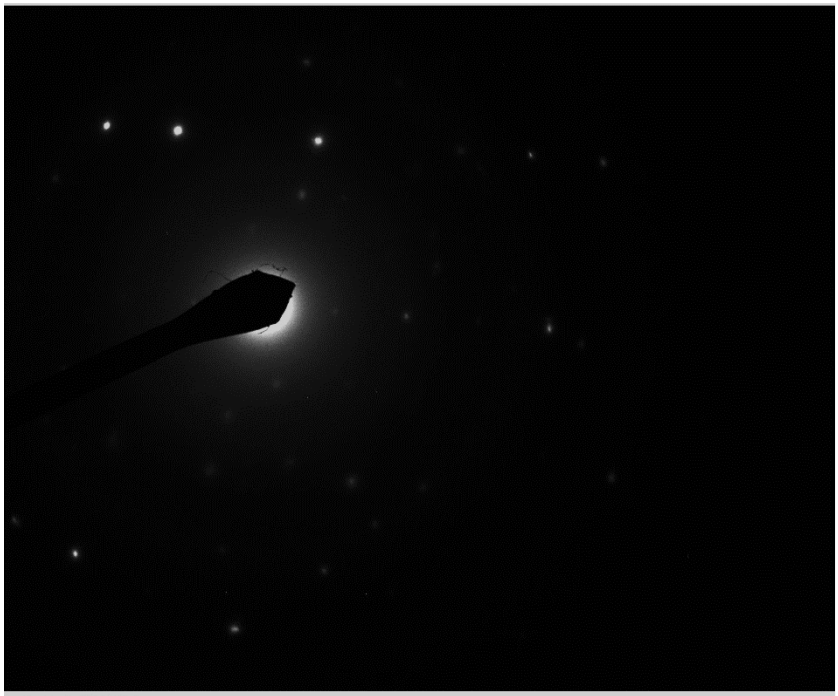
633185-4A, Elongated Iron Particle



633185 FDA_084.jpg
633185-4A
Elongated Iron particleIron Particles
Cal: 0.571351 nm/pix
10:15 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 nm
HV=100kV
Direct Mag: 19000 x
AMA Analytical Services, Inc

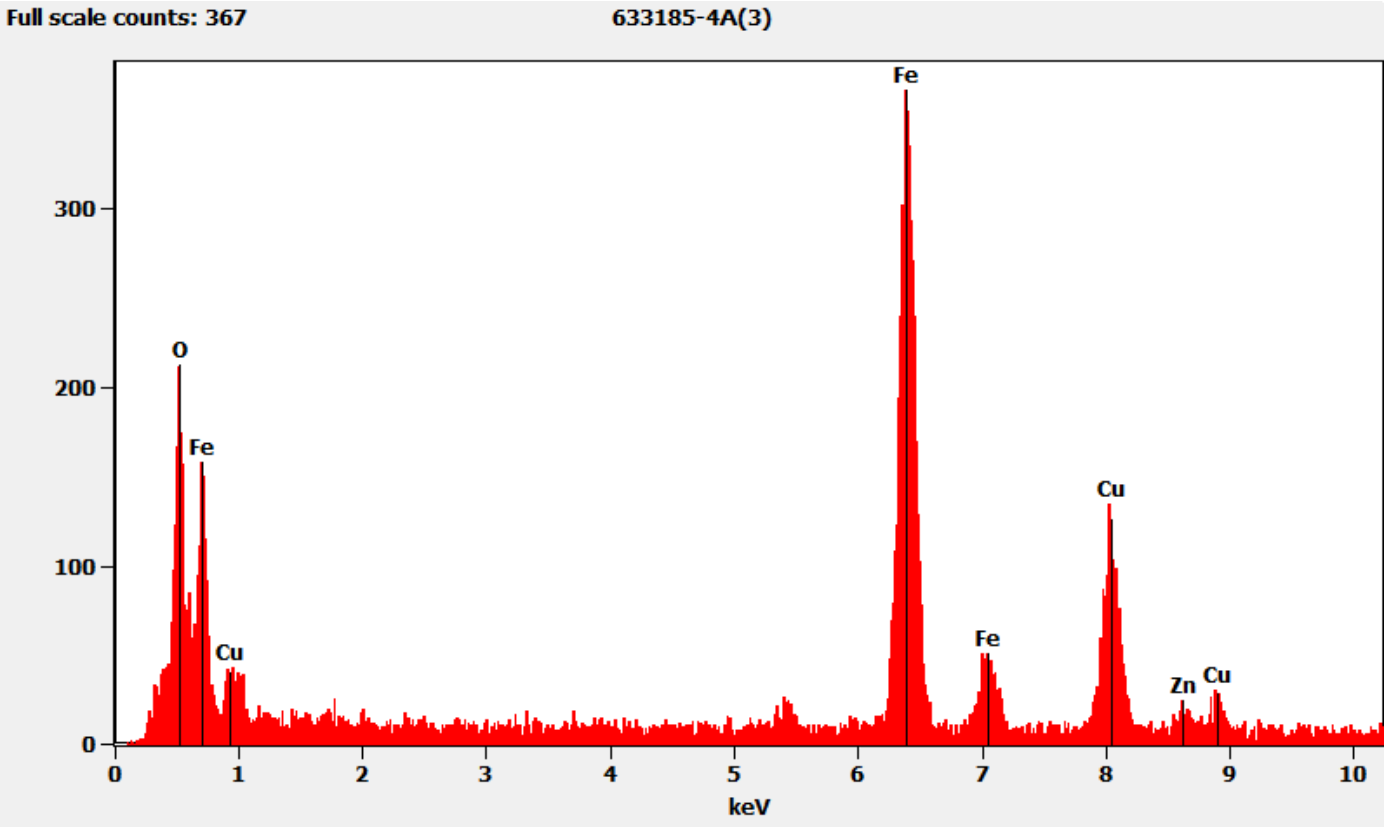
Diffraction Pattern from the Elongated Iron Particle Pictured Above



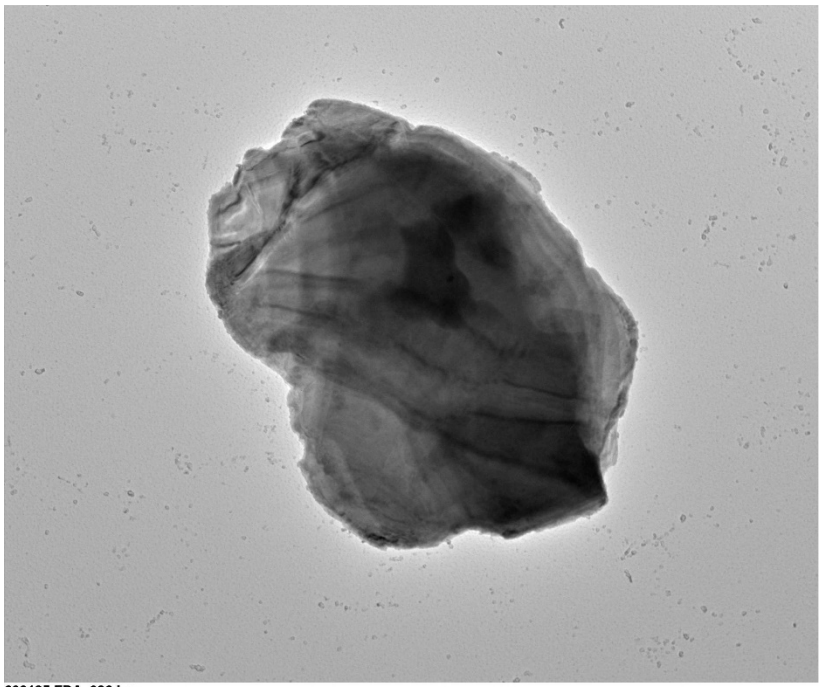
633185 FDA_083.jpg
633185-4A
Elongated Iron particleIron Particles
10:14 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Elongated Iron Particle Pictured Above

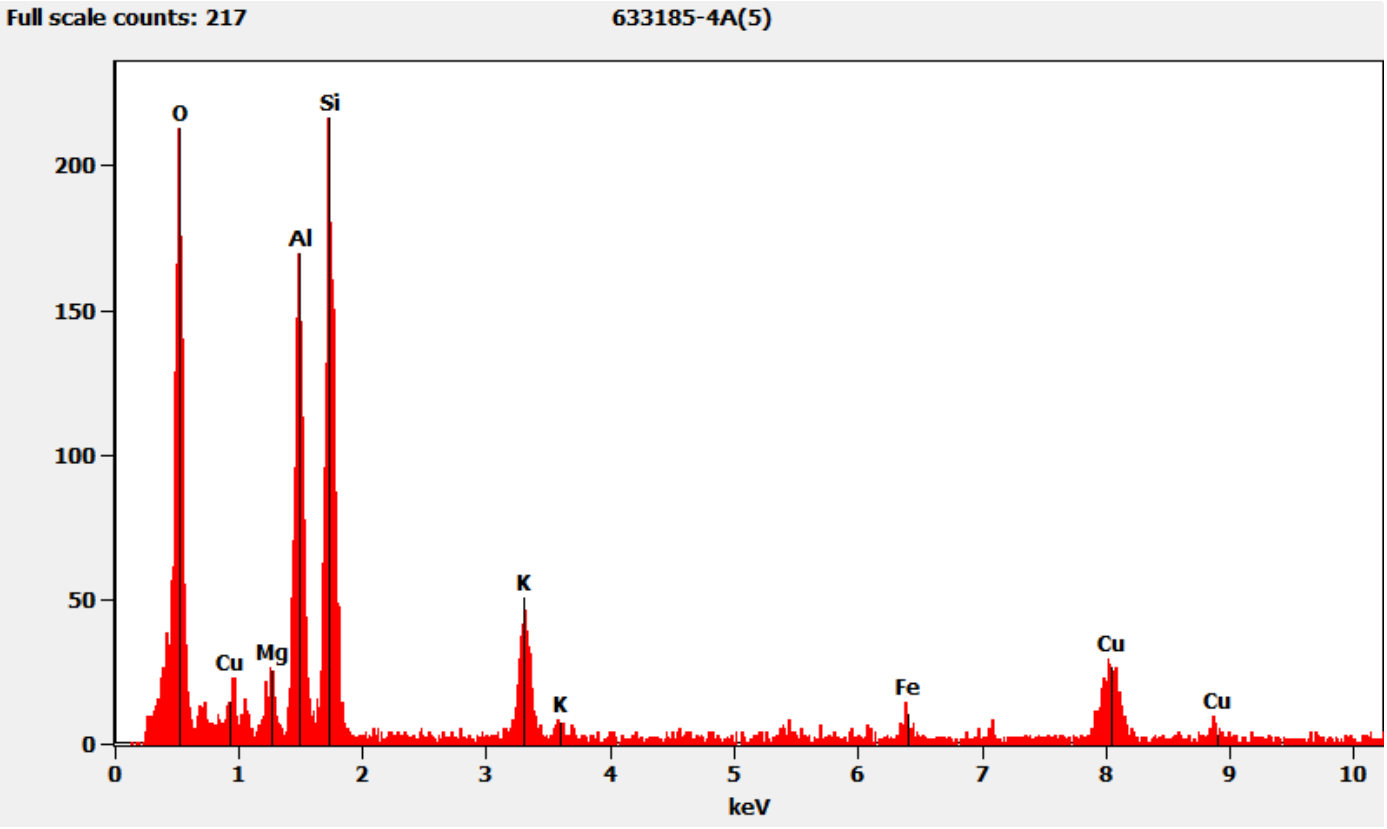


633185-4A, Mica Particle with Iron

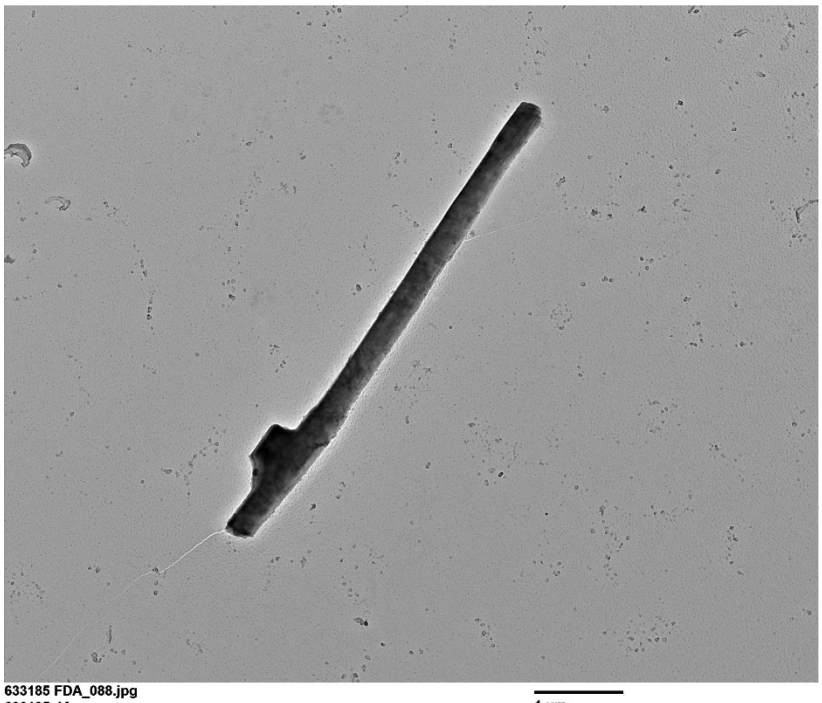


Hexagonal Diffraction from the Mica Particle with Iron Pictured Above

Chemistry from the Mica Particle with Iron Pictured Above



633185-4A, Talc Fiber



633185 FDA_088.jpg
633185-4A
Talc FiberIron Particles
Cal: 0.003702 µm/pix
10:46 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

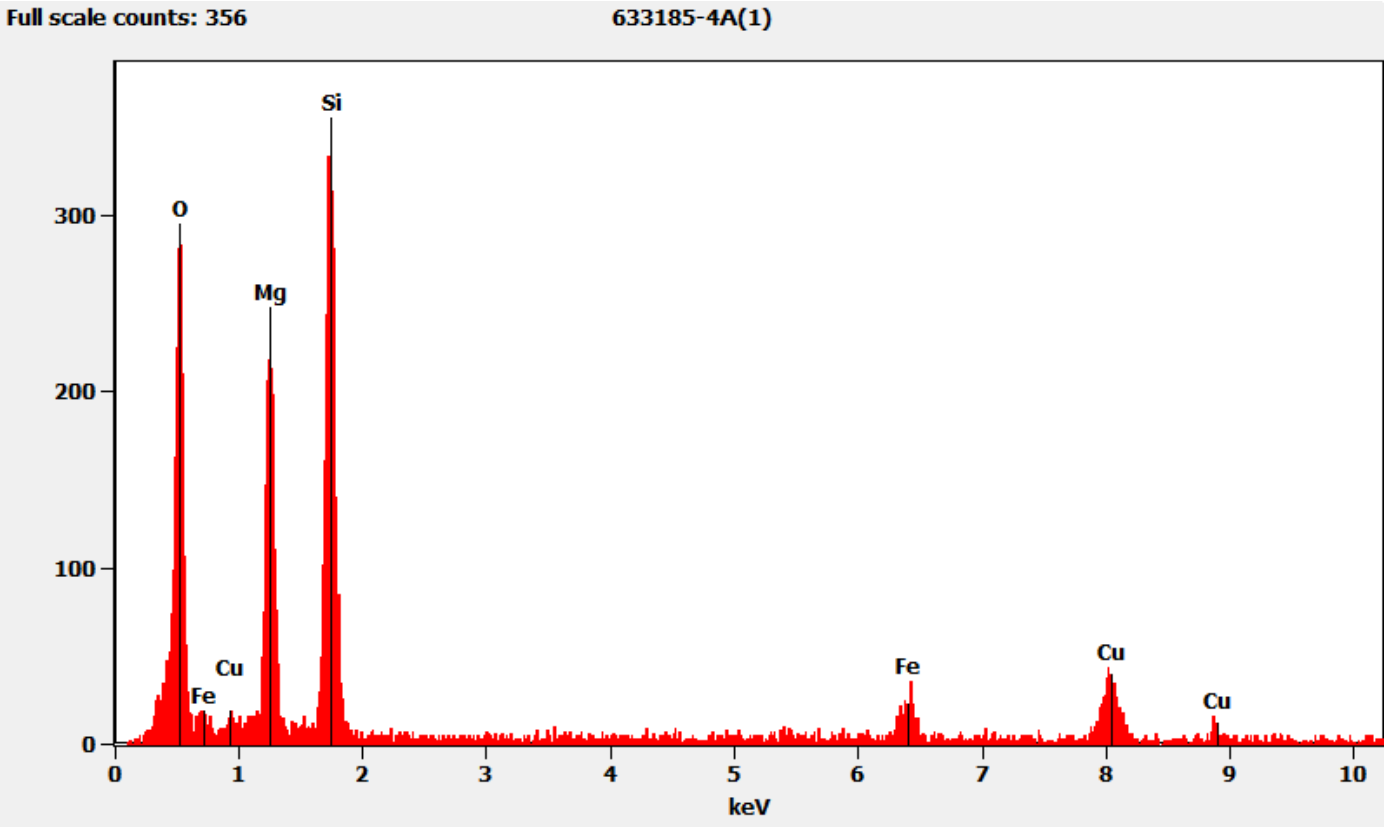
1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

Hexagonal Diffraction from the Talc Fiber Pictured Above

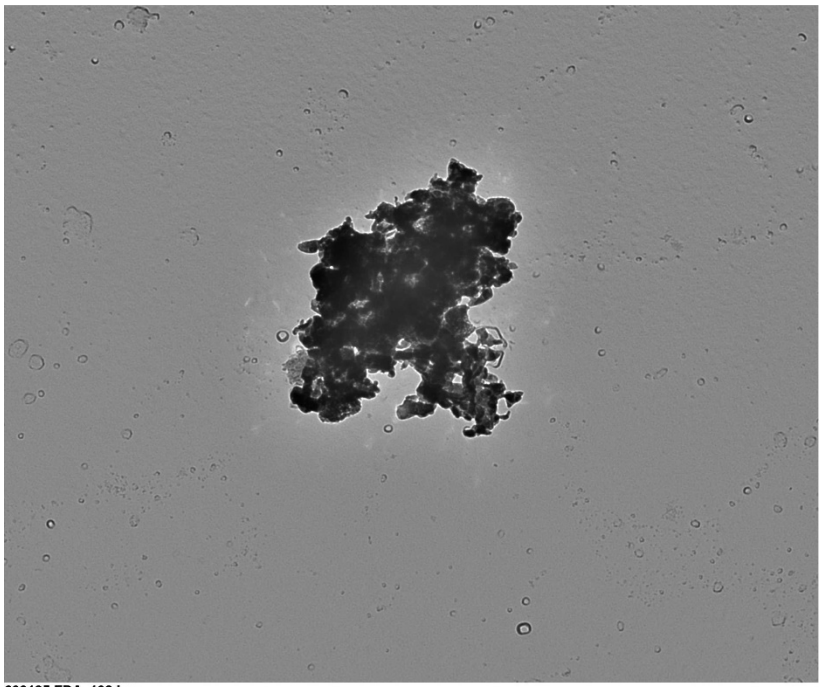
633185 FDA_087.jpg
633185-4A
Talc FiberIron Particles
10:45 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Fiber Pictured Above

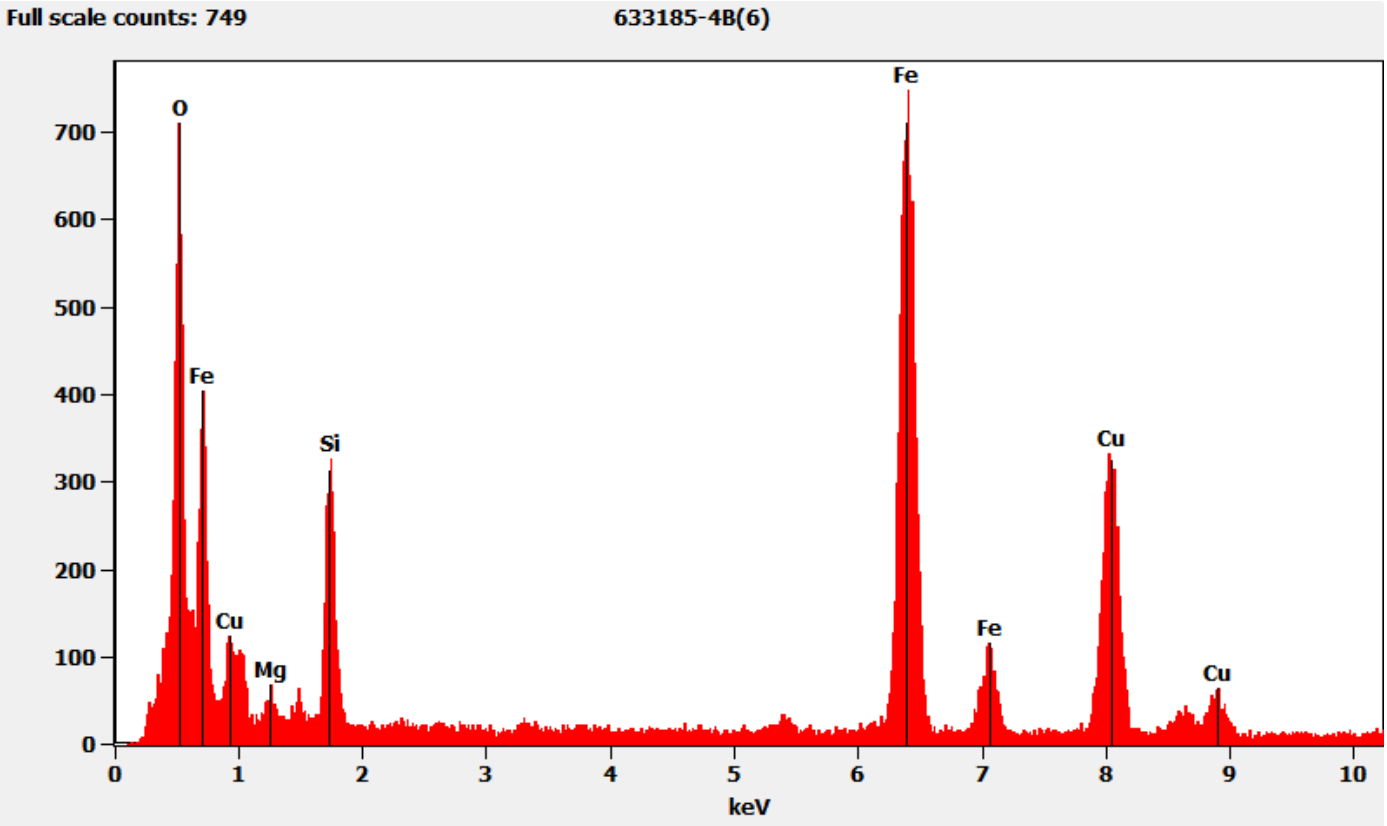


633185-4B, Particle Containing Iron and Silicon



Diffraction from the Particle Containing Iron and Silicon Pictured Above

Chemistry from the Particle Containing Iron and Silicon Pictured Above



633185-5A, 5B, 5C/Client Sample: 01212022-5

PLM

All three aliquots of sample 01212022-5 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-5A	No Asbestos Detected
633185-5B	No Asbestos Detected
633185-5C	No Asbestos Detected

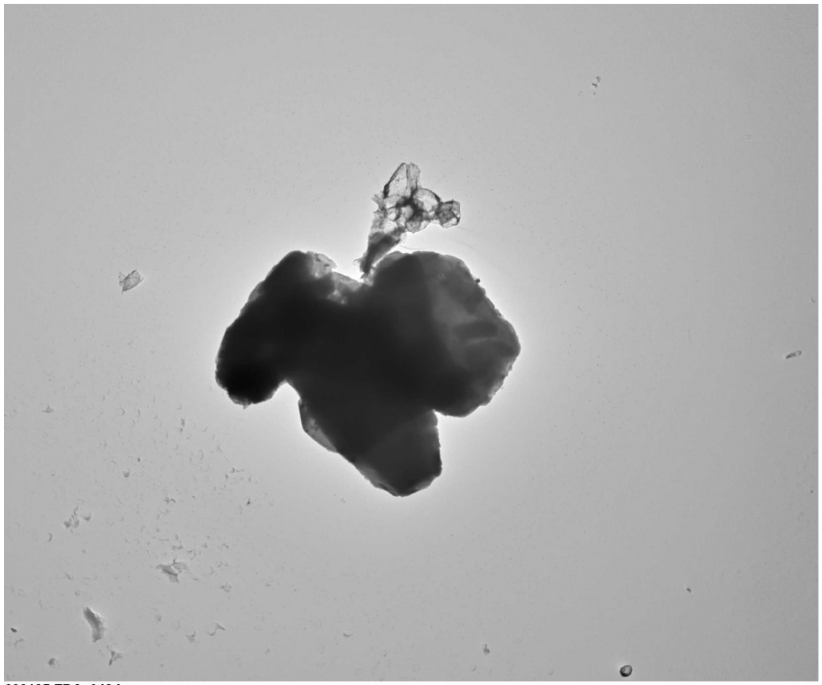
TEM

(b) (6) analyzed aliquots 5A and 5B on March 9, 2022, and aliquot 5C on March 11, 2022. The primary particle observed was mica; iron and titanium particles were also observed along with calcium particles, talc particles and silica spheres. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

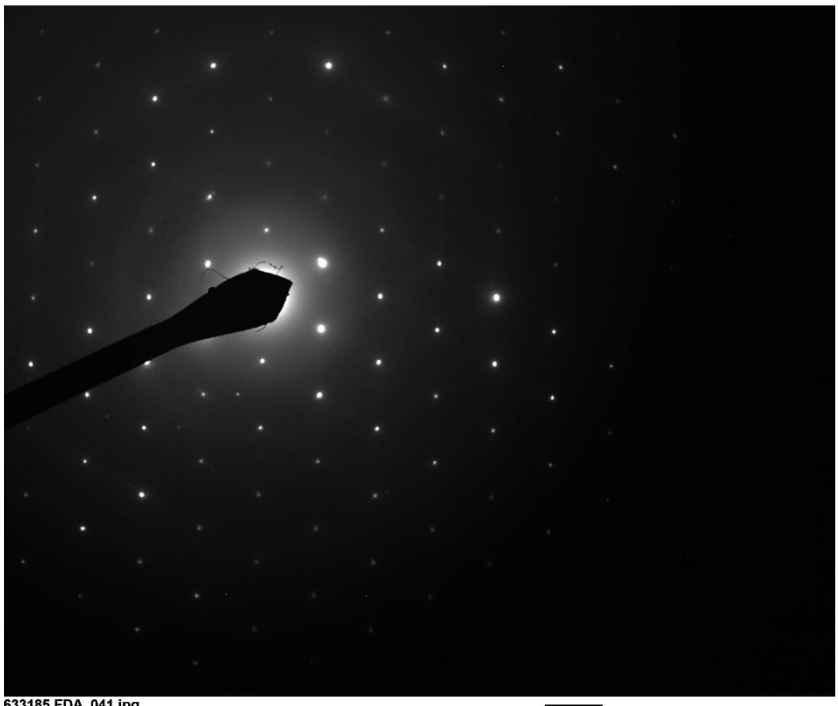
633185-5A	No Asbestos Detected
633185-5B	No Asbestos Detected
633185-5C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-5A, Mica Particle



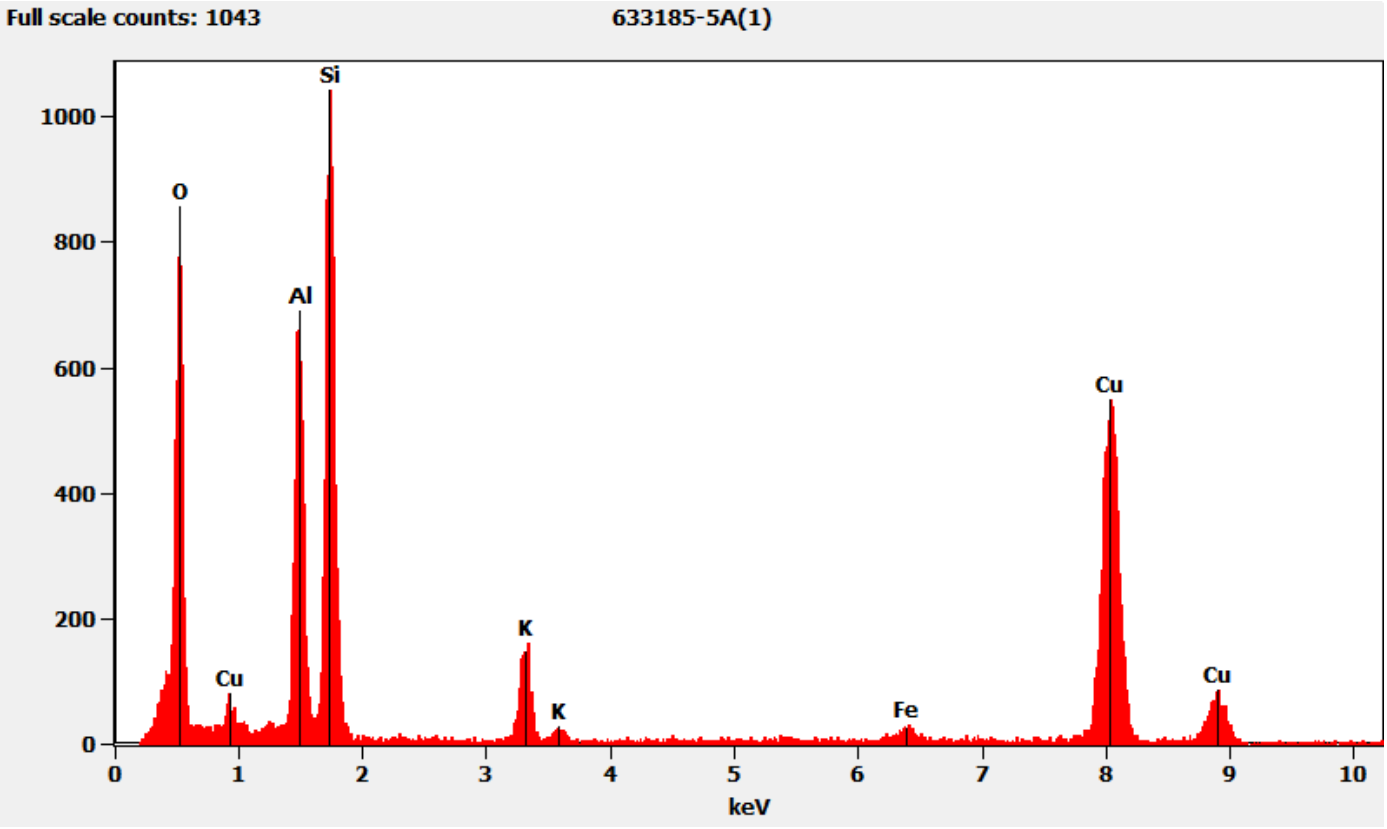
Hexagonal Diffraction Pattern from the Mica Particle Pictured Above



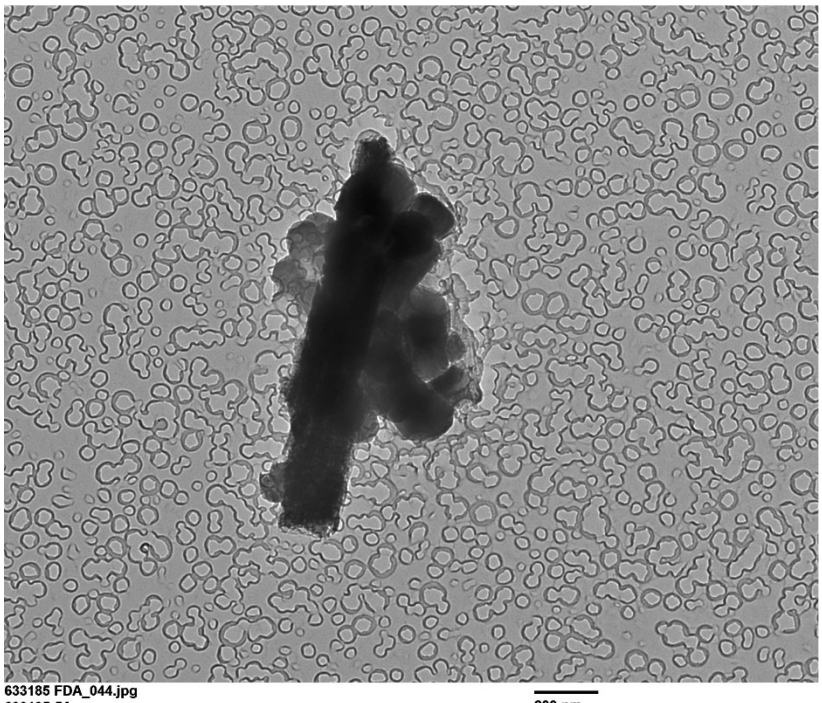
633185 FDA_041.jpg
633185-5A
Mica Particle Dif
15:58 3/9/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above

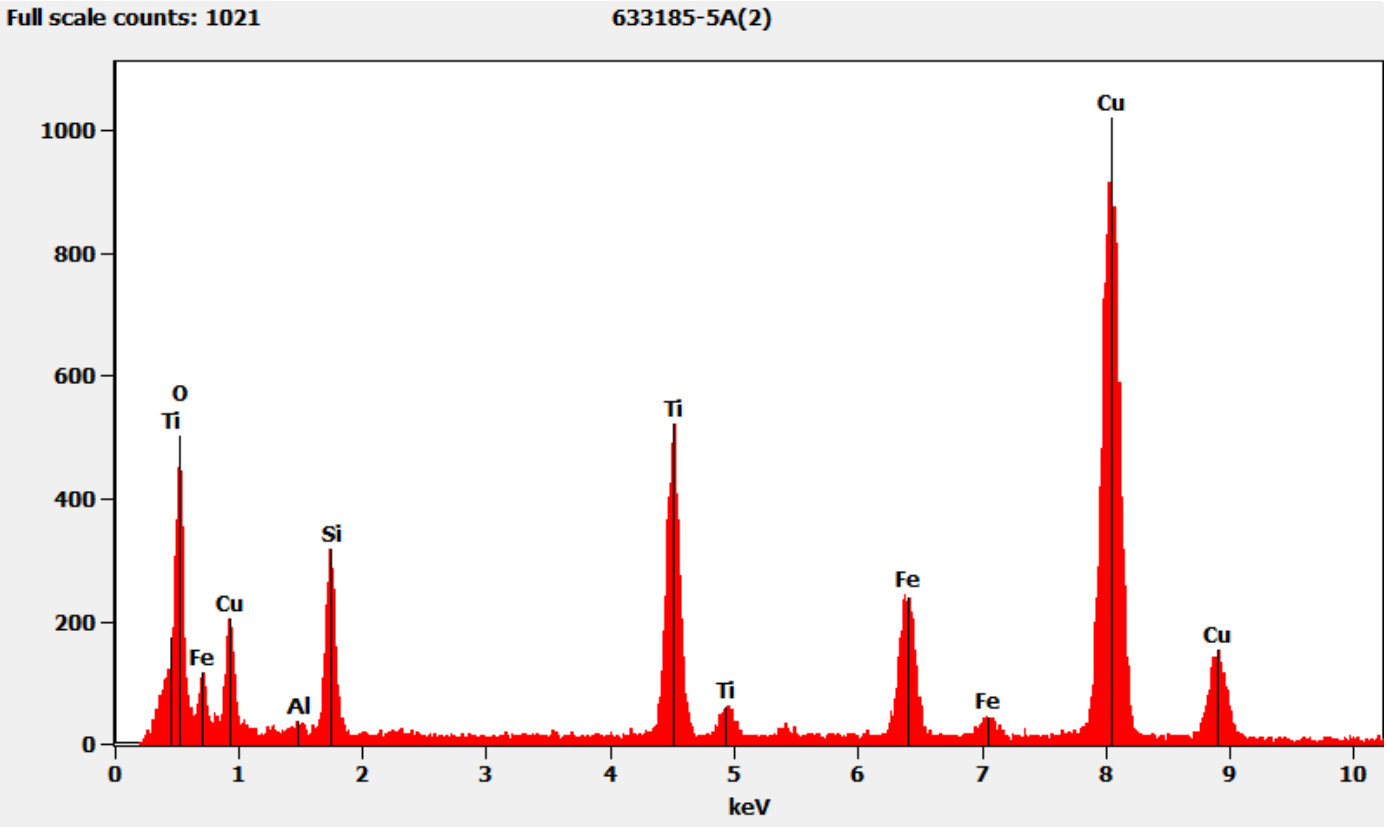


633185-5A, Particle Containing Iron, Titanium, and Silicon

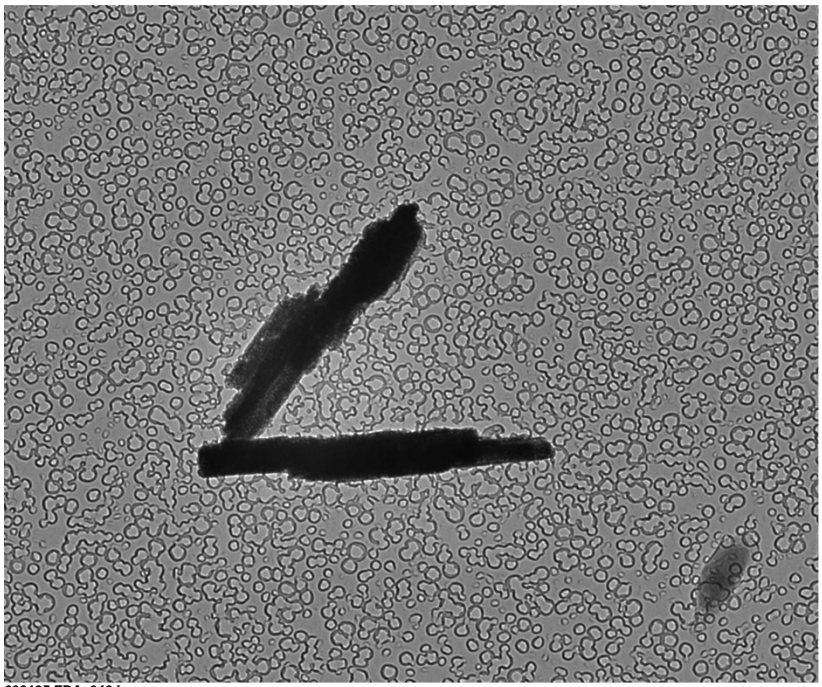


Diffraction Pattern from the Particle Containing Iron, Titanium, and Silicon Pictured Above

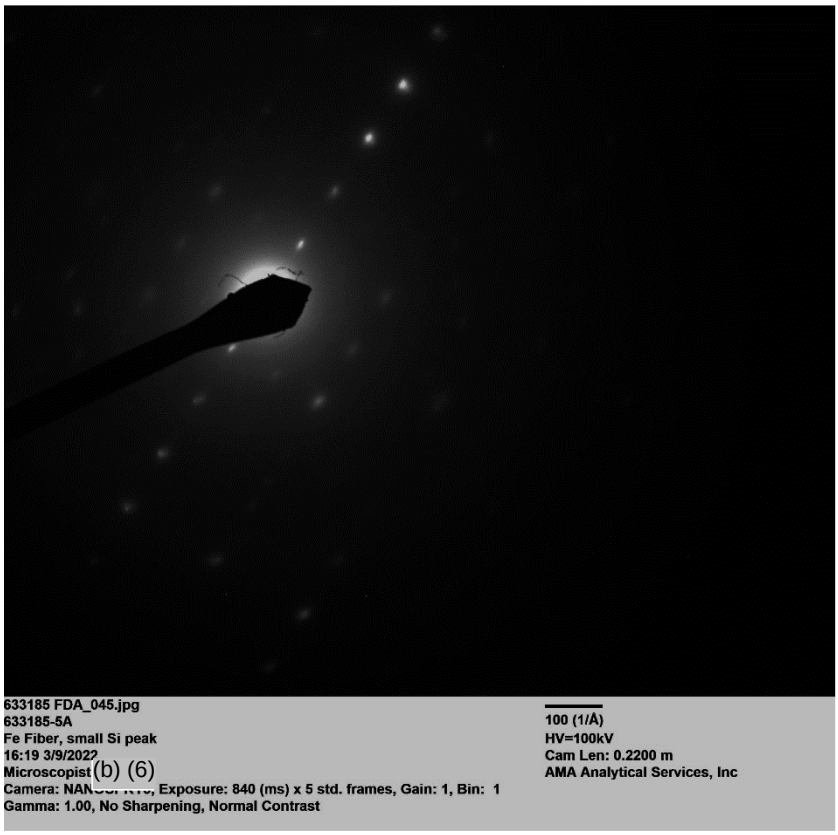
Chemistry from the Particle Containing Iron, Titanium, and Silicon Pictured Above



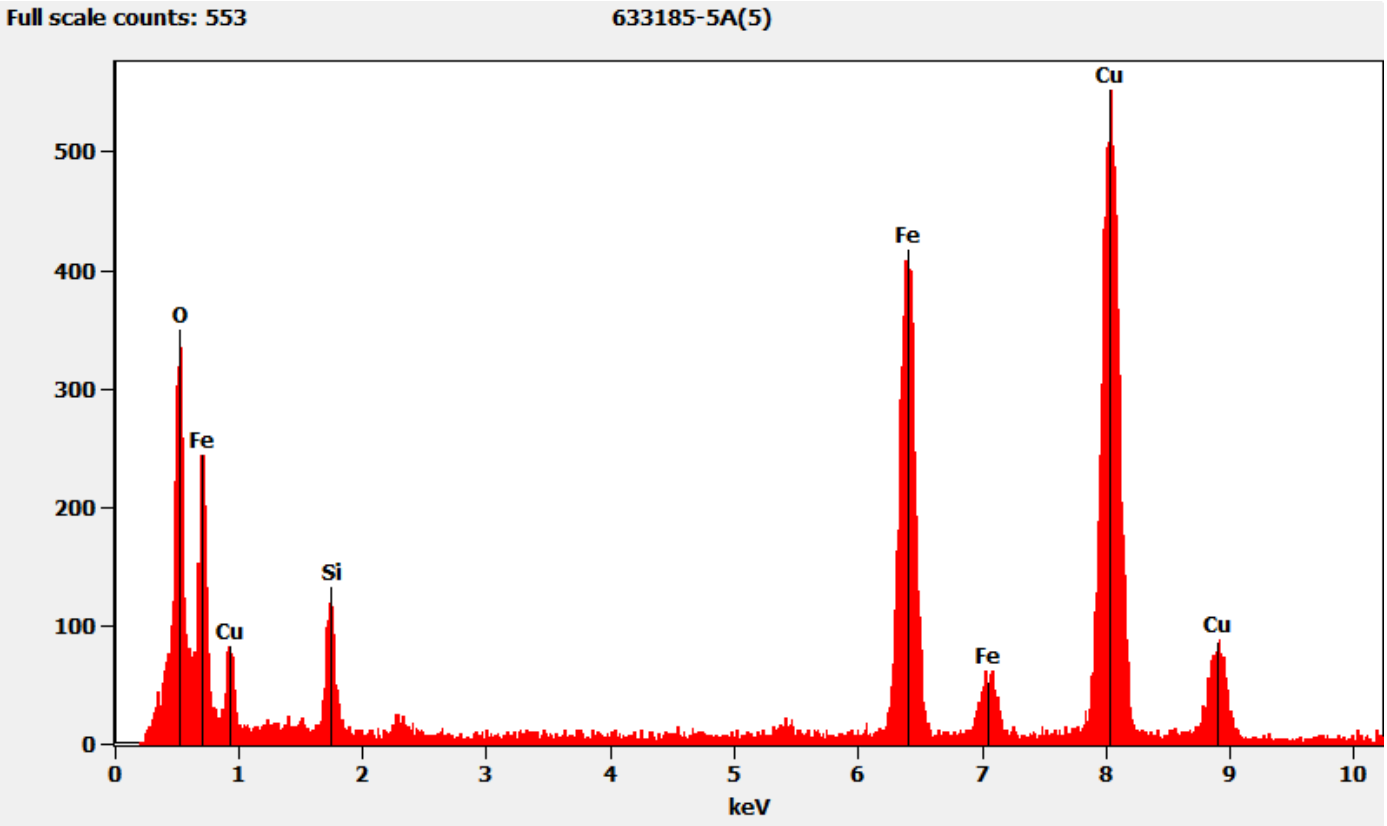
633185-5A, Elongated Particle Containing Iron and Silicon



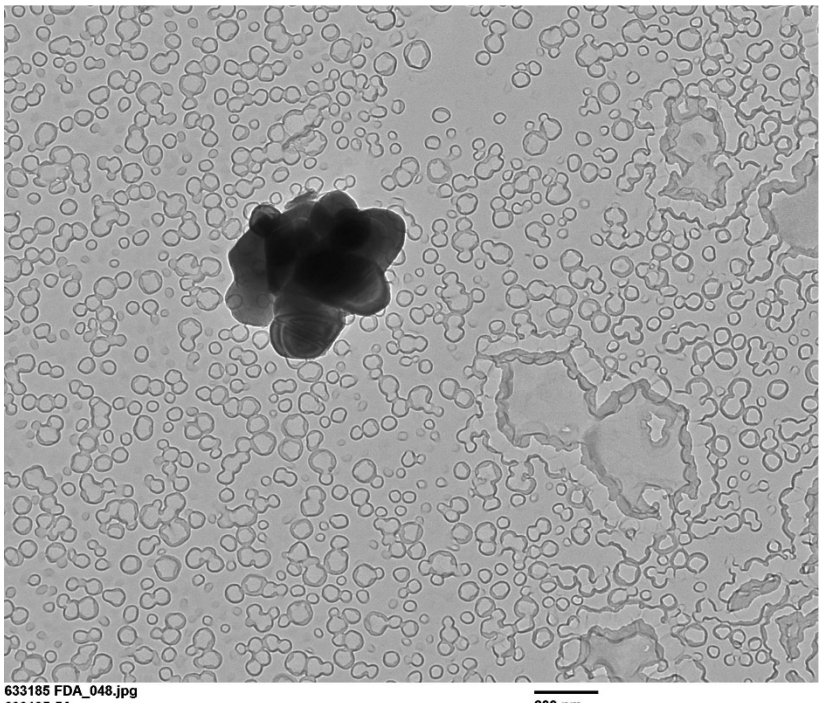
Diffraction Pattern from the Elongated Particle Containing Iron and Silicon Pictured Above



Chemistry from the Elongated Particle Containing Iron and Silicon Pictured Above

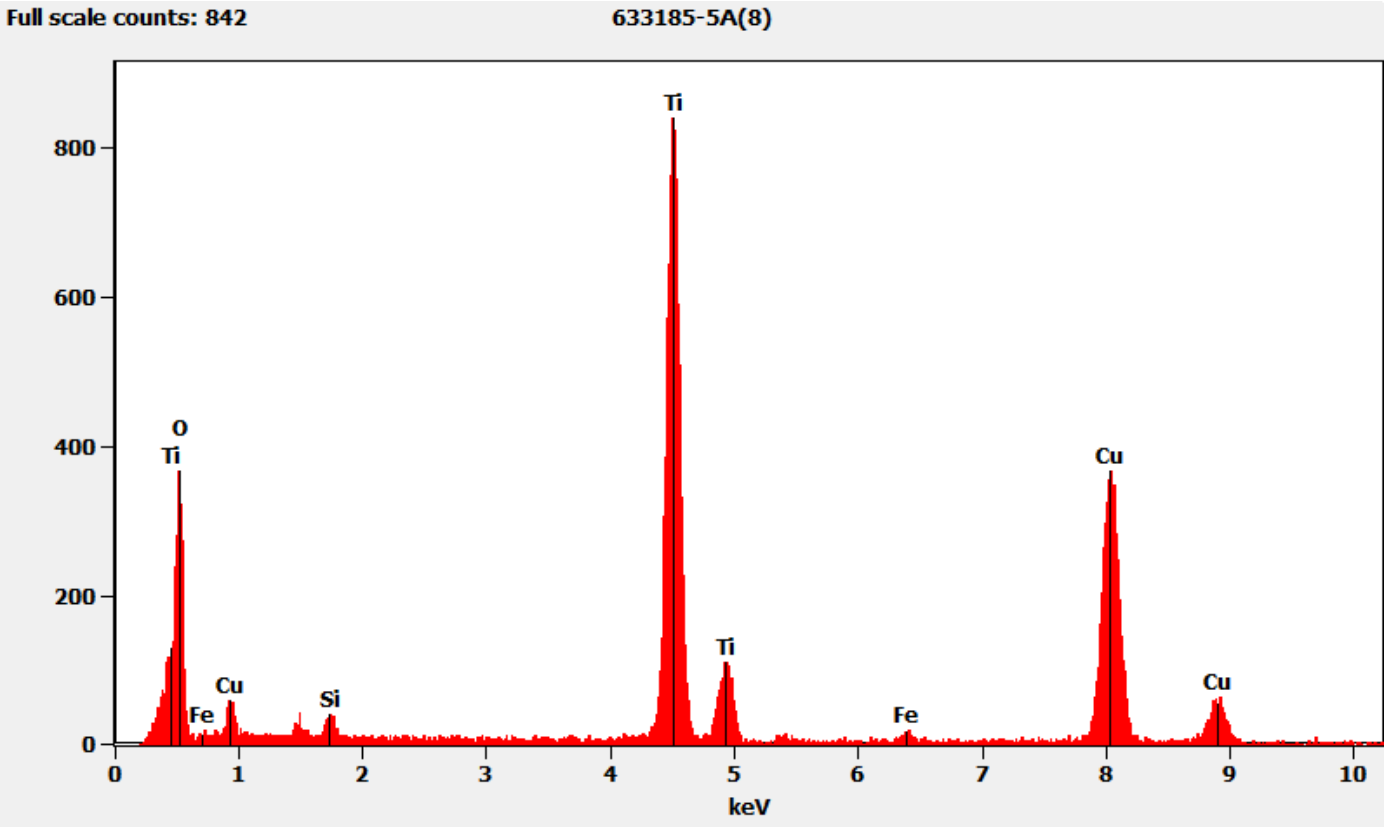


633185-5A, Titanium Particle

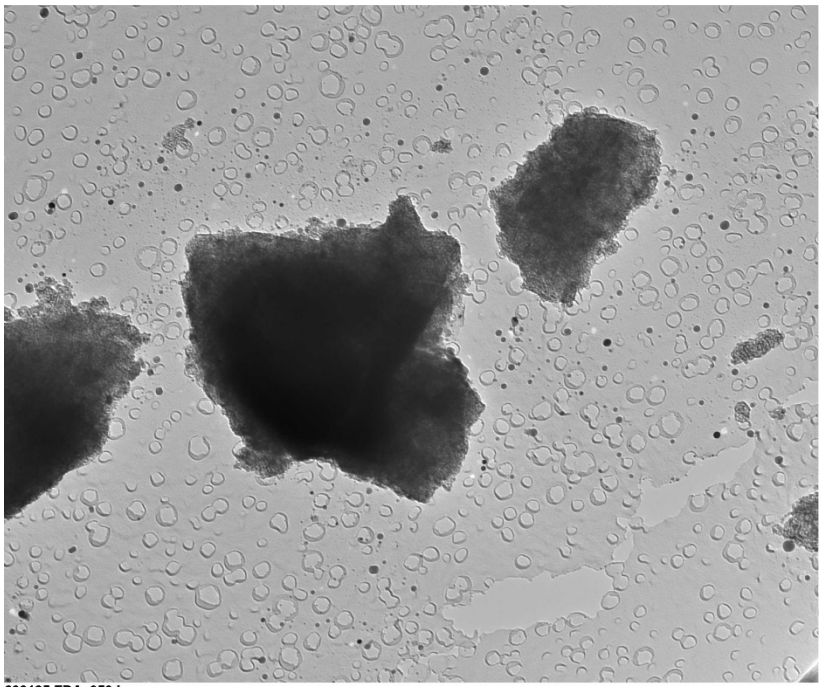


Diffraction Pattern from the Titanium Particle Pictured Above

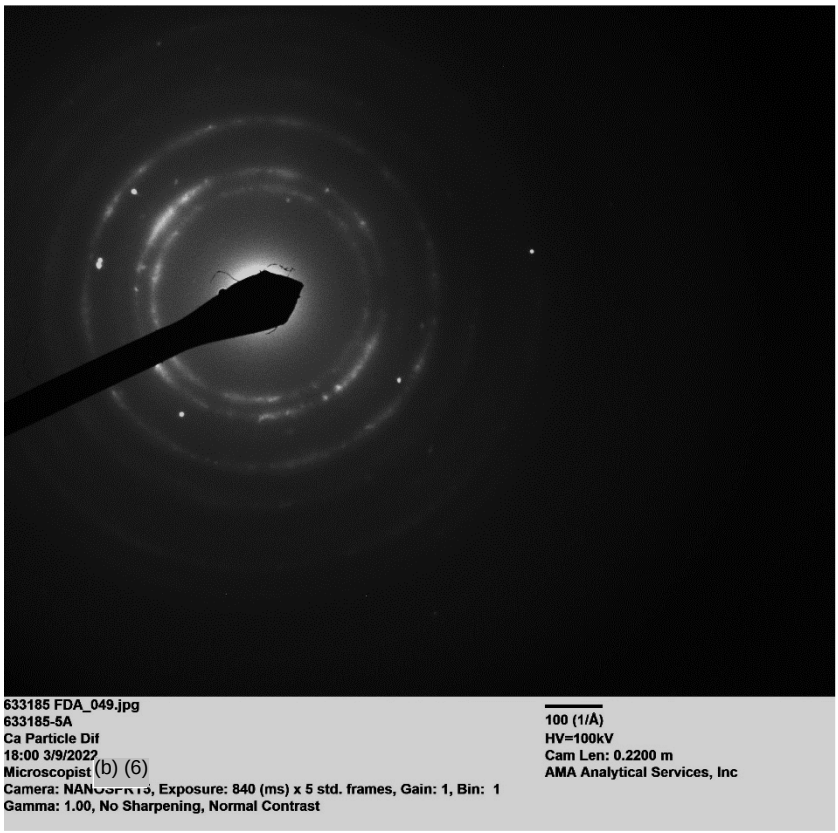
Chemistry from the Titanium Particle Pictured Above



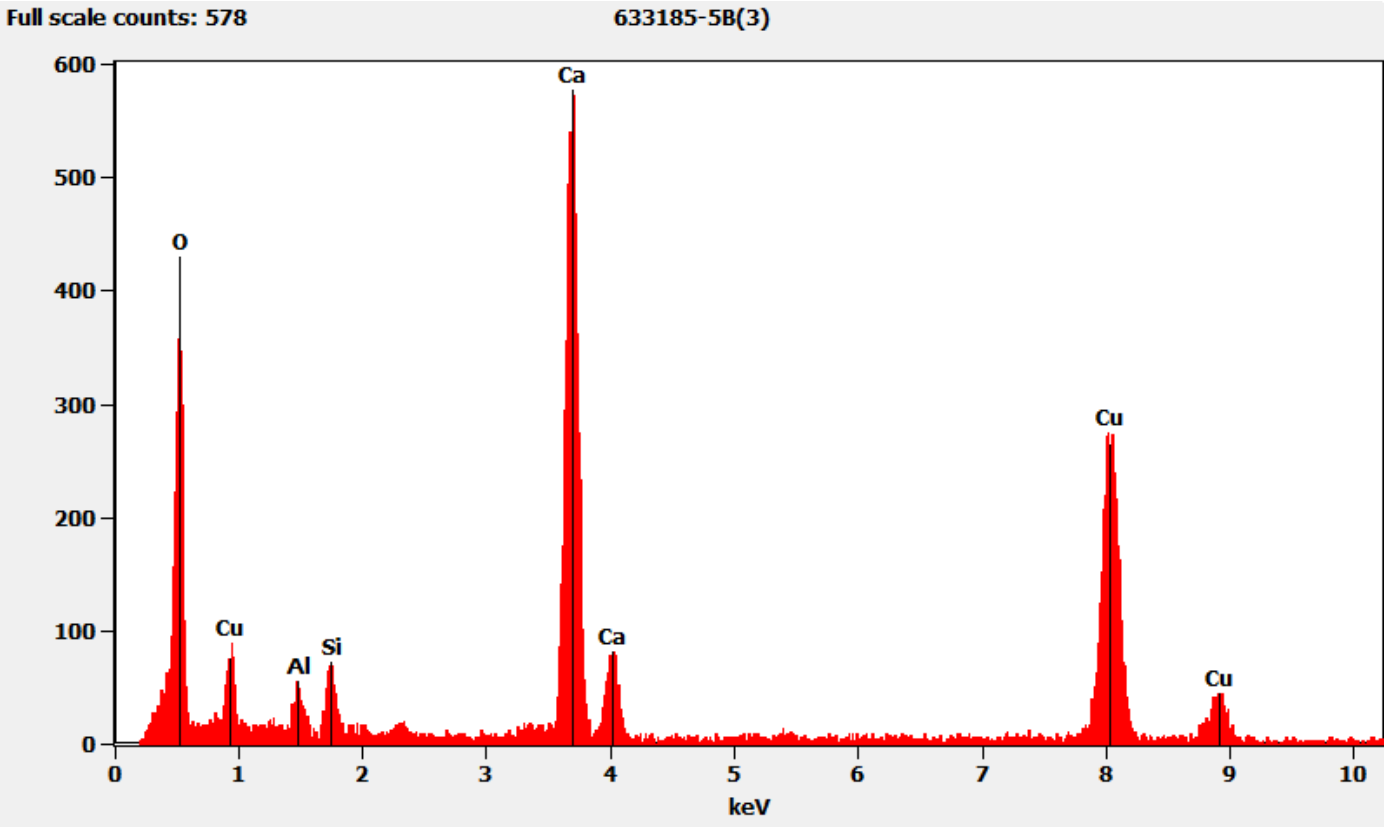
633185-5B, Calcium Particle



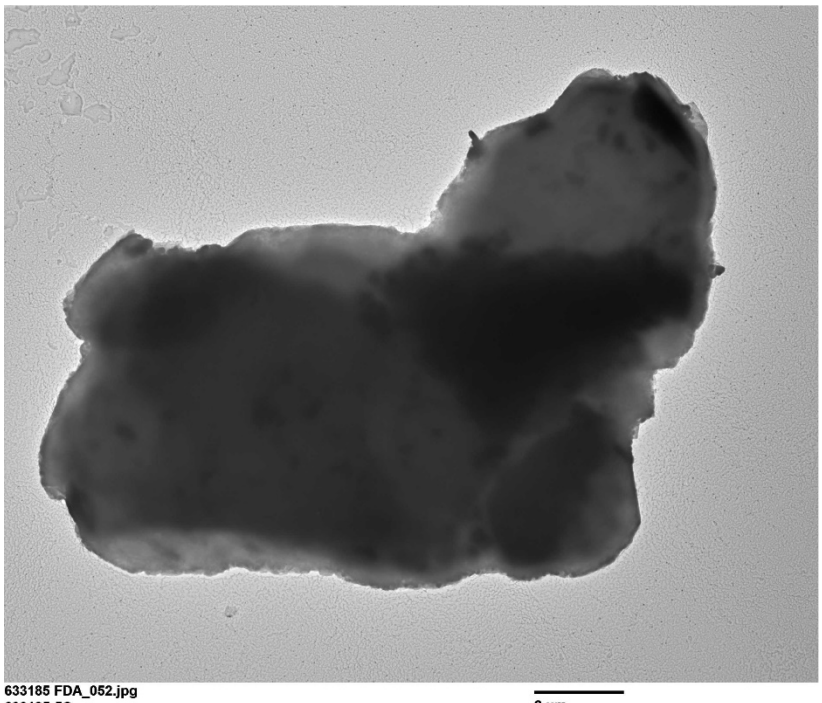
Diffraction Pattern from the Calcium Particle Pictured Above



Chemistry from the Calcium Particle Pictured Above



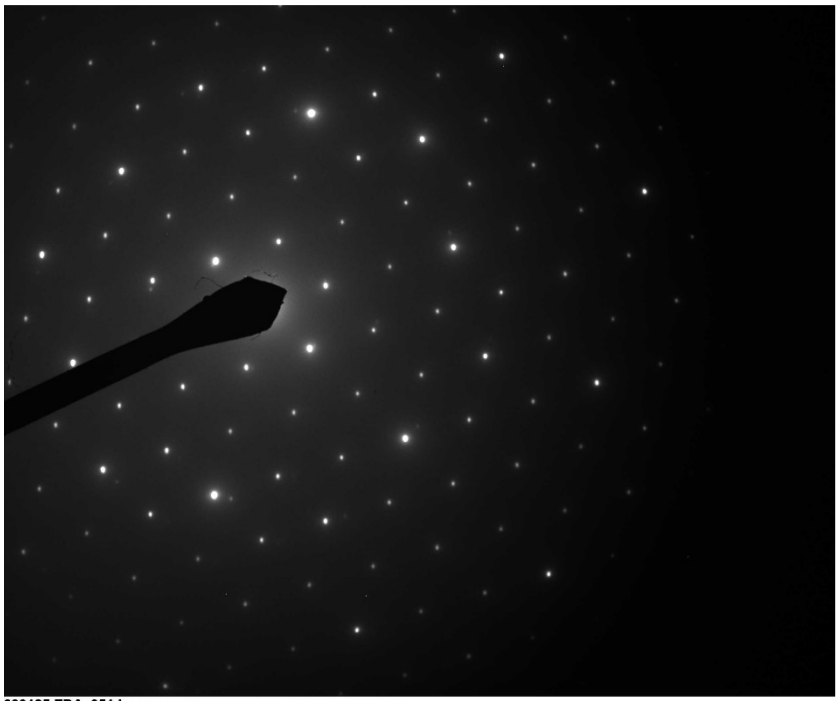
633185-5C, Talc Particle



633185 FDA_052.jpg
633185-5C
Talc Particle
Cal: 0.007355 µm/pix
14:18 3/11/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

2 µm
HV=100kV
Direct Mag: 1400 x
AMA Analytical Services, Inc

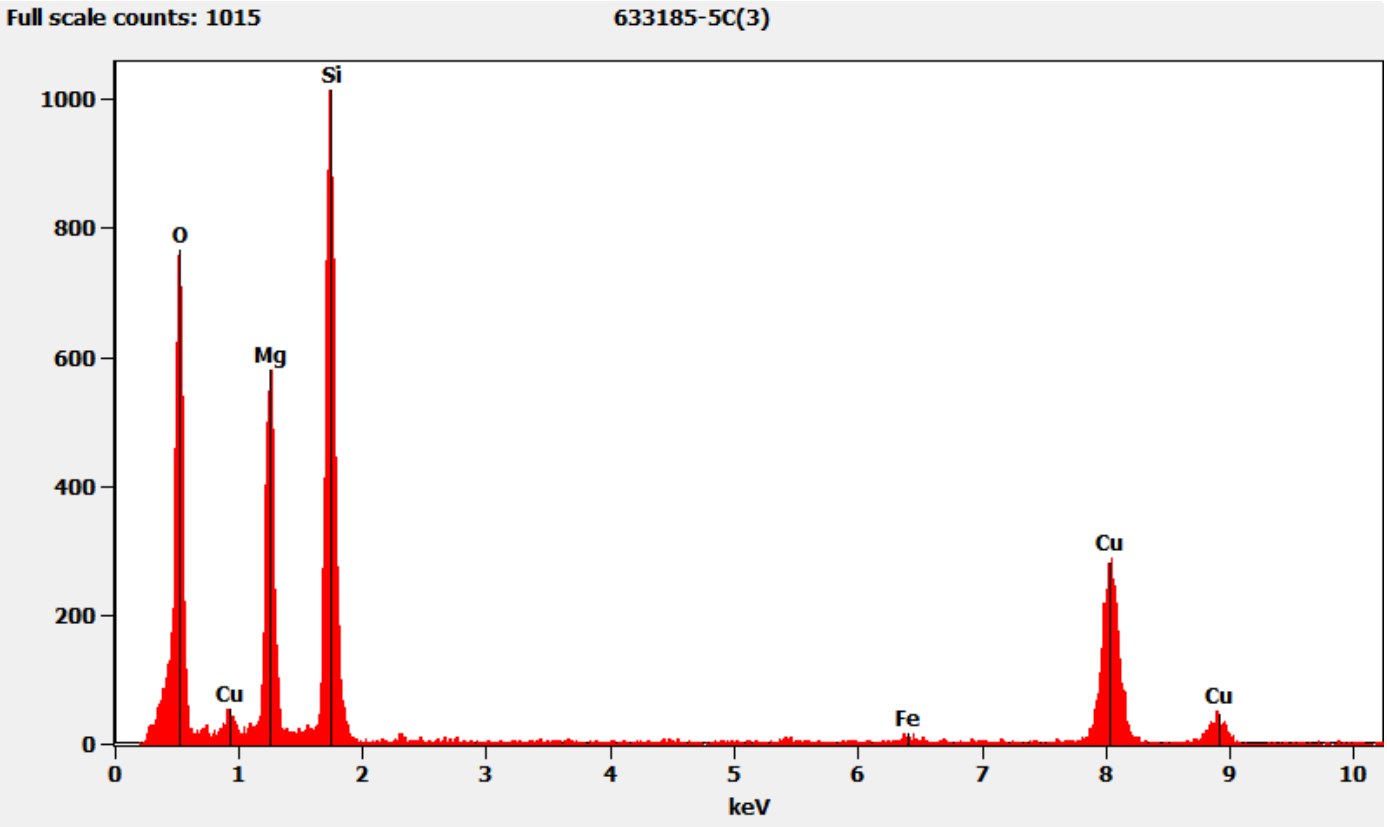
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



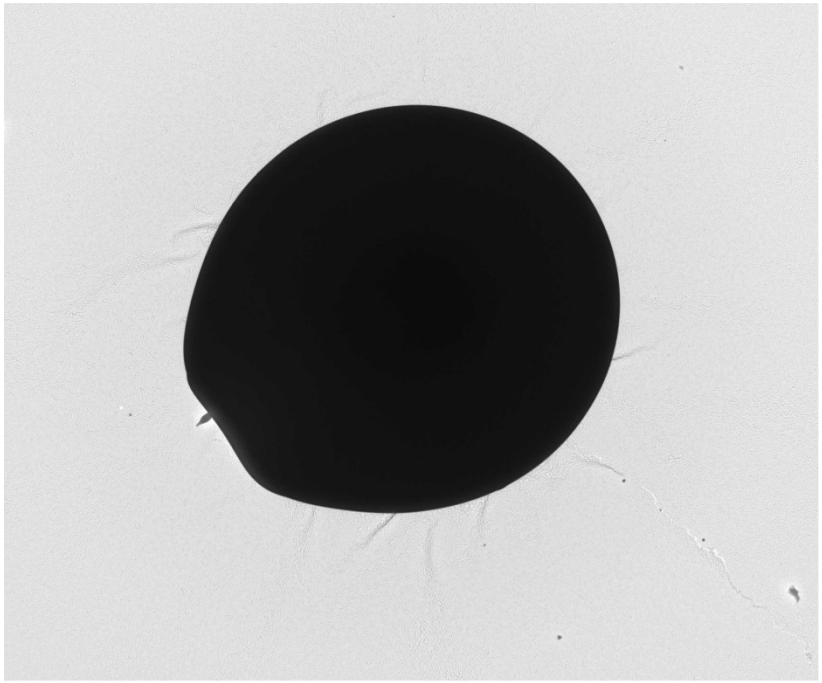
633185 FDA_051.jpg
633185-5C
Talc Particle Dif
14:17 3/11/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

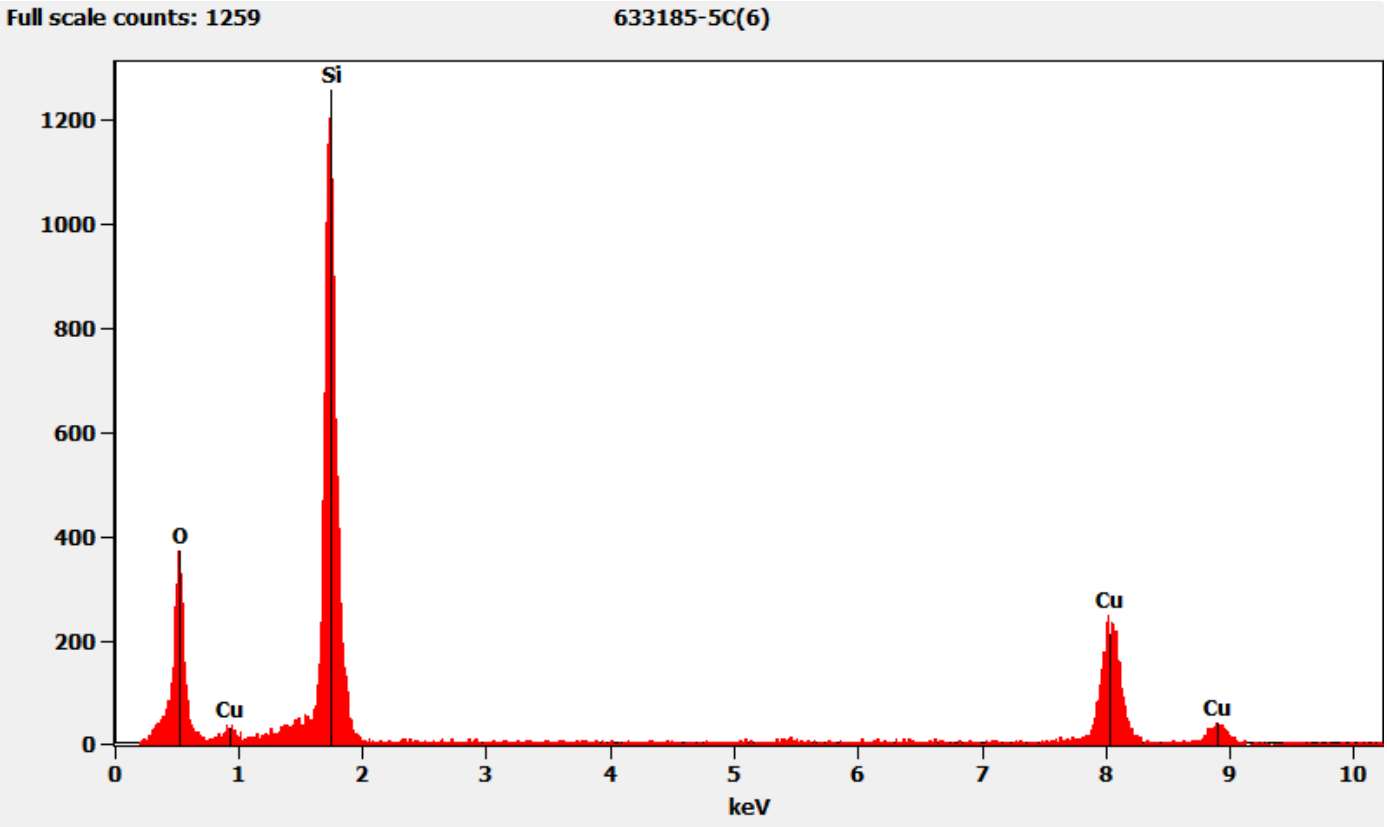
Chemistry from the Talc Particle Pictured Above



633185-5C, Silica Sphere



Chemistry from the Silica Sphere Pictured Above



633185-6A, 6B, 6C/Client Sample: 01212022-6

PLM

All three aliquots of sample 01212022-6 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-6A	No Asbestos Detected
633185-6B	No Asbestos Detected
633185-6C	No Asbestos Detected

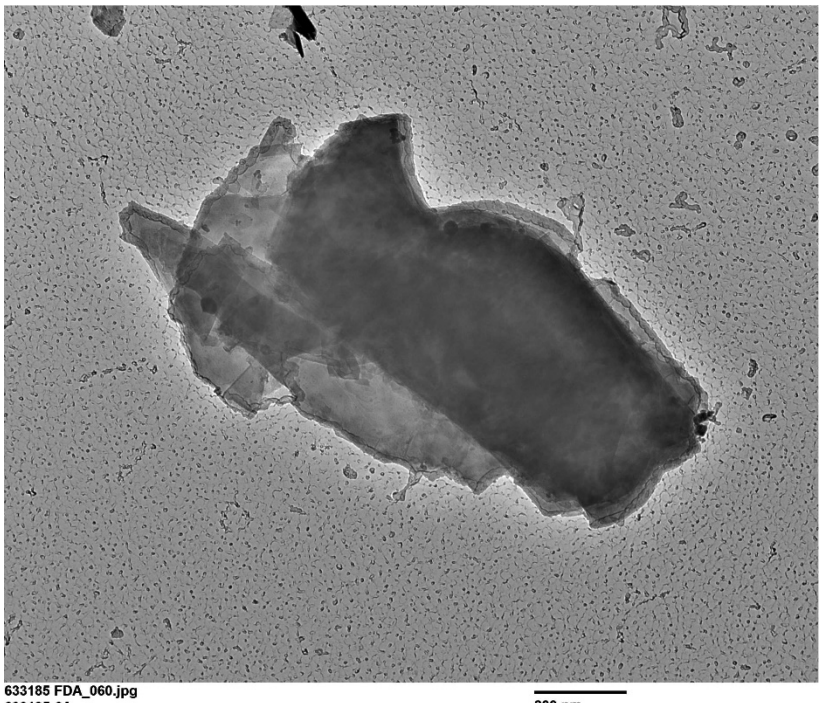
TEM

(b) (6) analyzed aliquot 6A March 11, 2022. (b) (6) analyzed aliquots 6B and 6C on March 15, 2022. The primary particle observed was talc; titanium particles were also observed along with particles containing silicon, aluminum, potassium, titanium, iron, and magnesium, iron particles, mica particles, and talc fibers. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-6A	No Asbestos Detected
633185-6B	No Asbestos Detected
633185-6C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

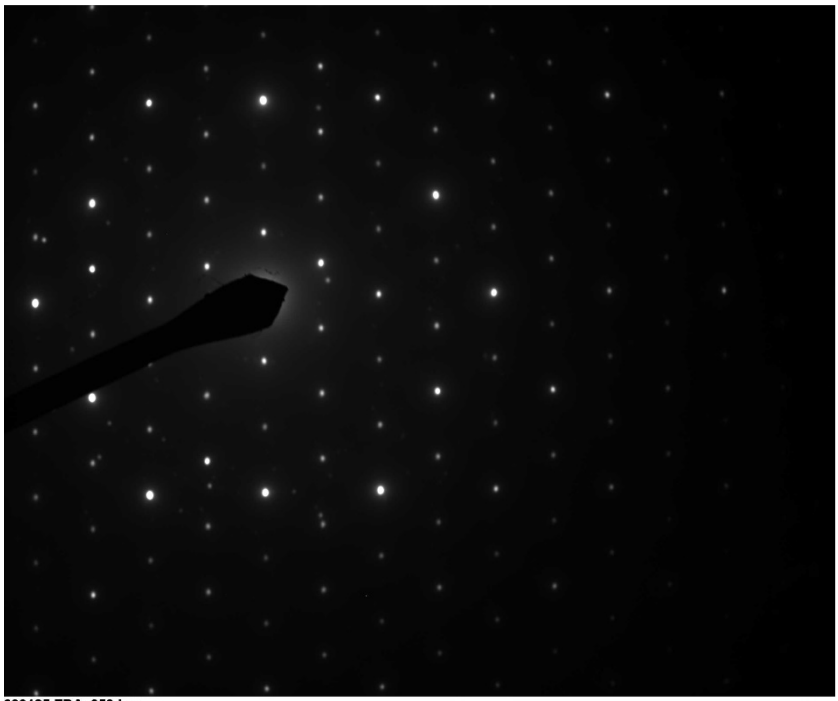
633185-6A, Talc Particle



633185 FDA_060.jpg
633185-6A
Talc Particle
Cal: 0.002860 µm/pix
15:48 3/11/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

800 nm
HV=100kV
Direct Mag: 3600 x
AMA Analytical Services, Inc

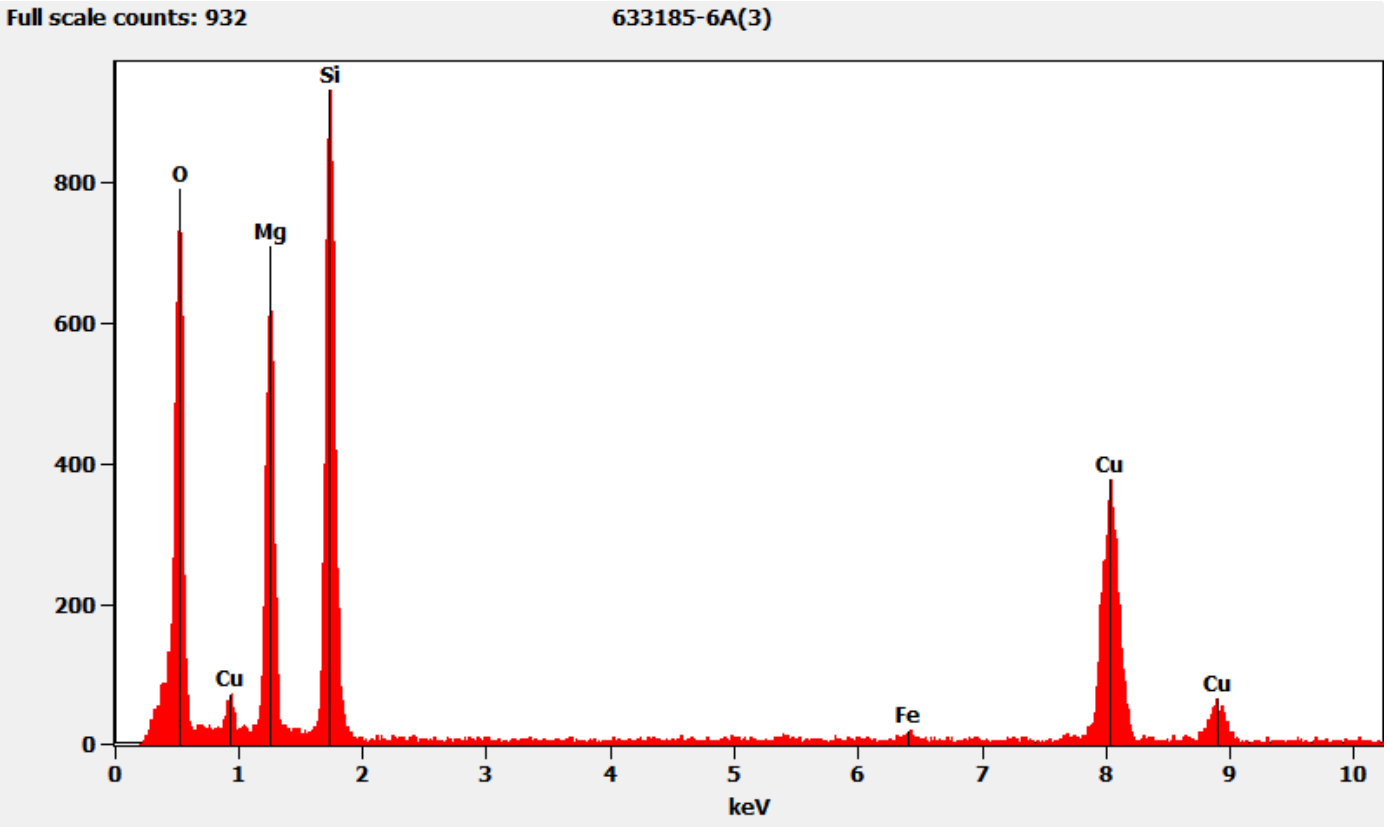
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



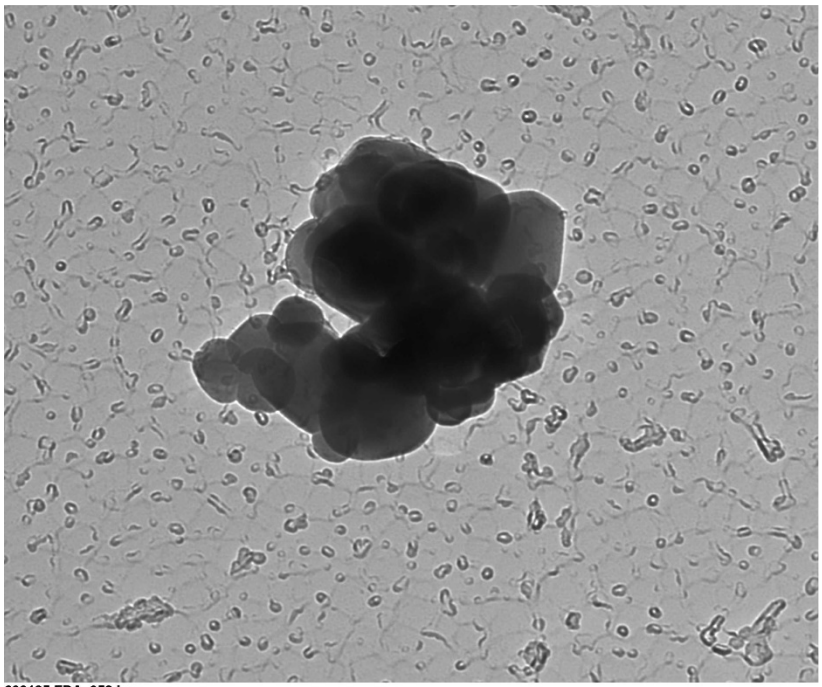
633185 FDA_059.jpg
633185-6A
Talc Particle Dif
15:47 3/11/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle Pictured Above

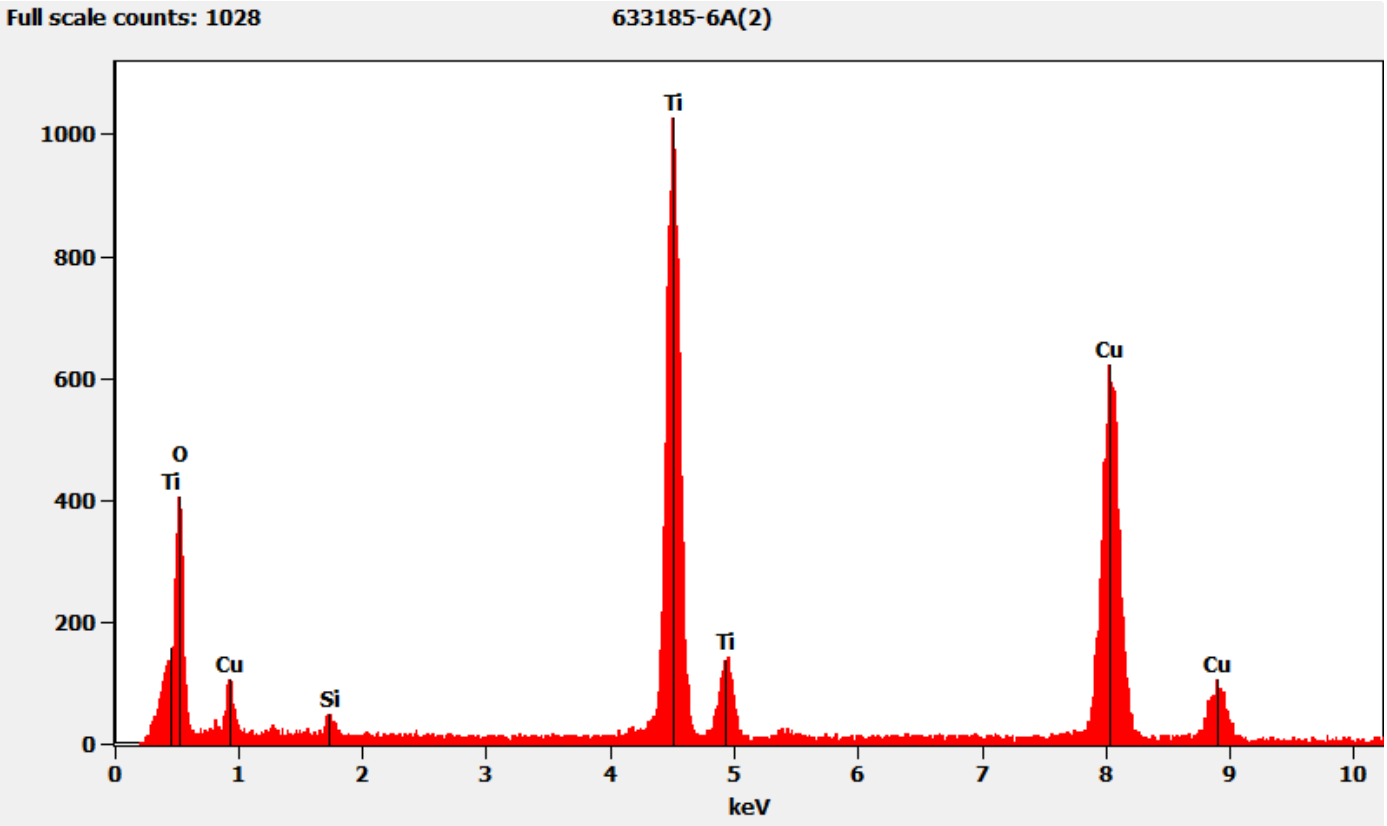


633185-6A, Titanium Particle

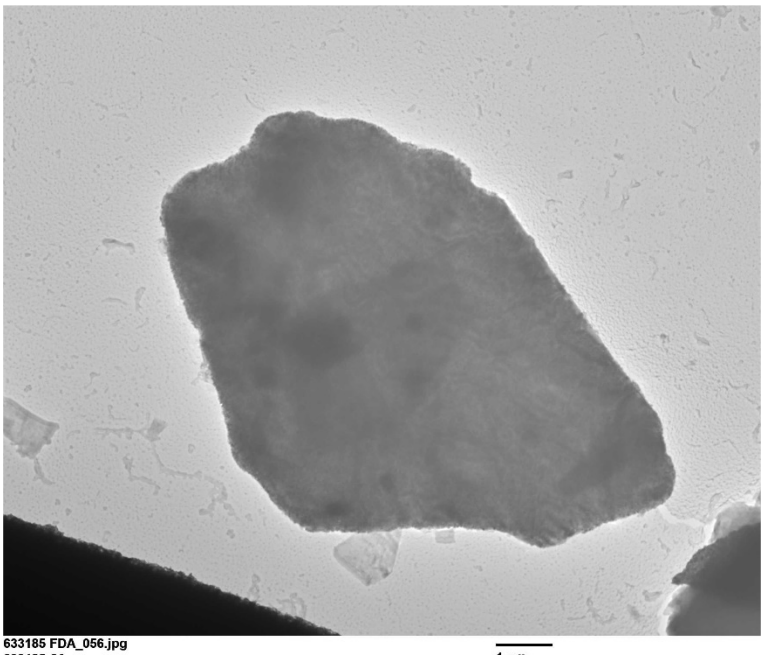


Diffraction Pattern from the Titanium Particle Pictured Above

Chemistry from the Titanium Particle Pictured Above



633185-6A, Particle Containing Silicon, Aluminum, Potassium, Titanium, Iron, and Magnesium



633185 FDA_056.jpg
633185-6A
SiAlKTiFeMg Particle
Cal: 0.005419 µm/pix
15:41 3/11/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

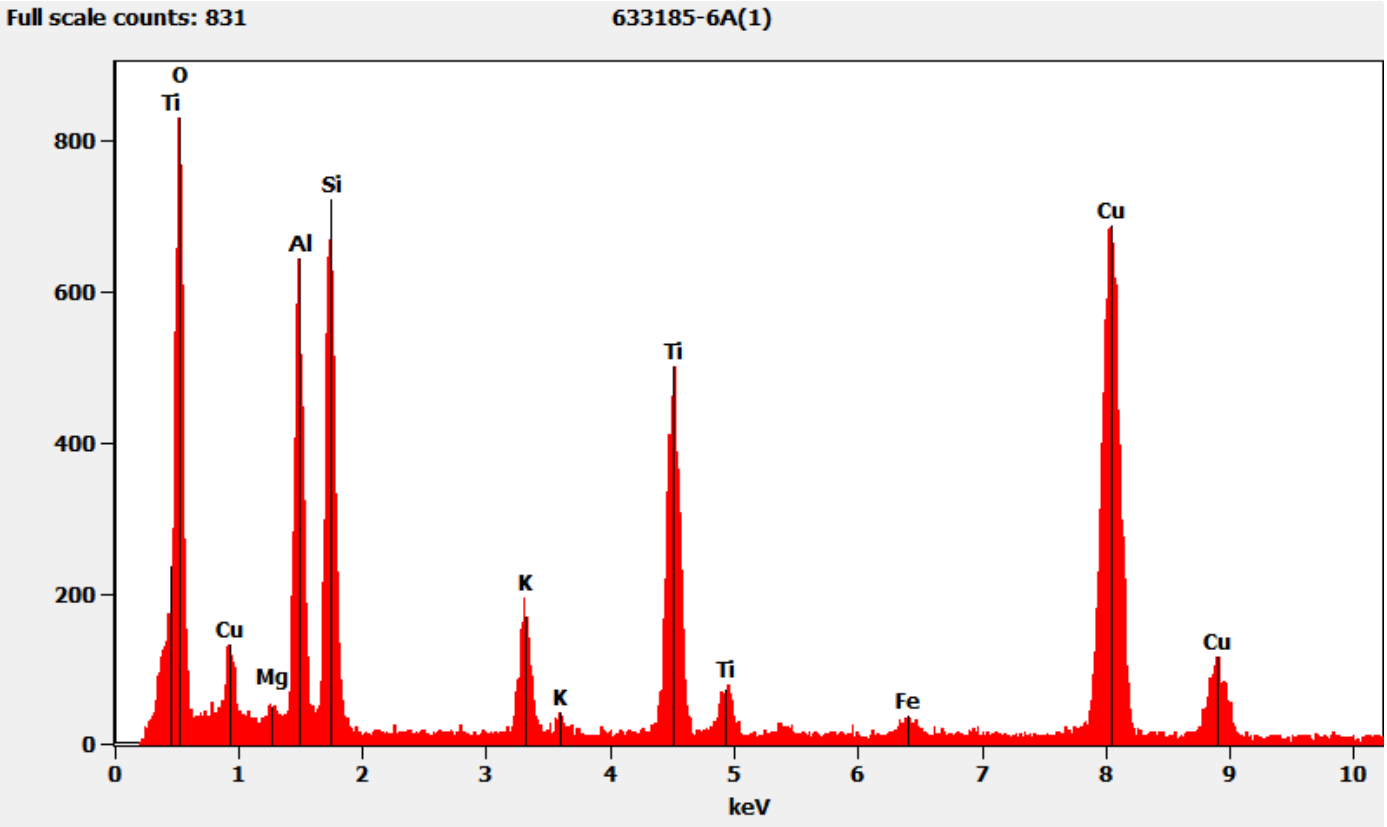
1 µm
HV=100kV
Direct Mag: 1900 x
AMA Analytical Services, Inc

Diffraction Pattern from the Particle Containing Silicon, Aluminum, Potassium, Titanium, Iron, and Magnesium Pictured Above

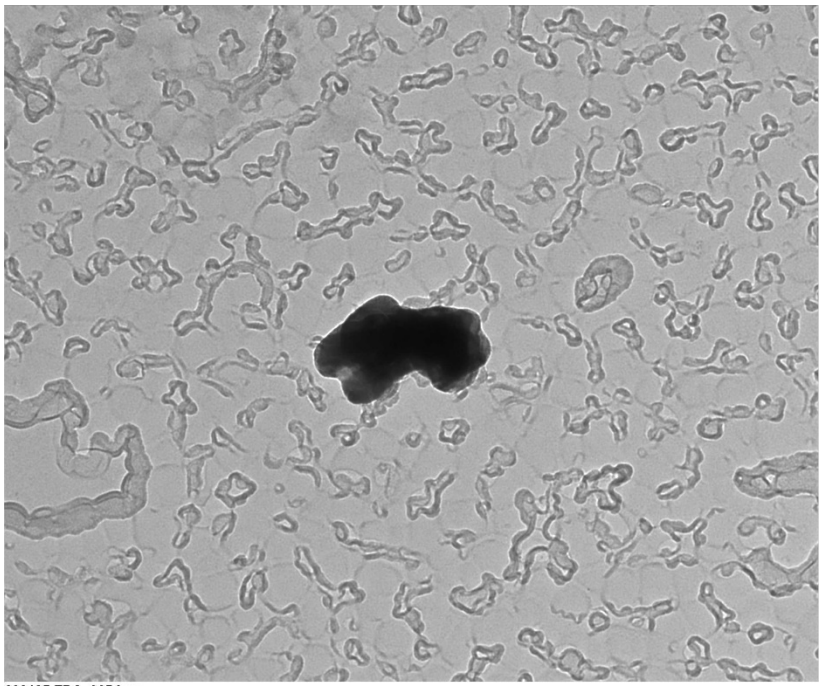
633185 FDA_055.jpg
633185-6A
SiAlKTiFeMg Particle Dif
15:40 3/11/2022
Microscopist (b) (6)
Camera: NAN , Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Particle Containing Silicon, Aluminum, Potassium, Titanium, Iron, and Magnesium Pictured Above

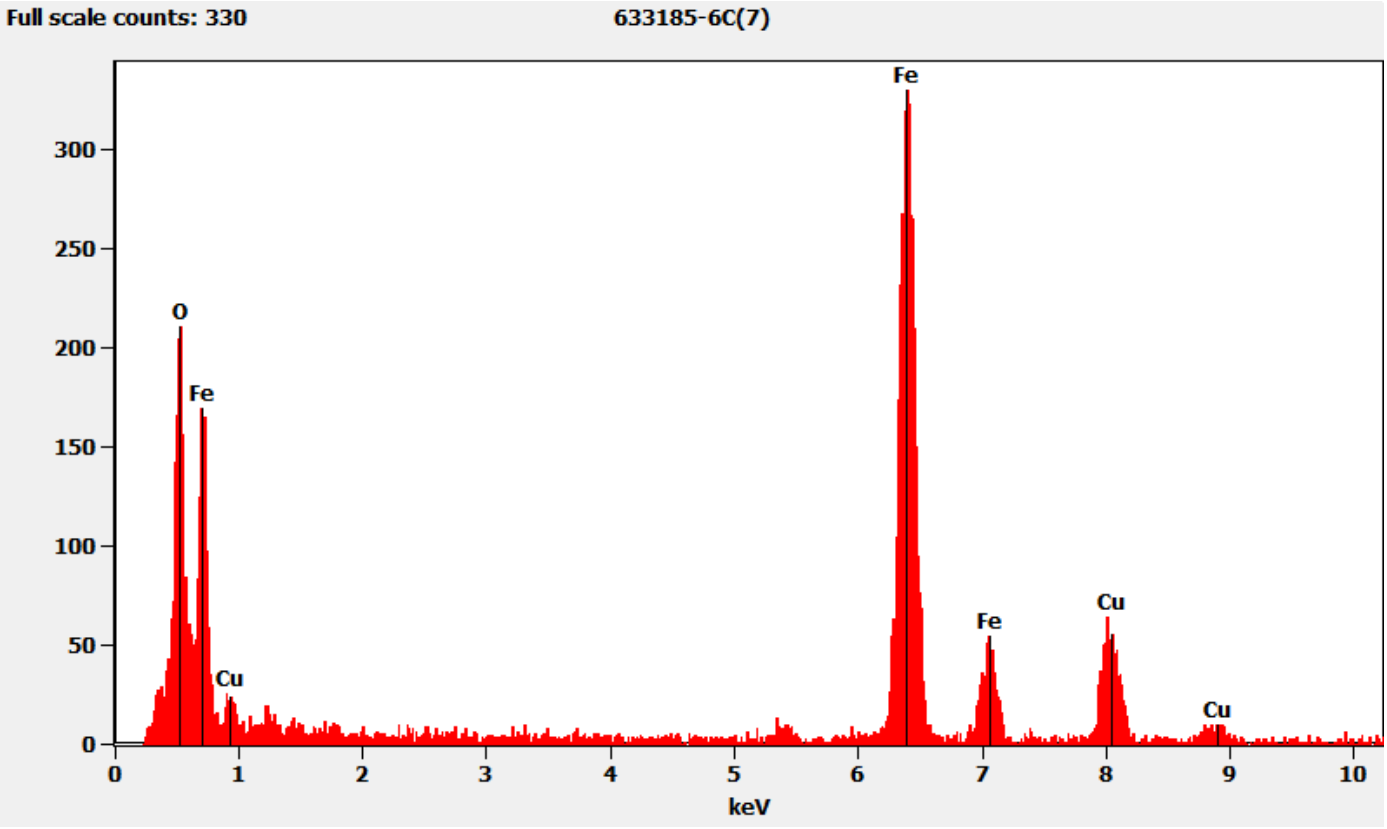


633185-6C, Iron Particle

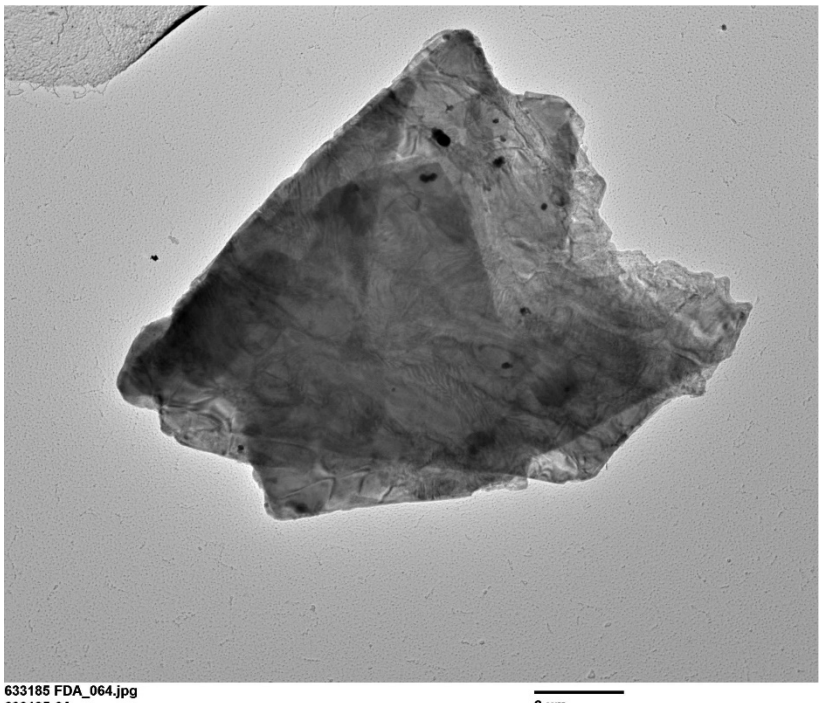


Diffraction Pattern from the Iron Particle Pictured Above

Chemistry from the Iron Particle Pictured Above



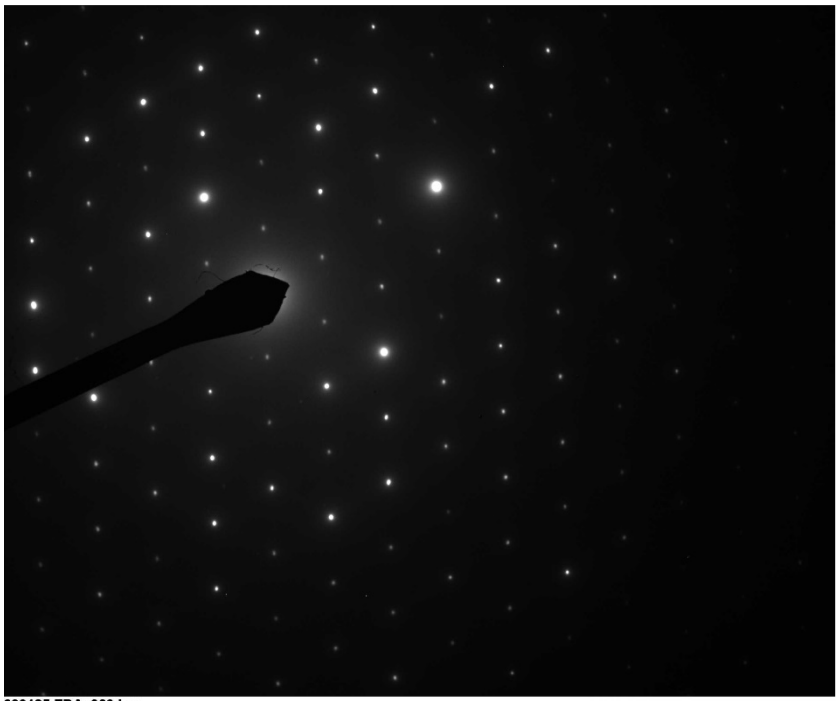
633185-6A, Mica Particle



633185 FDA_064.jpg
633185-6A
Mica
Cal: 0.007355 µm/pix
16:32 3/11/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

2 µm
HV=100kV
Direct Mag: 1400 x
AMA Analytical Services, Inc

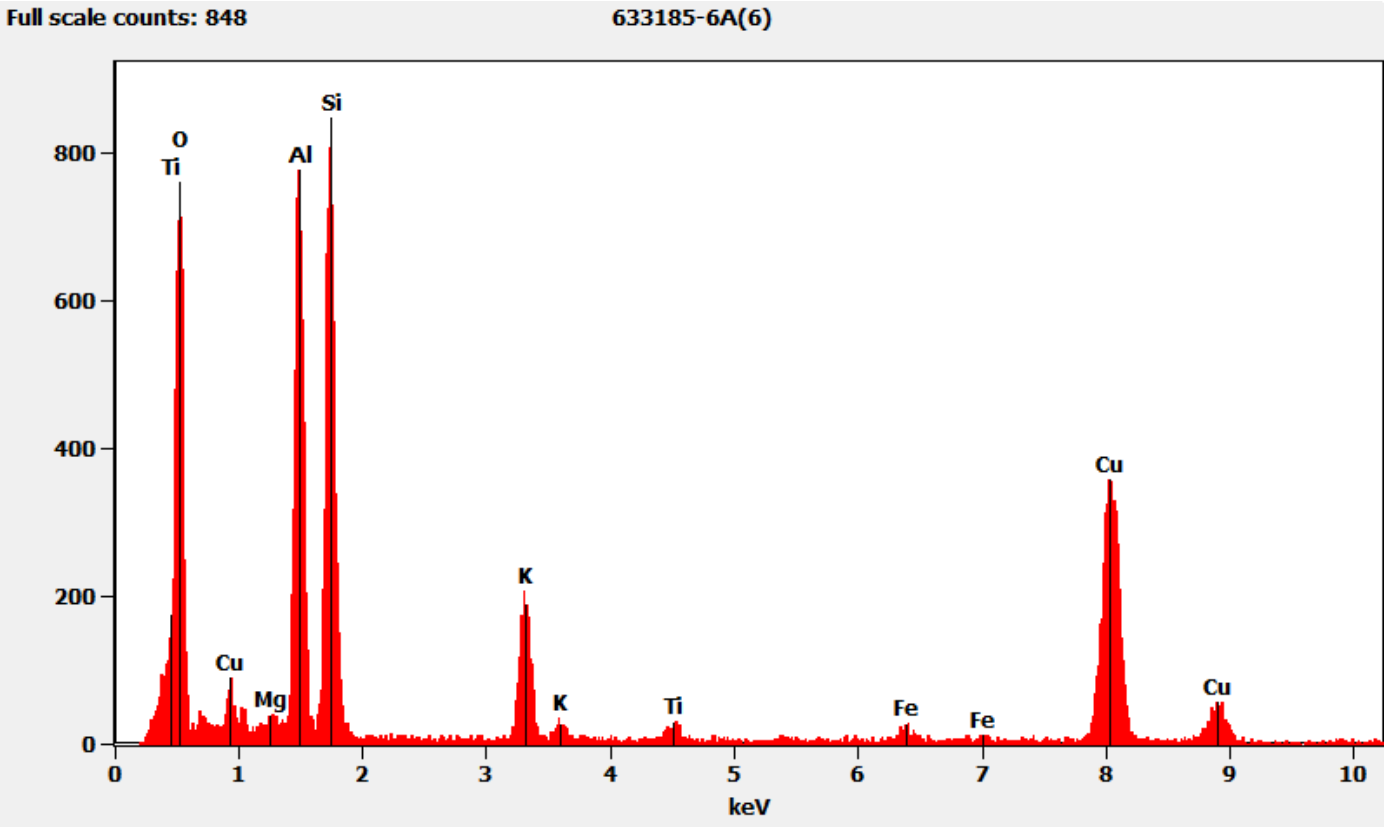
Hexagonal Diffraction Pattern from the Mica Particle Pictured Above



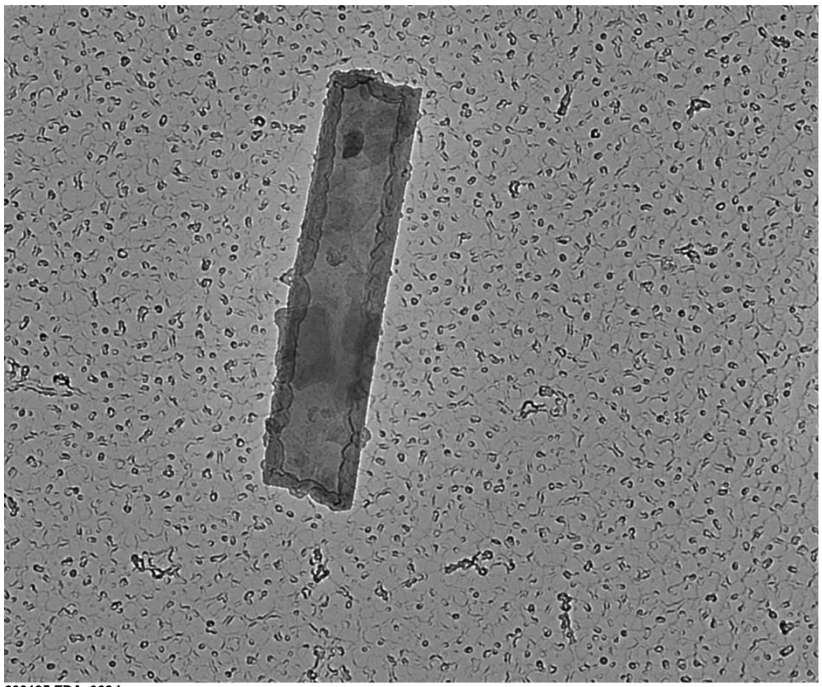
633185 FDA_063.jpg
633185-6A
Mica Dif
16:32 3/11/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above

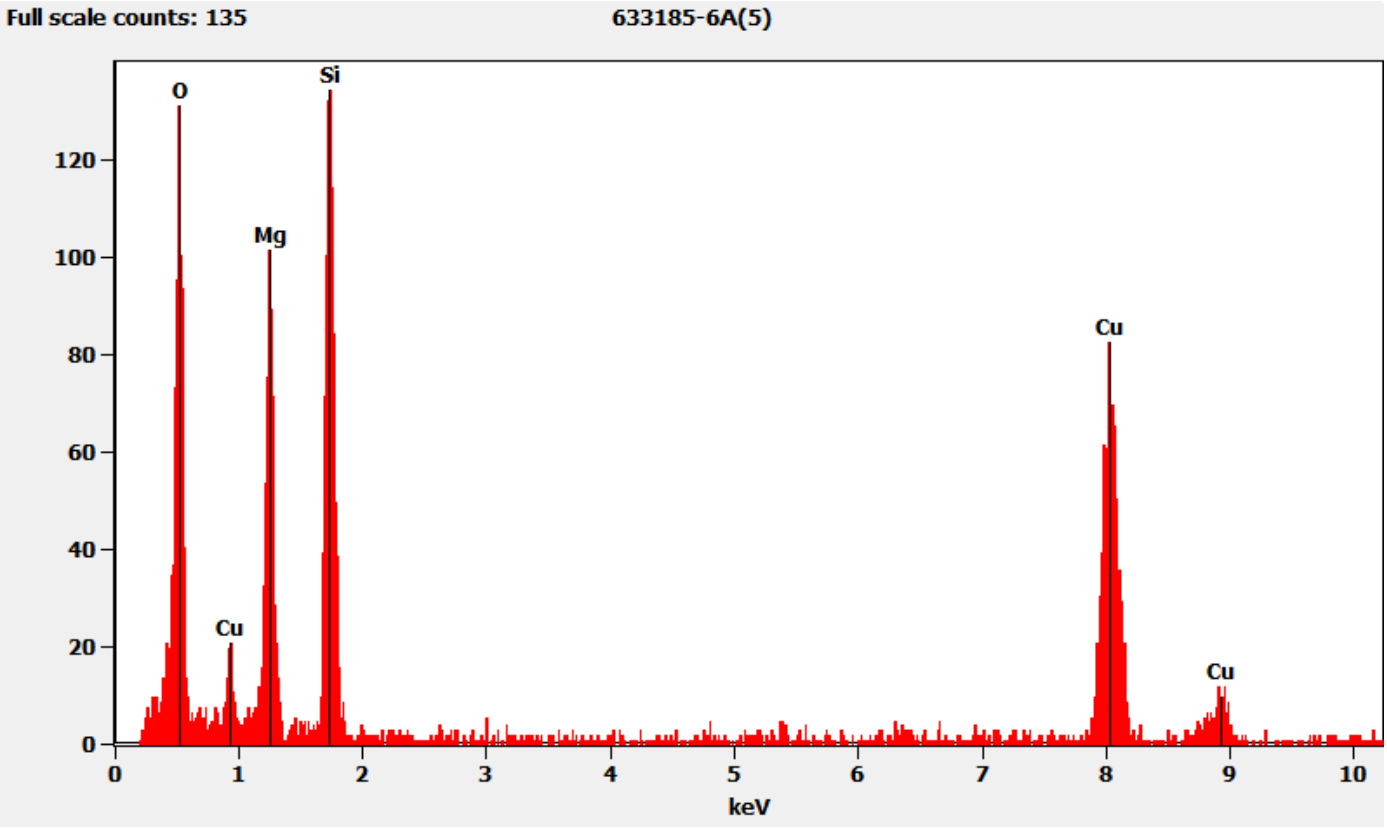


633185-6A, Talc Fiber



Hexagonal Diffraction Pattern from the Talc Fiber Pictured Above

Chemistry from the Talc Fiber Pictured Above



633185-7A, 7B, 7C/Client Sample: 01212022-7

PLM

All three aliquots of sample 01212022-7 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-7A	No Asbestos Detected
633185-7B	No Asbestos Detected
633185-7C	No Asbestos Detected

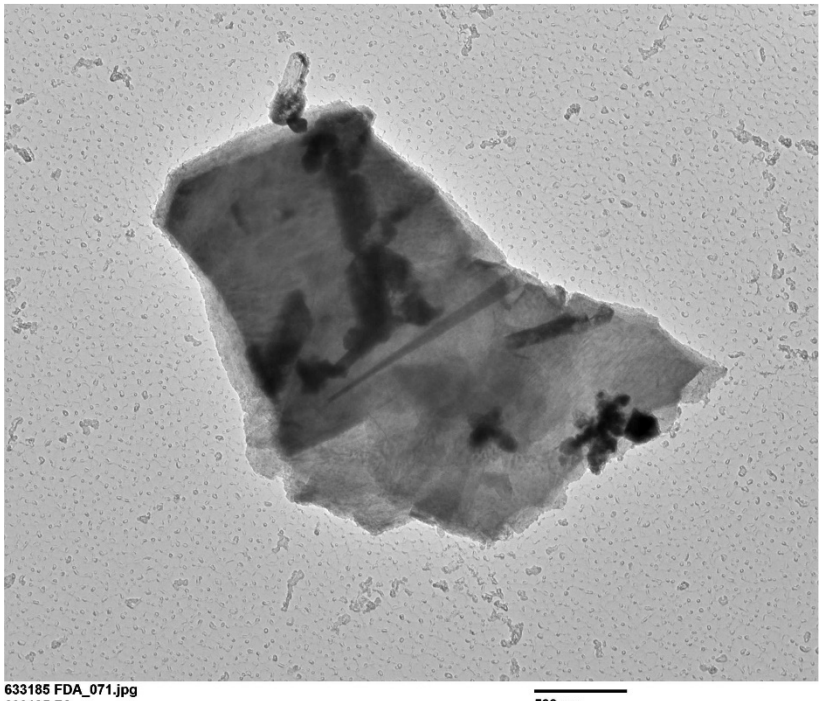
TEM

(b) (6) analyzed aliquot 7A on March 16, 2022. Andreas Saldivar analyzed aliquot 7B on March 17, 2022, and aliquot 7C on March 18, 2022. The primary particle observed was talc; silica spheres, titanium and iron particles were also observed along with mica particles. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

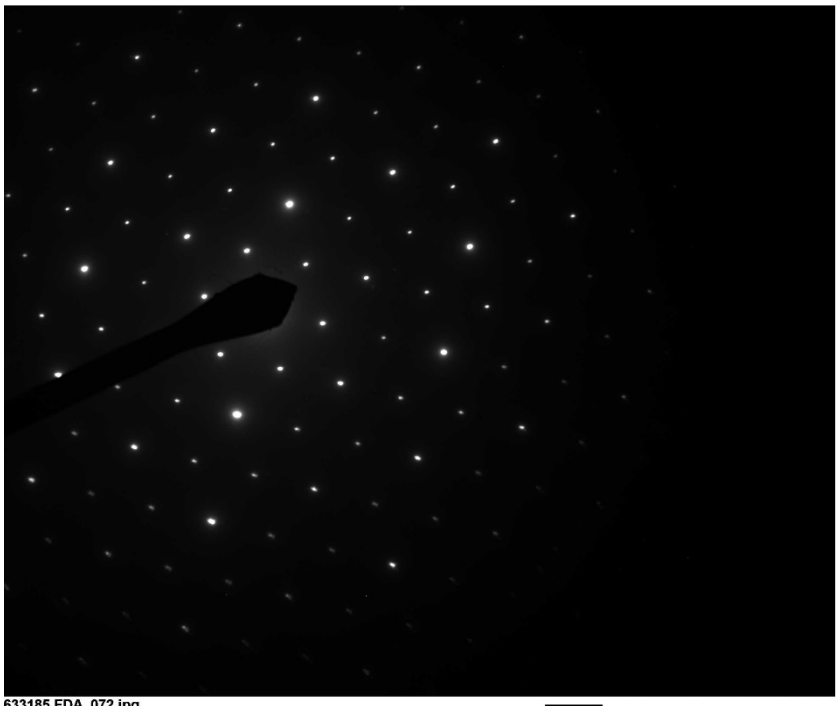
633185-7A	No Asbestos Detected
633185-7B	No Asbestos Detected
633185-7C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-7A, Talc Particle



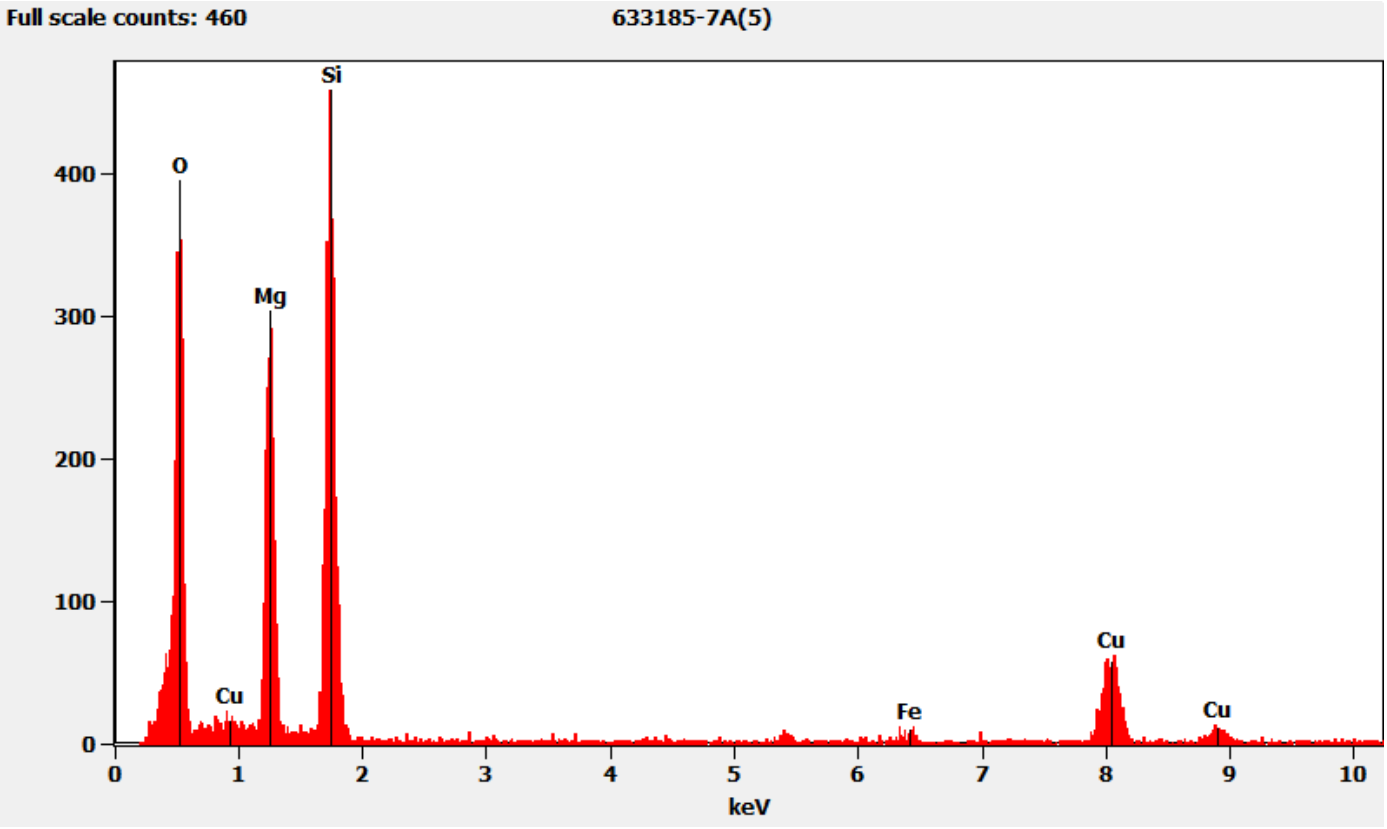
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



633185 FDA_072.jpg
633185-7A
Talc Particle
11:21 3/16/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

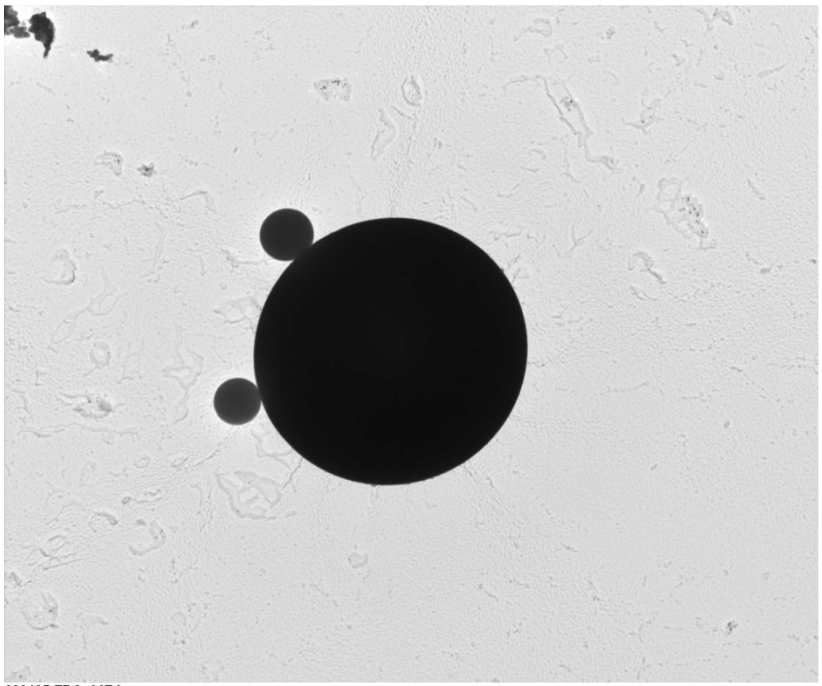
100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle Pictured Above

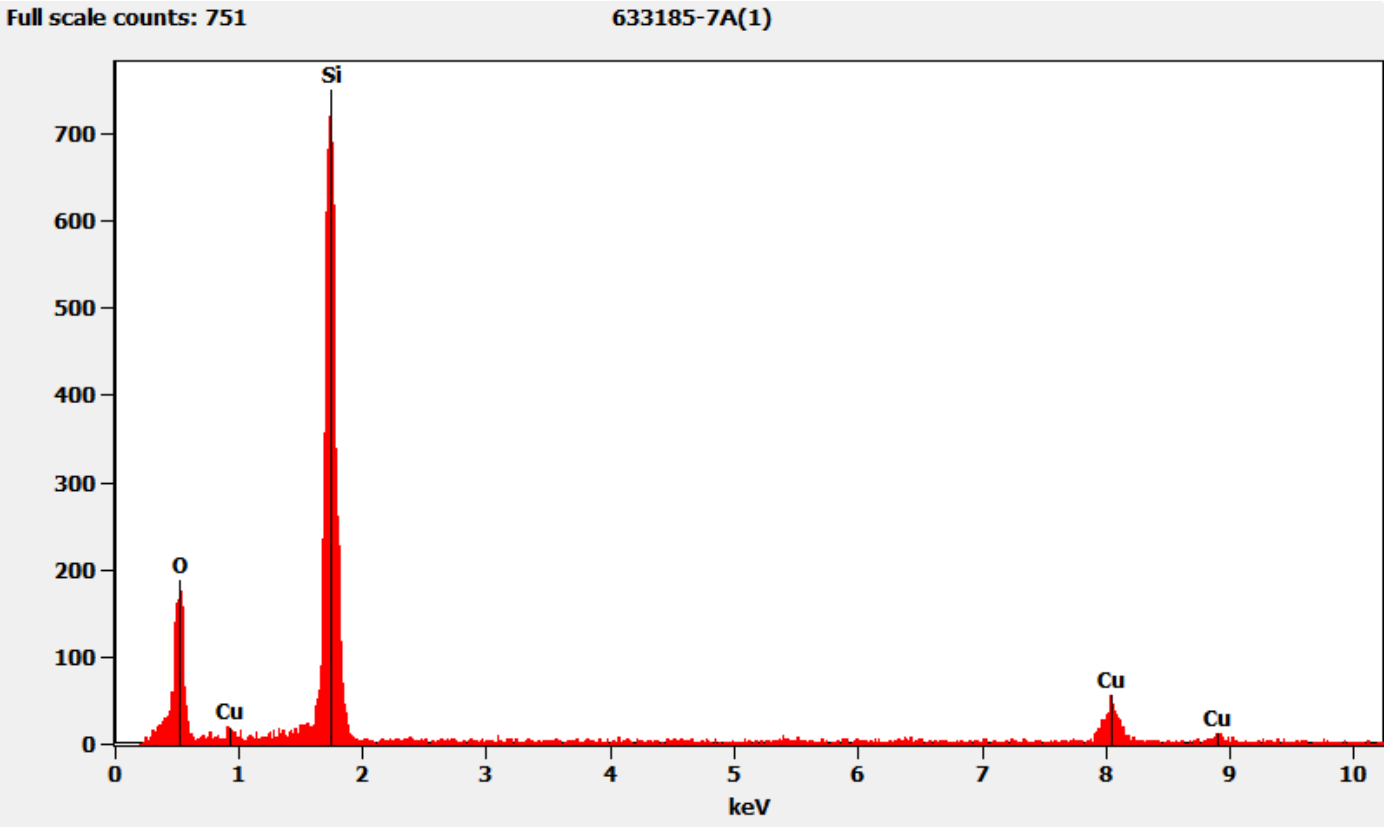


Asbestos · Lead · Mold · Nano

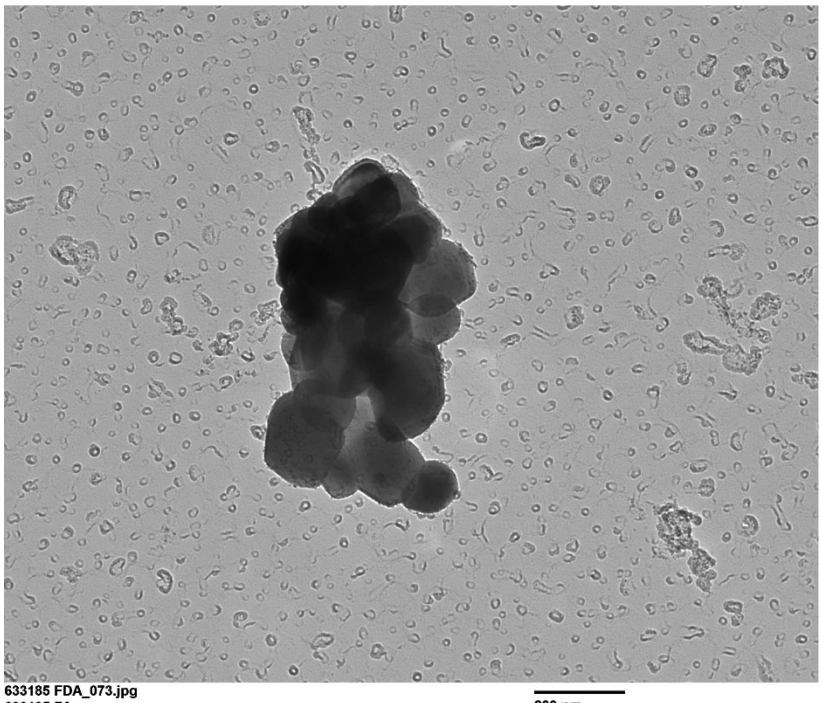
633185-7A, Silica Sphere



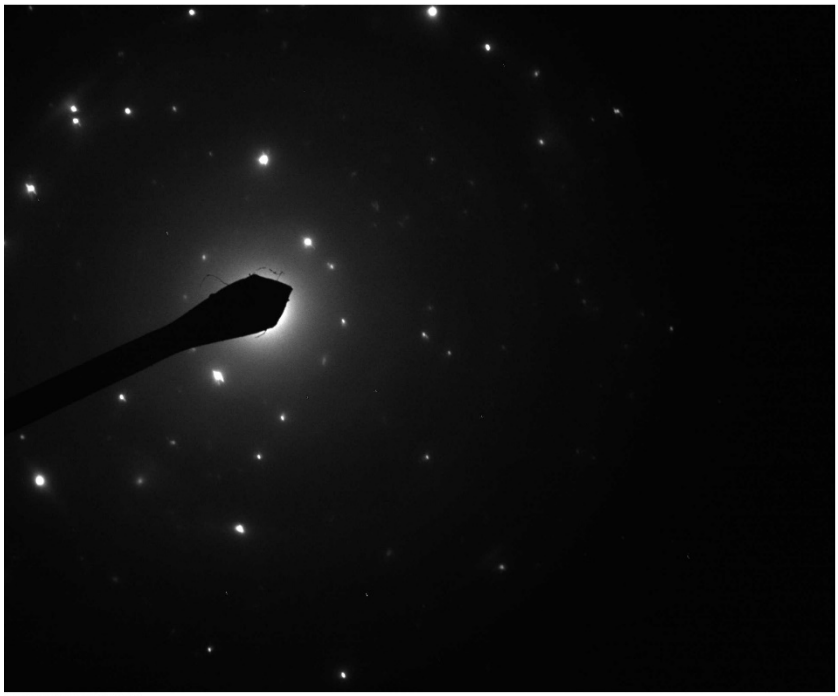
Chemistry from the Silica Sphere Pictured Above



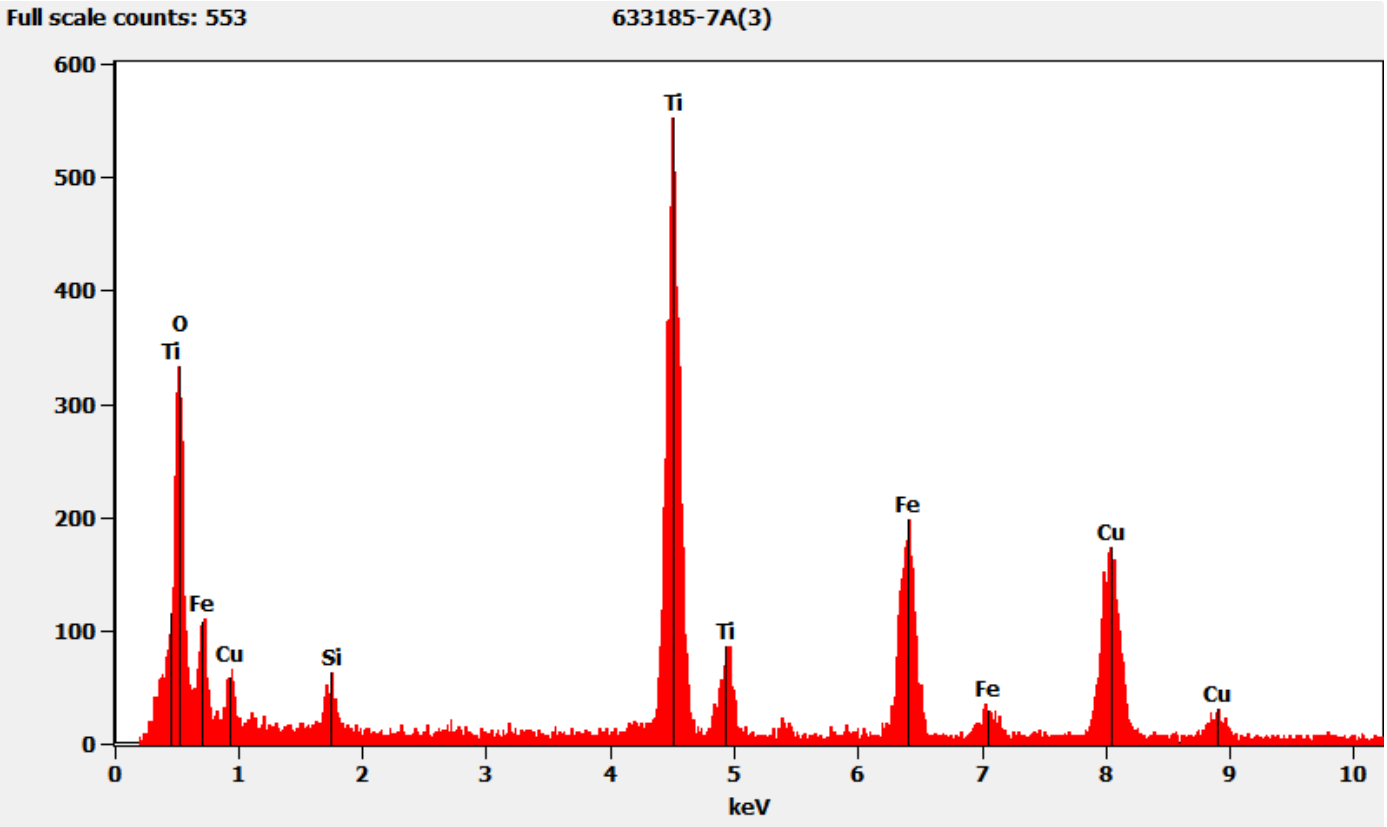
633185-7A, Titanium Particle with Iron



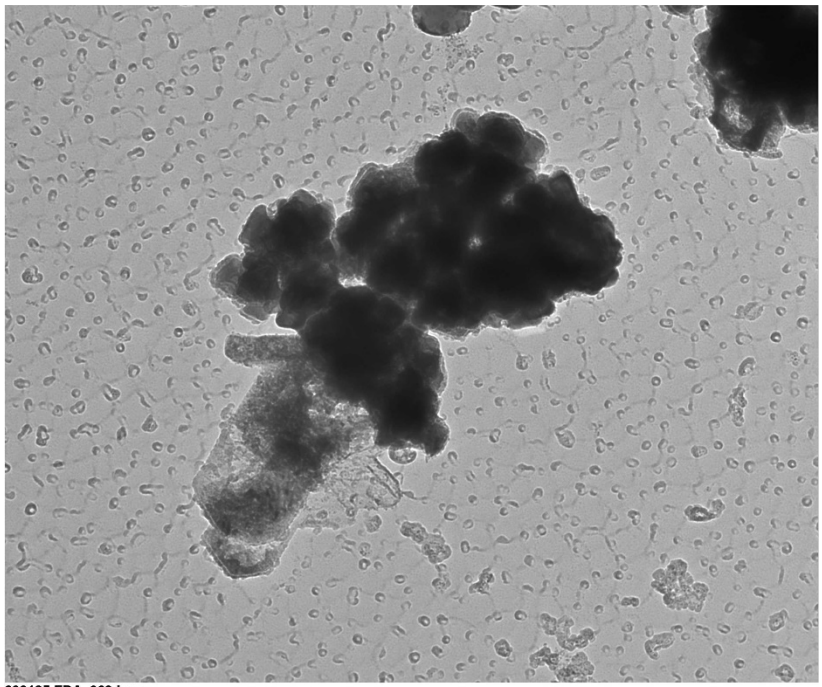
Diffraction Pattern from the Titanium Particle with Iron Pictured Above



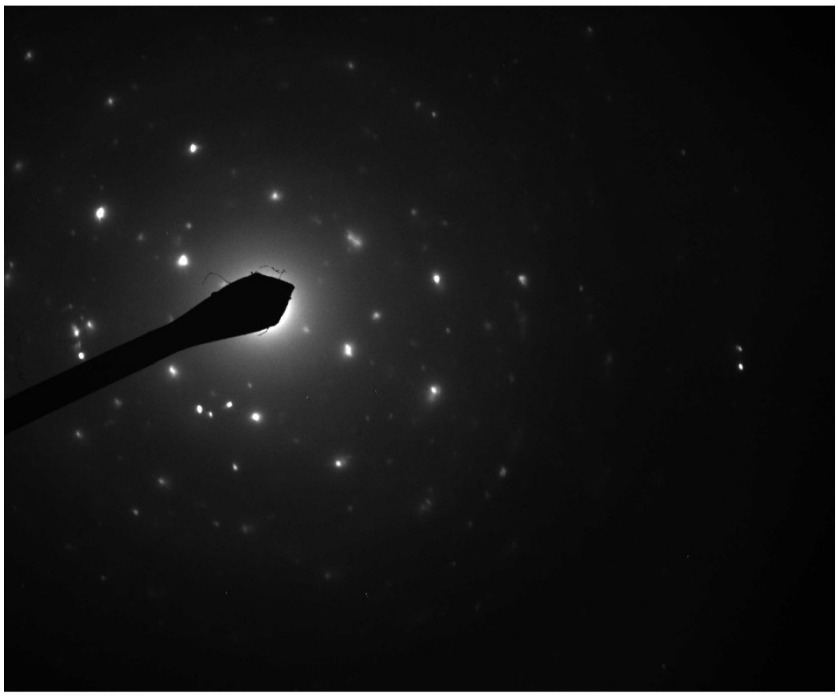
Chemistry from the Titanium Particle with Iron Pictured Above



633185-7A, Iron Particle



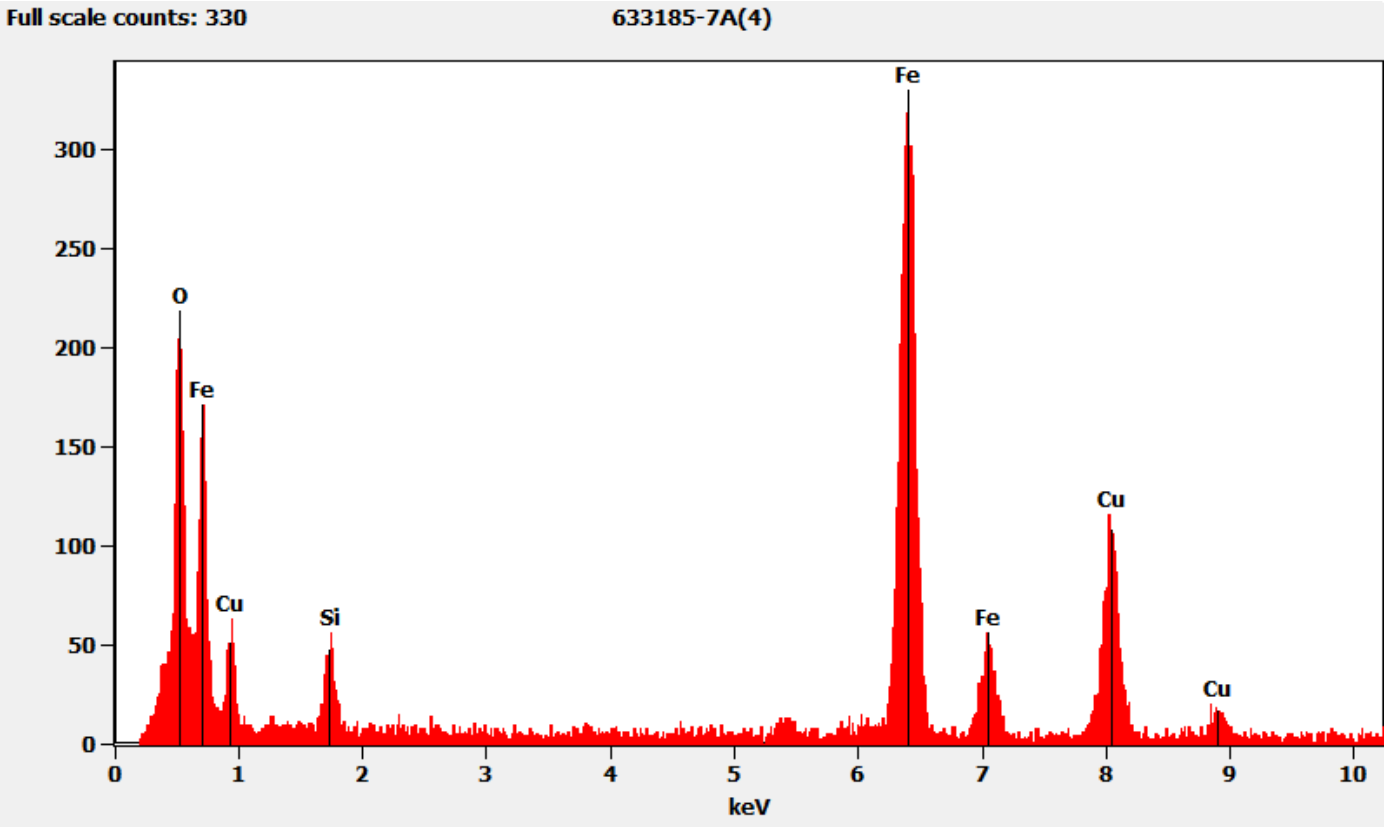
Diffraction Pattern from the Iron Particle Pictured Above



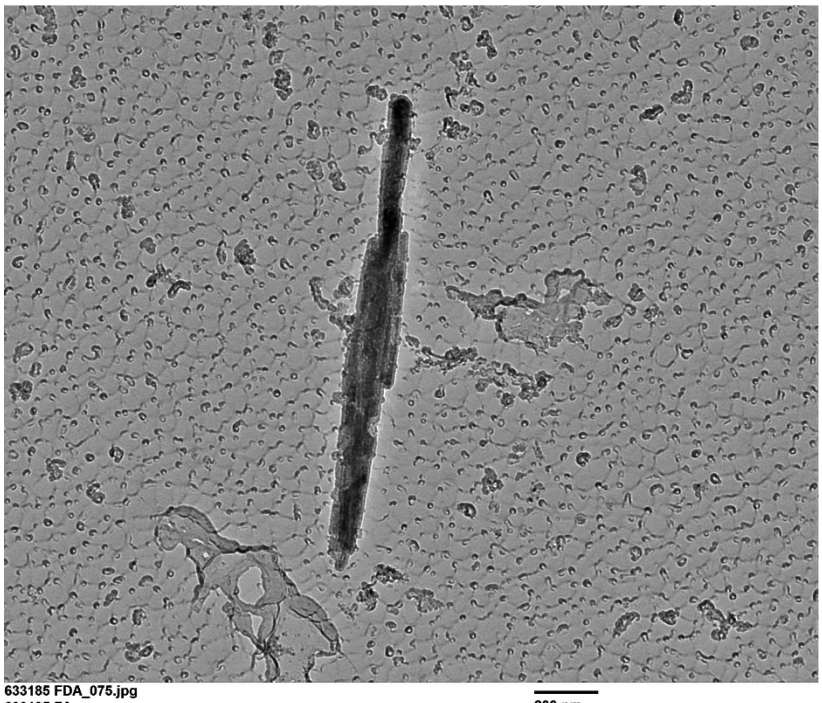
633185 FDA_070.jpg
633185-7A
Fe Particles
11:16 3/16/2(b) (6)
Microscopis
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Iron Particle Pictured Above



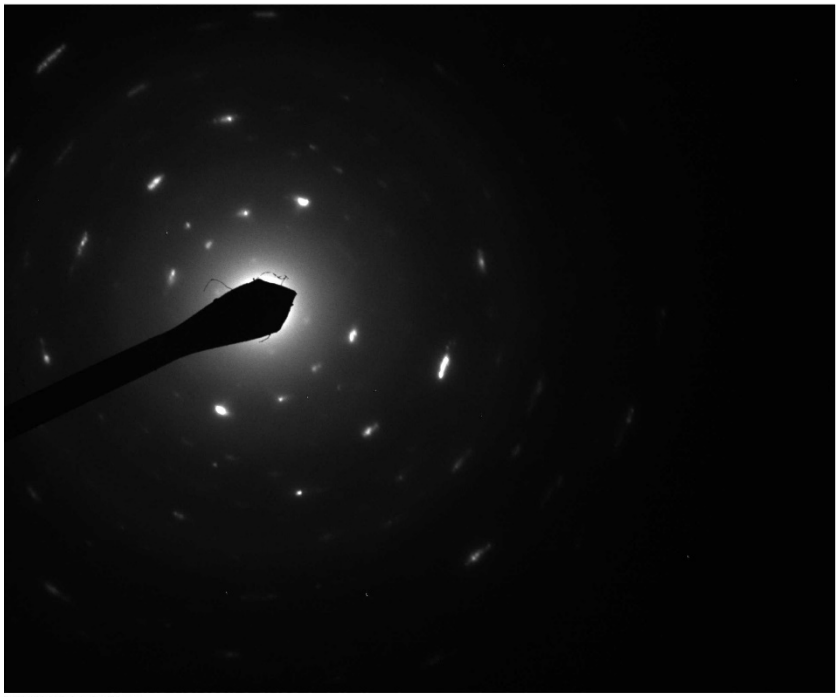
633185-7A, Elongated Iron Particle



633185 FDA_075.jpg
633185-7A
Elongated Fe Particle
Cal: 0.001030 µm/pix
11:33 3/16/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

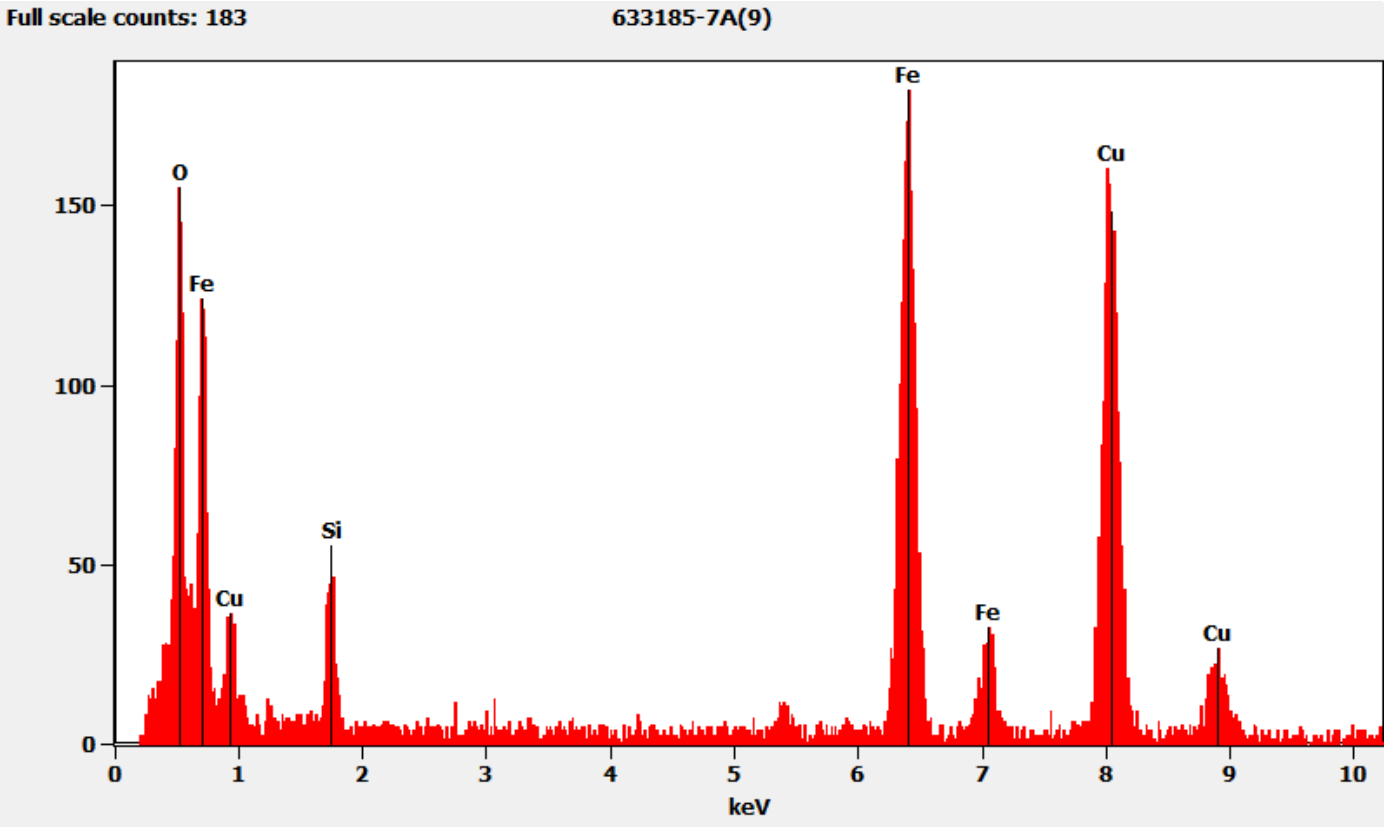
Diffraction Pattern from the Elongated Iron Particle Pictured Above



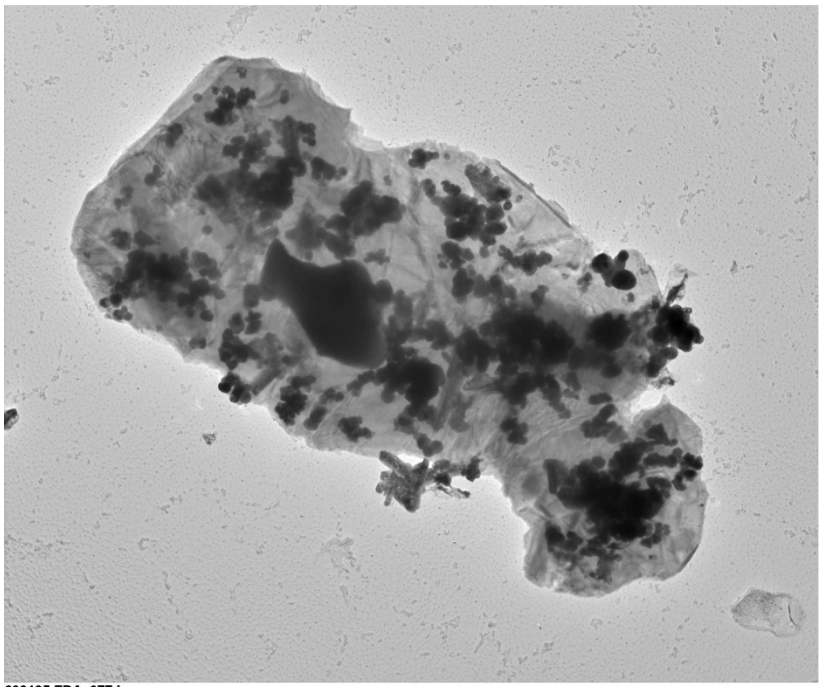
633185 FDA_076.jpg
633185-7A
Elongated Fe Particle
11:34 3/16/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

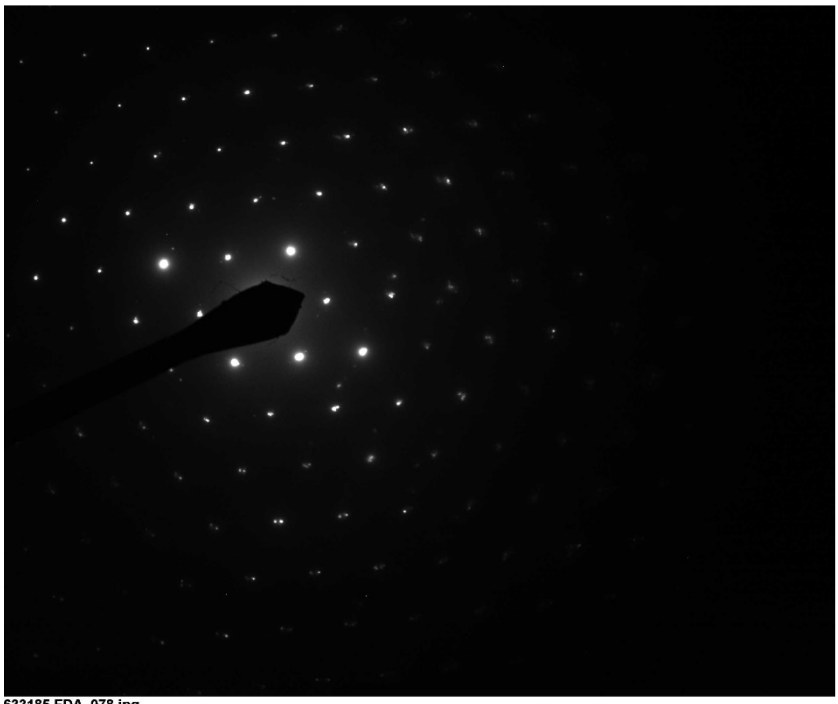
Chemistry from the Elongated Iron Particle Pictured Above



633185-7A, Mica Particle



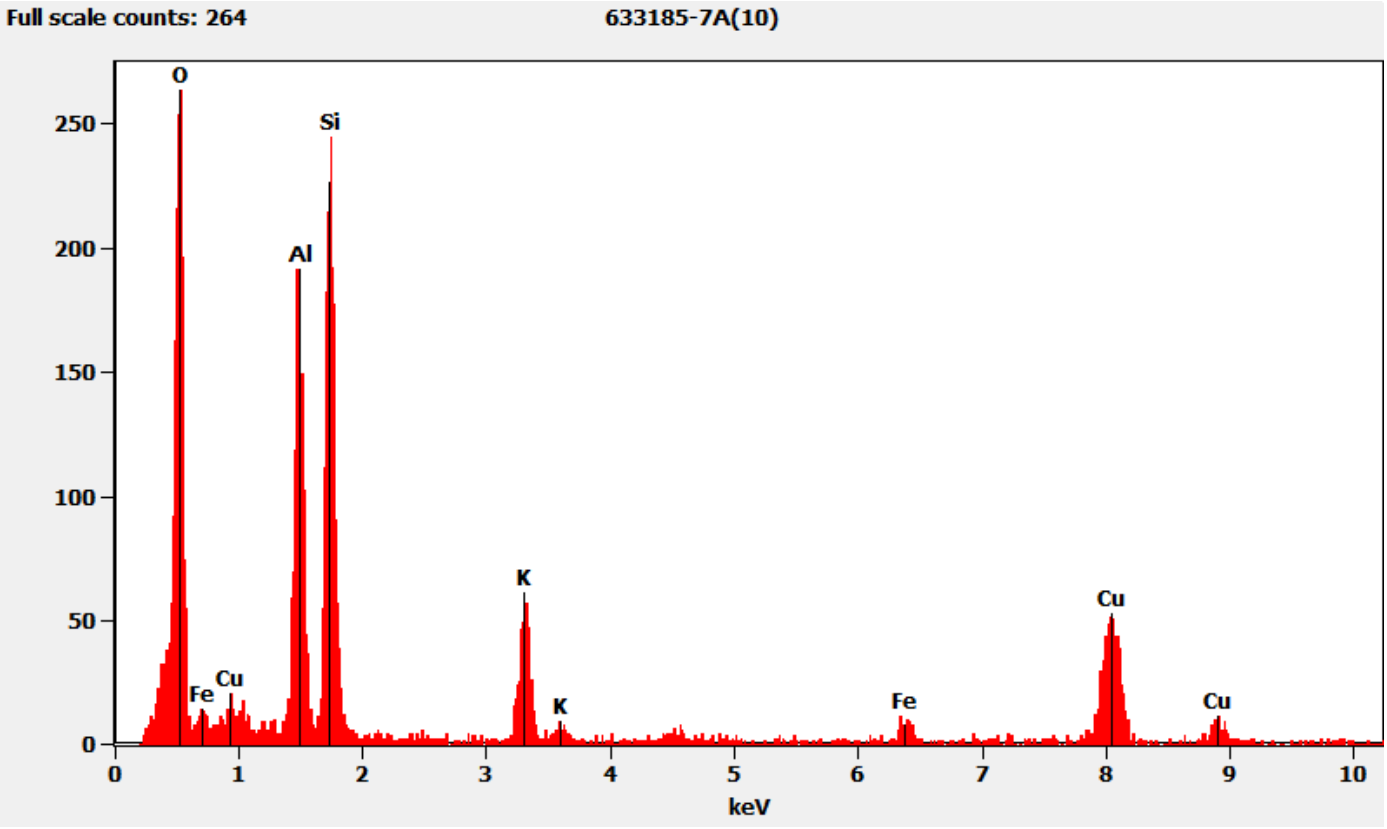
Hexagonal Diffraction Pattern from the Mica Particle Pictured Above



633185 FDA_078.jpg
633185-7A
Mica Particle
11:49 3/16/2022
Microscopist (b) (6)
Camera: NAN[illegible], Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above



633185-8A, 8B, 8C/Client Sample: 01212022-8

PLM

All three aliquots of sample 01212022-8 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-8A	No Asbestos Detected
633185-8B	No Asbestos Detected
633185-8C	No Asbestos Detected

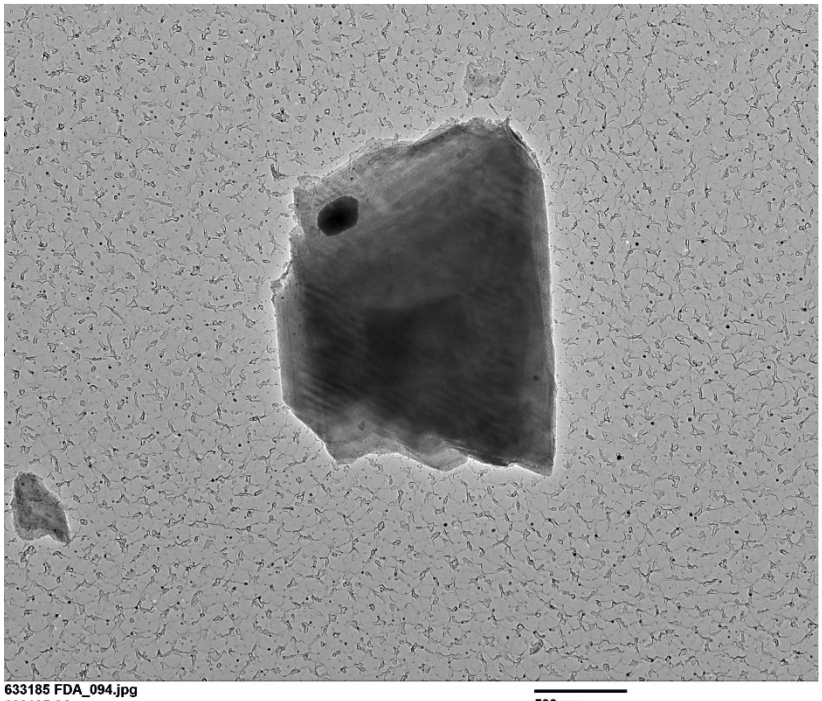
TEM

(b) (6) analyzed aliquot 8A on March 22, 2022. (b) (6) analyzed aliquot 8B on March 22, 2022, and aliquot 8C on March 23, 2022. The primary particles observed were talc and mica; titanium and iron particles were also observed along with silica spheres. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-8A	No Asbestos Detected
633185-8B	No Asbestos Detected
633185-8C	No Asbestos Detected

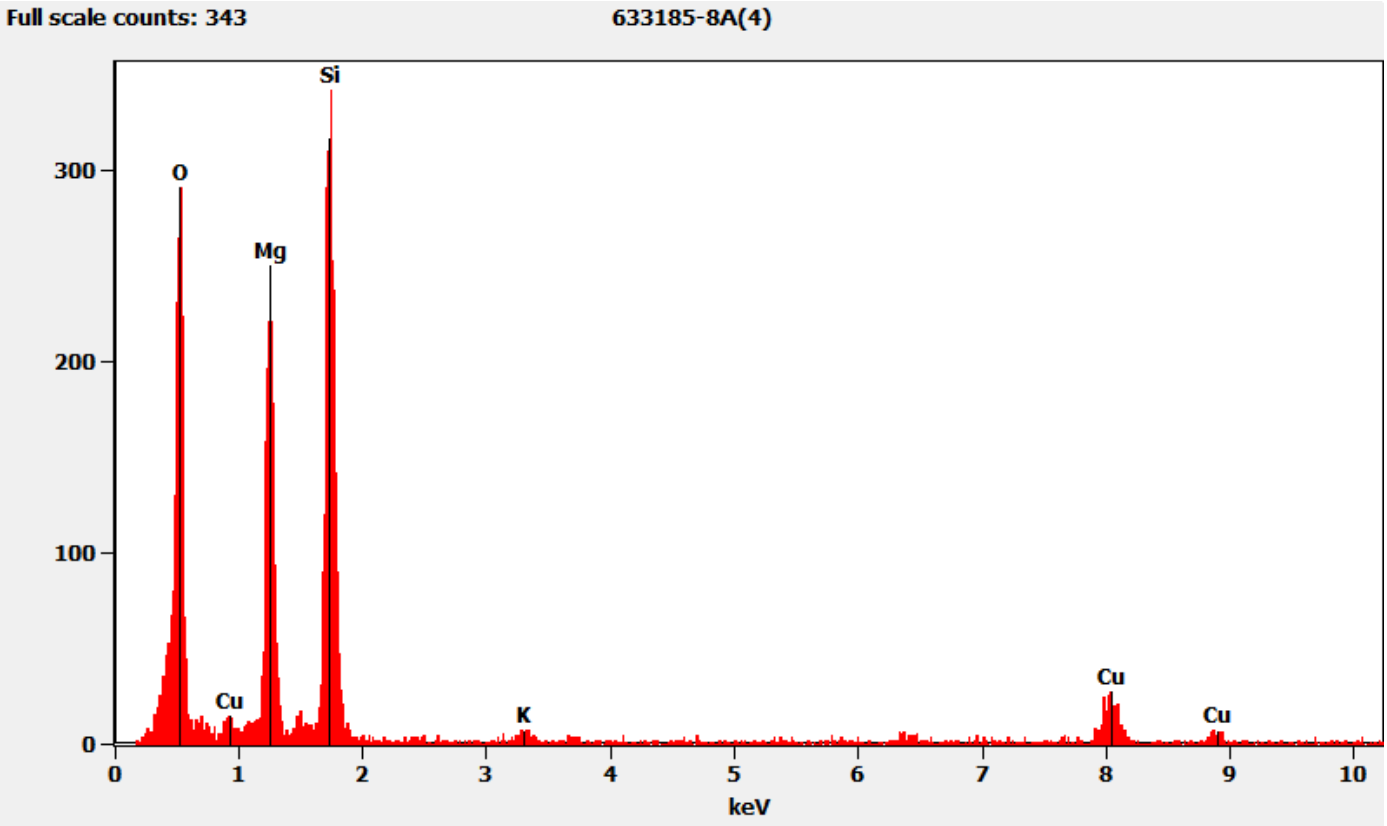
Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-8A, Talc Particle

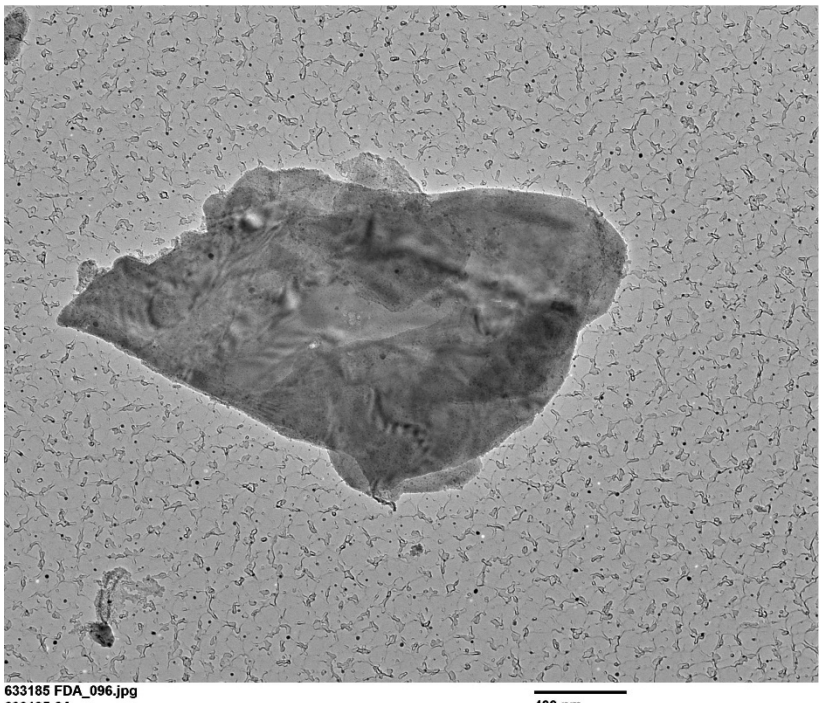


Hexagonal Diffraction Pattern from the Talc Particle Pictured Above

Chemistry from the Talc Particle Pictured Above



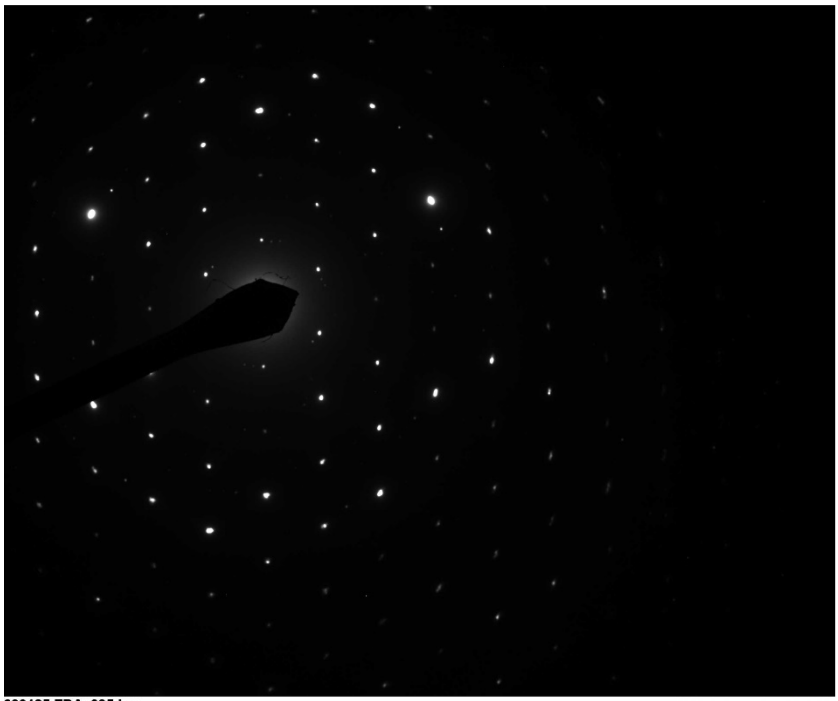
633185-8A, Mica Particle



633185 FDA_096.jpg
633185-8A
Mica ParticleIron Particles
Cal: 0.001430 µm/pix
11:27 3/22/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

400 nm
HV=100kV
Direct Mag: 7200 x
AMA Analytical Services, Inc

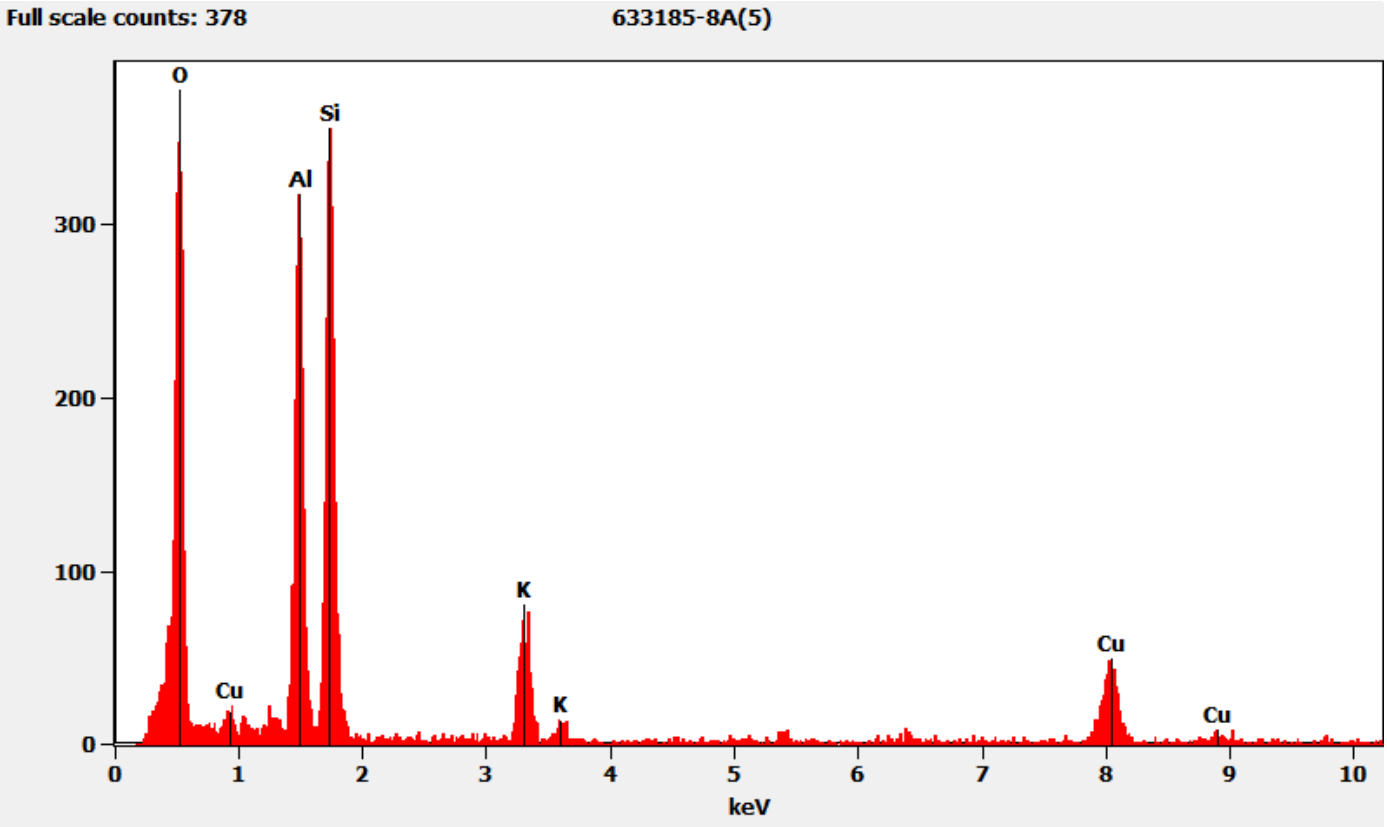
Hexagonal Diffraction Pattern from the Mica Particle Pictured Above



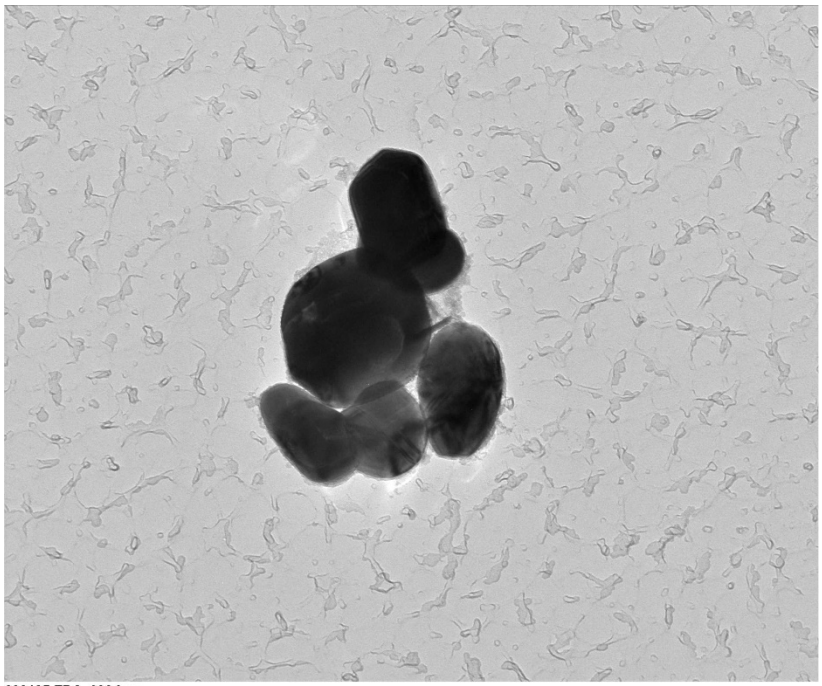
633185 FDA_095.jpg
633185-8A
Mica ParticleIron Particles
11:26 3/22/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above

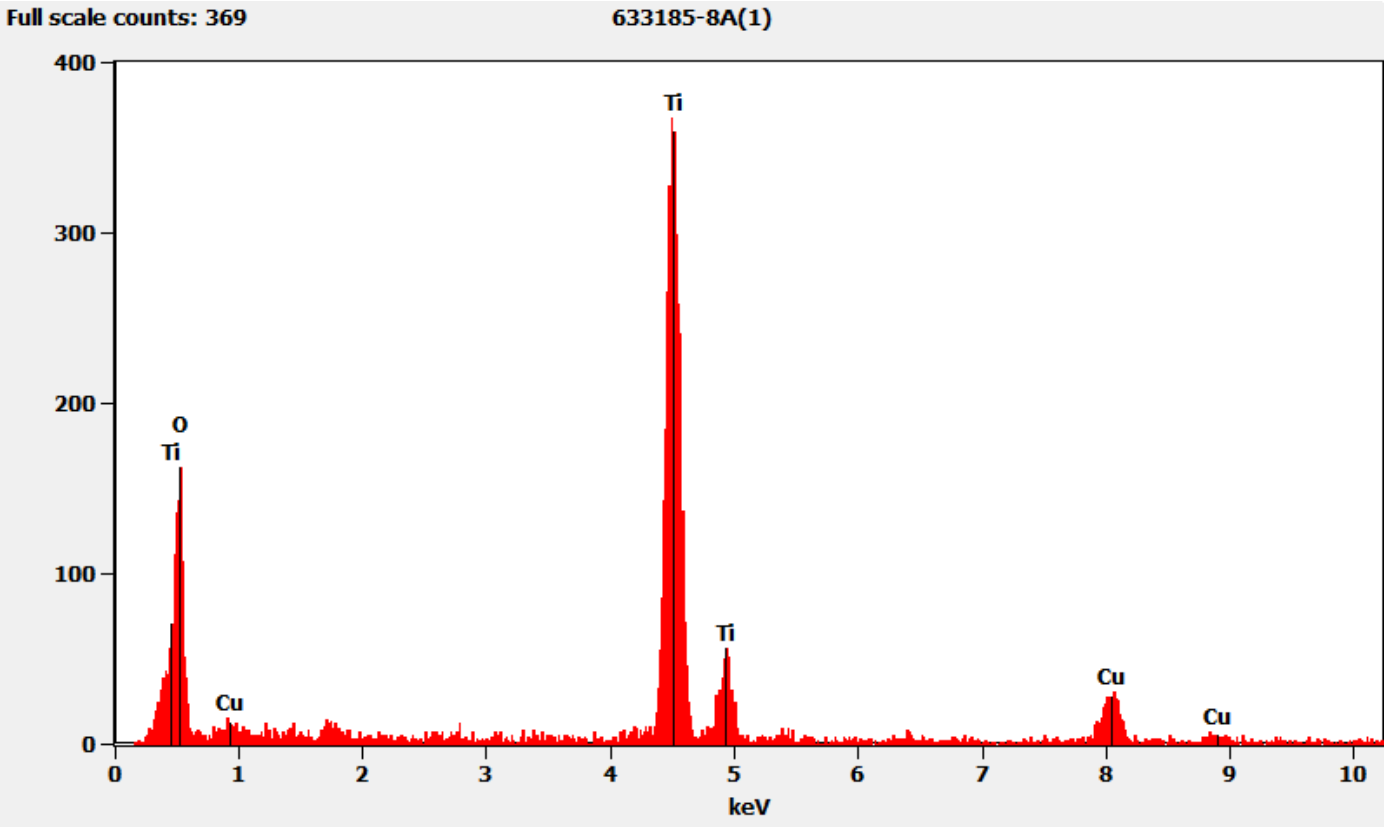


633185-8A, Titanium Particles

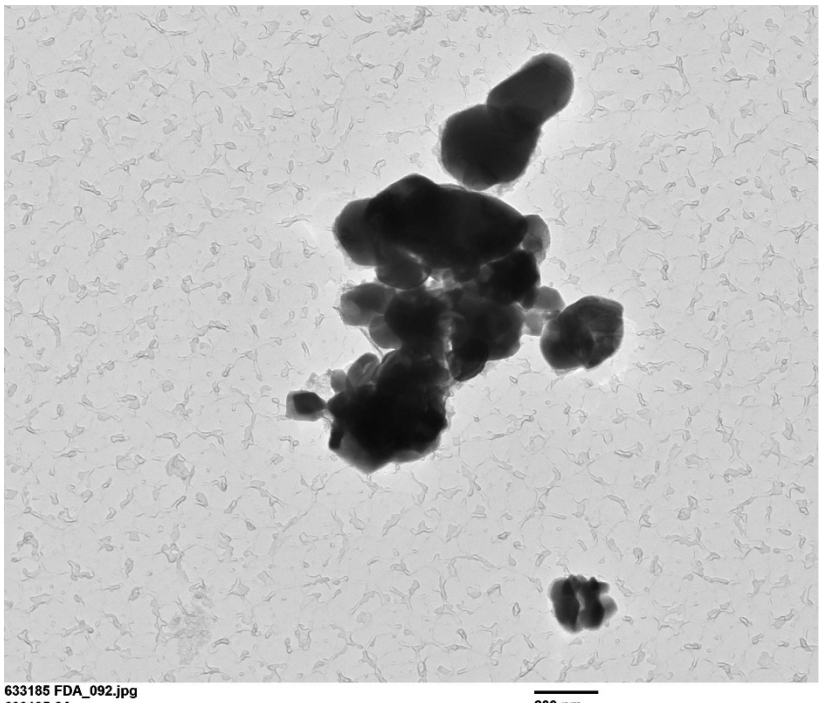


Diffraction Pattern from the Titanium Particles Pictured Above

Chemistry from the Titanium Particle Pictured Above



633185-8A, Iron Particles



633185 FDA_092.jpg
633185-8A
Fe ParticlesIron Particles
Cal: 0.001030 µm/pix
11:14 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

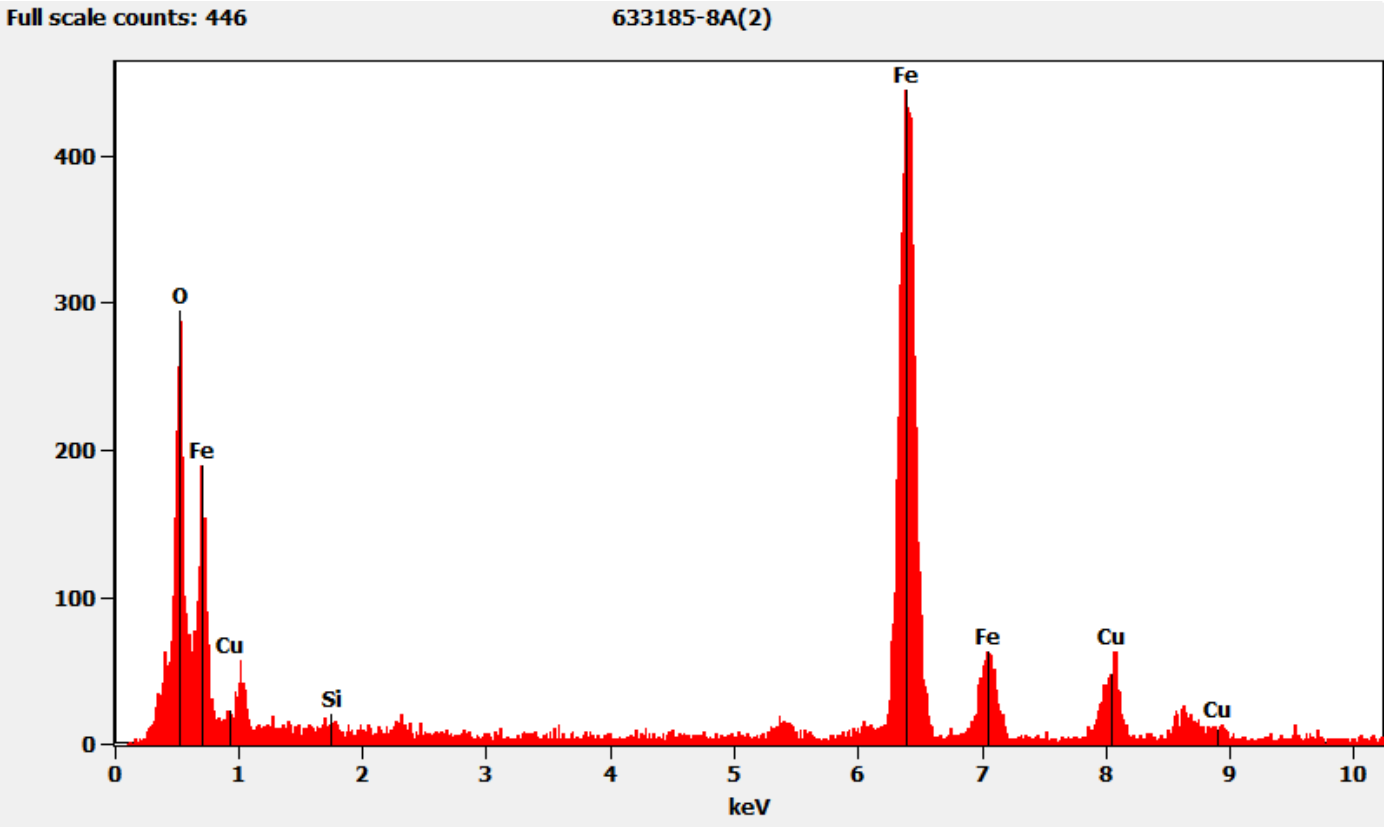
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Diffraction Pattern from the Iron Particles Pictured Above

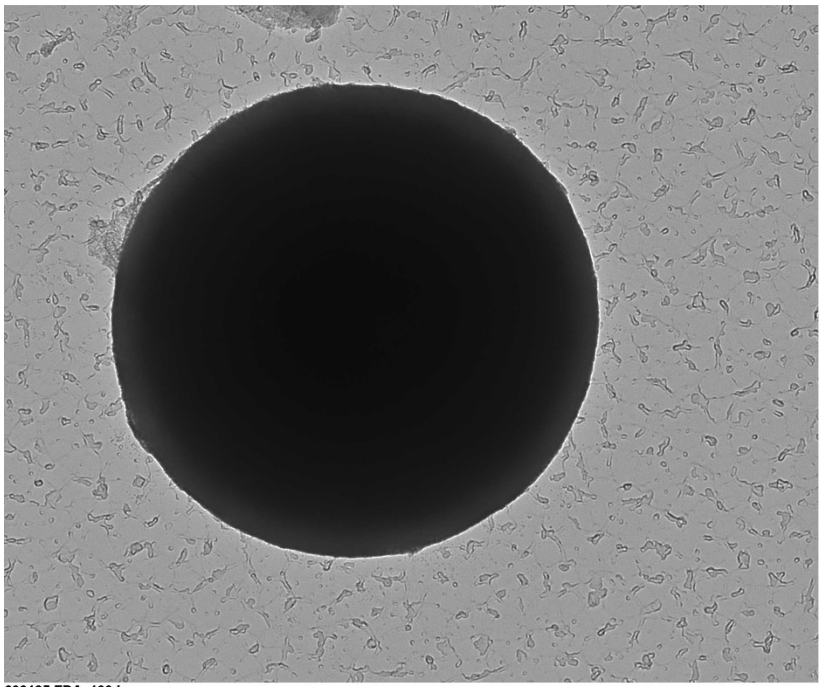
633185 FDA_091.jpg
633185-8A
Fe ParticlesIron Particles
11:13 3/22/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

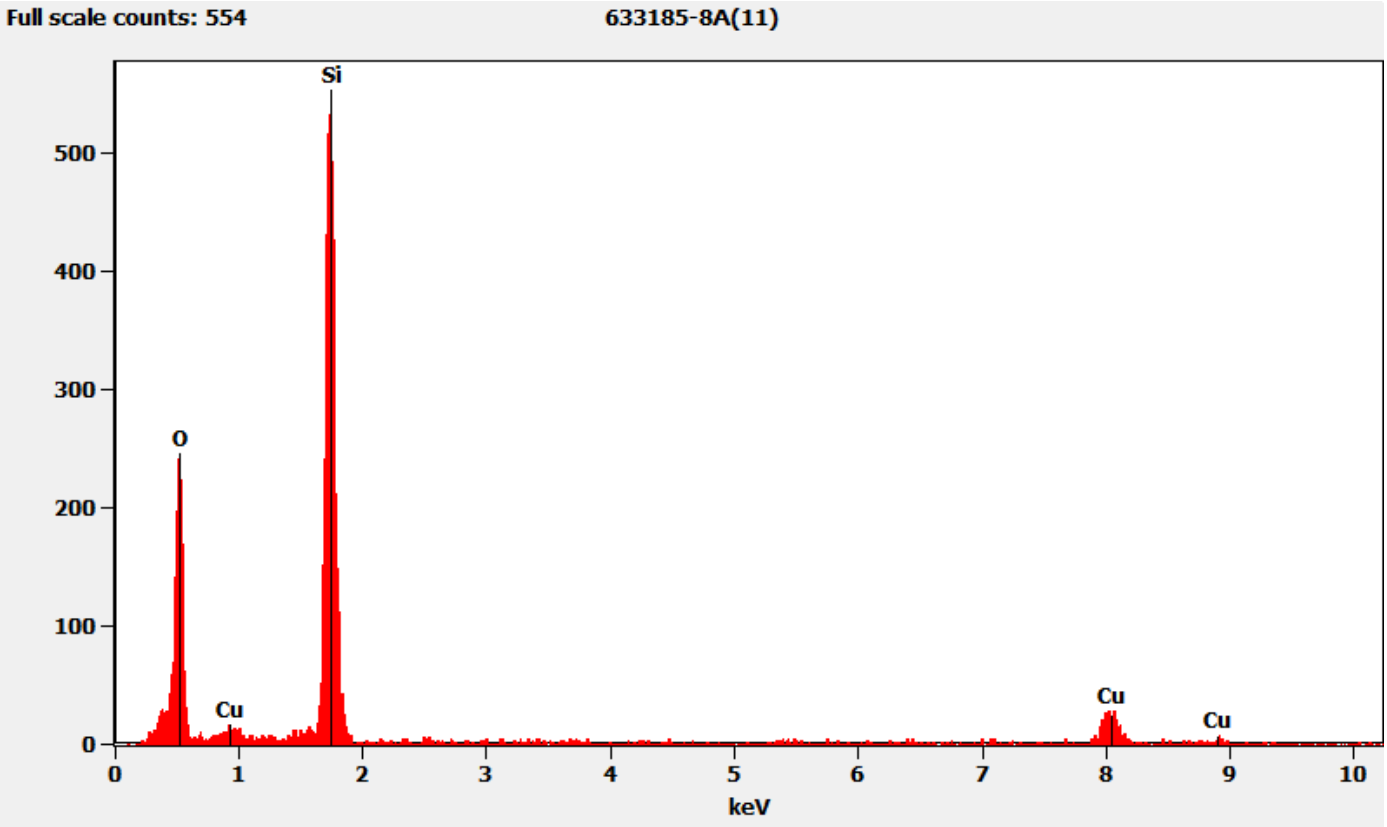
Chemistry from the Iron Particles Pictured Above



633185-8A, Silica Sphere



Chemistry from the Silica Sphere Pictured Above



633185-9A, 9B, 9C/Client Sample: 01212022-9

PLM

All three aliquots of sample 01212022-9 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-9A	No Asbestos Detected
633185-9B	No Asbestos Detected
633185-9C	No Asbestos Detected

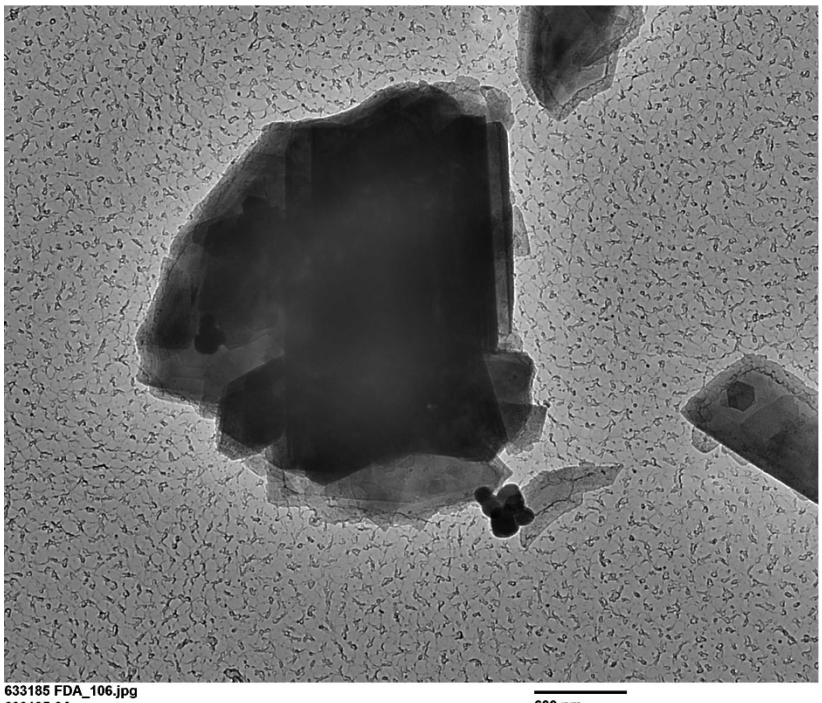
TEM

(b) (6) analyzed aliquots 9A, 9B, and 9C on March 23, 2022. The primary particle observed was talc; titanium particles were also observed along with talc fibers/ribbons, silicon particles and particles containing phosphorus and calcium. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-9A	No Asbestos Detected
633185-9B	No Asbestos Detected
633185-9C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-9A, Talc Particle



633185 FDA_106.jpg
633185-9A
Talc Particle
Cal: 0.002145 µm/pix
12:03 3/23/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

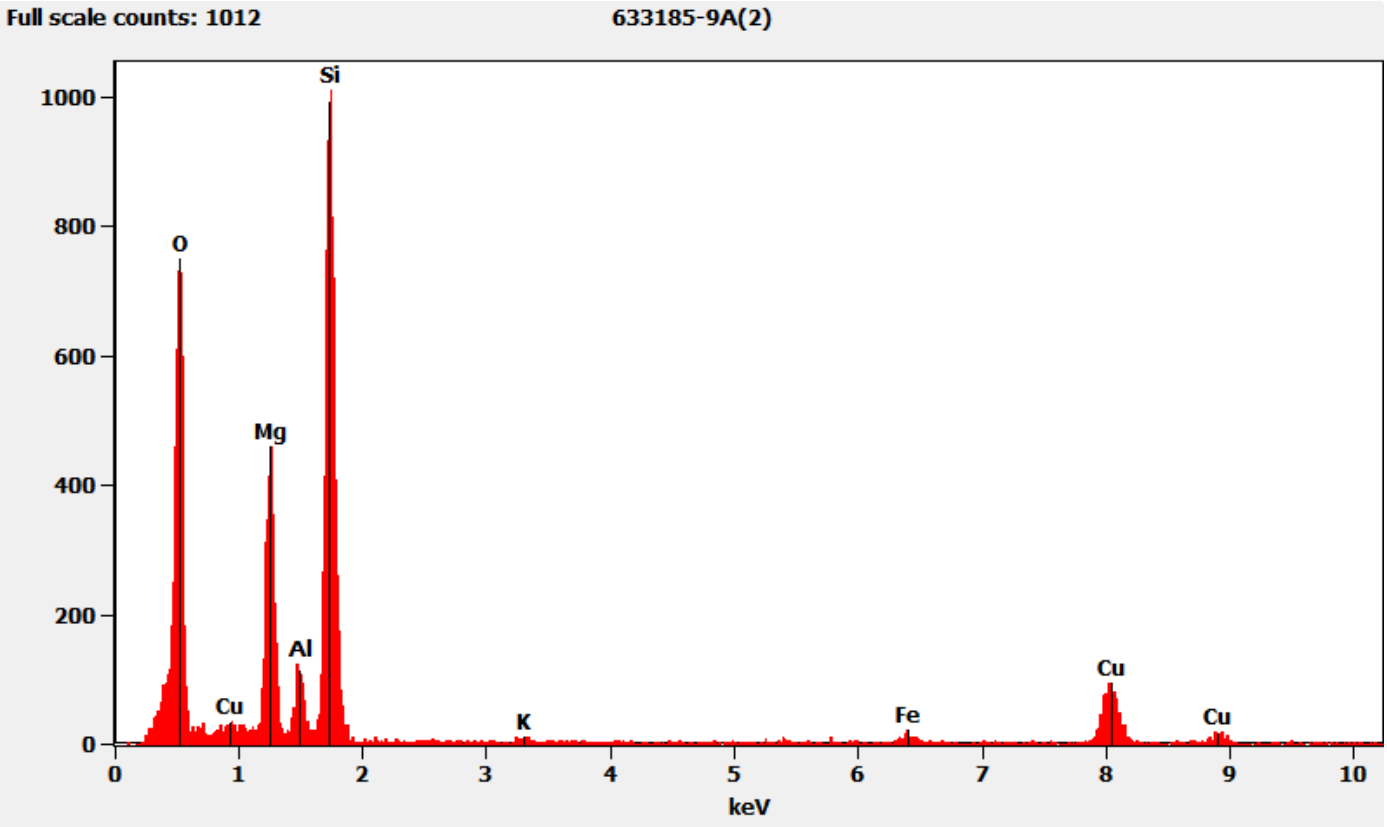
600 nm
HV=100kV
Direct Mag: 4800 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Particle Pictured Above

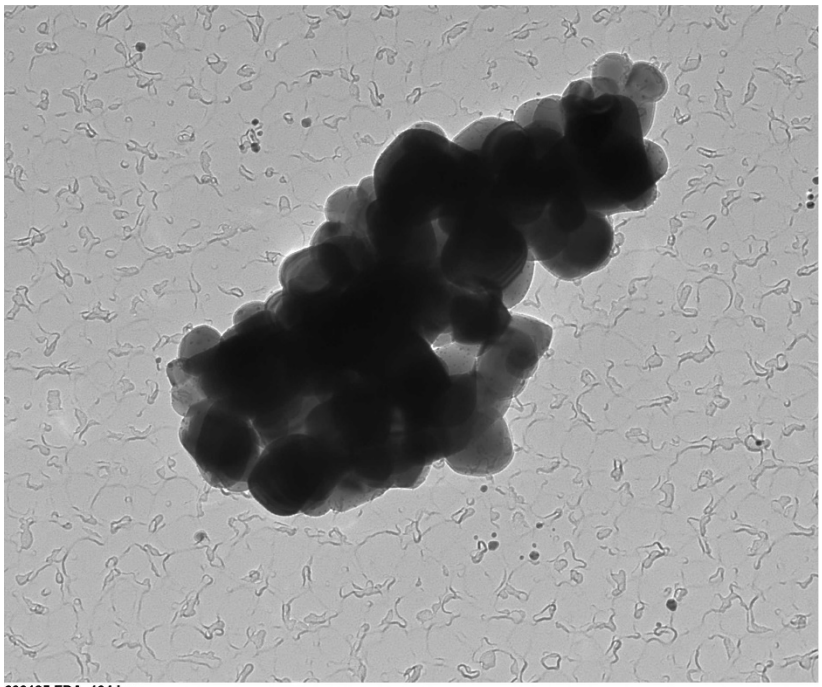
633185 FDA_105.jpg
633185-9A
Talc Particle Dif
12:02 3/23/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle pictured above

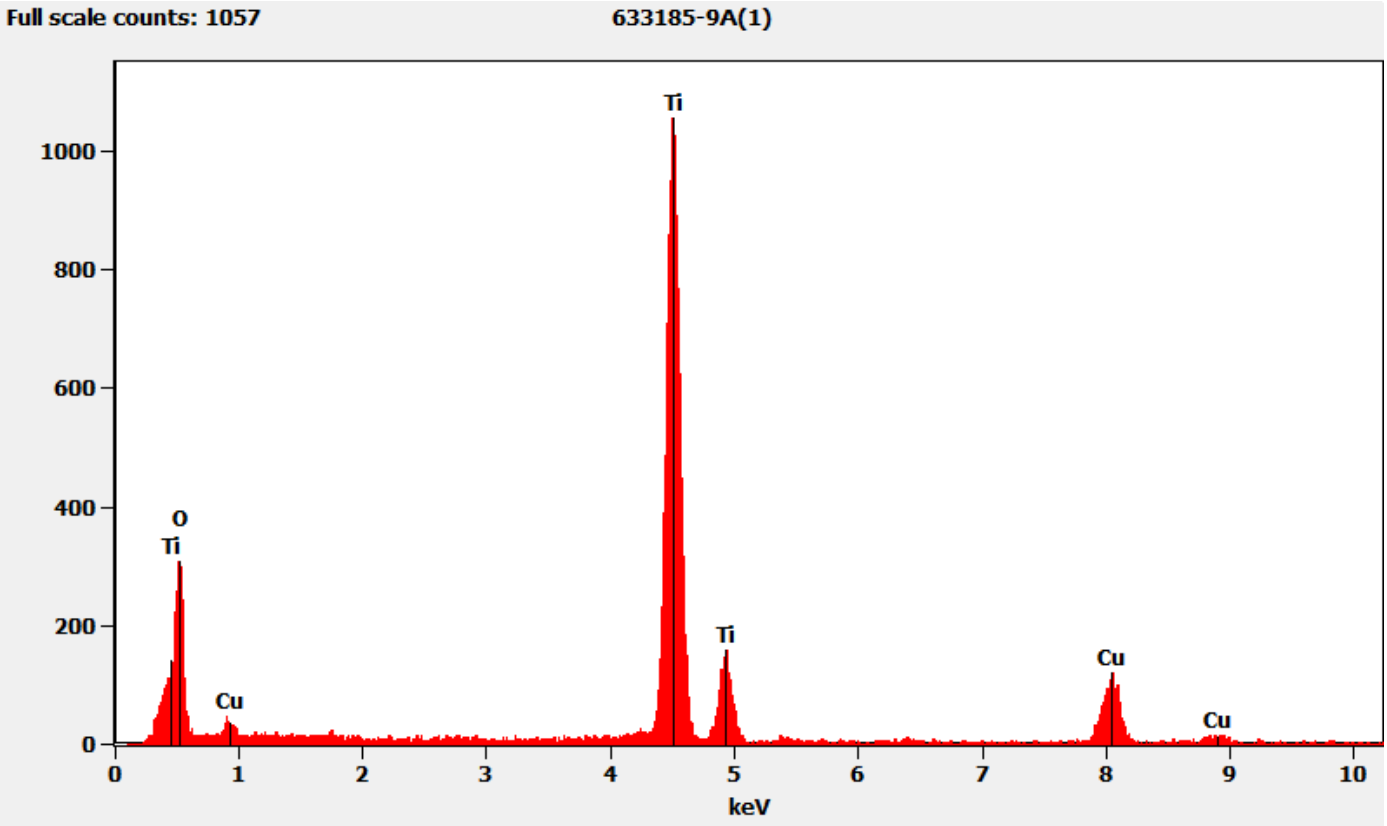


633185-9A, Titanium Particle

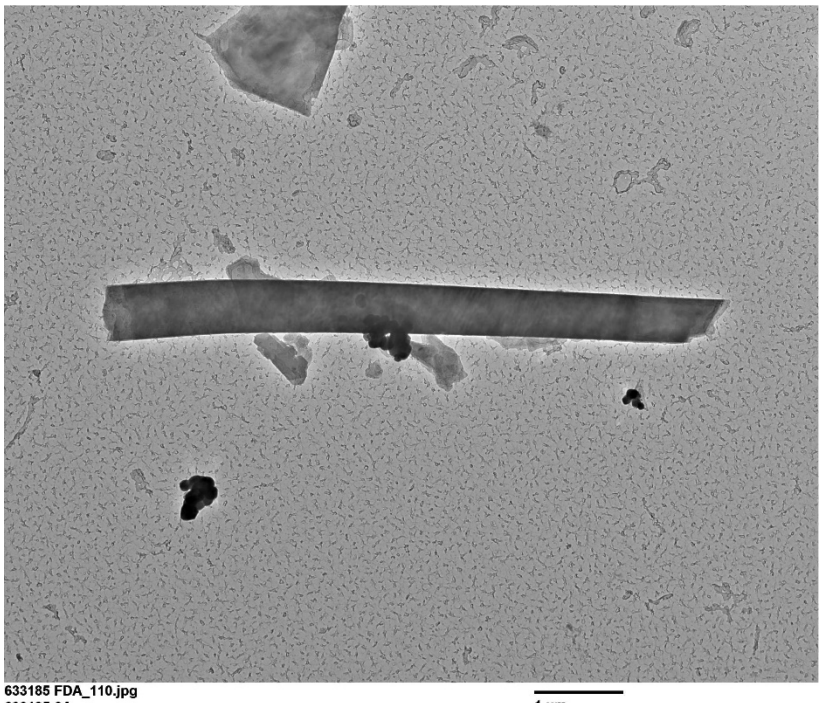


Diffraction Pattern from the Titanium Particle Pictured Above

Chemistry from the Titanium Particle pictured above



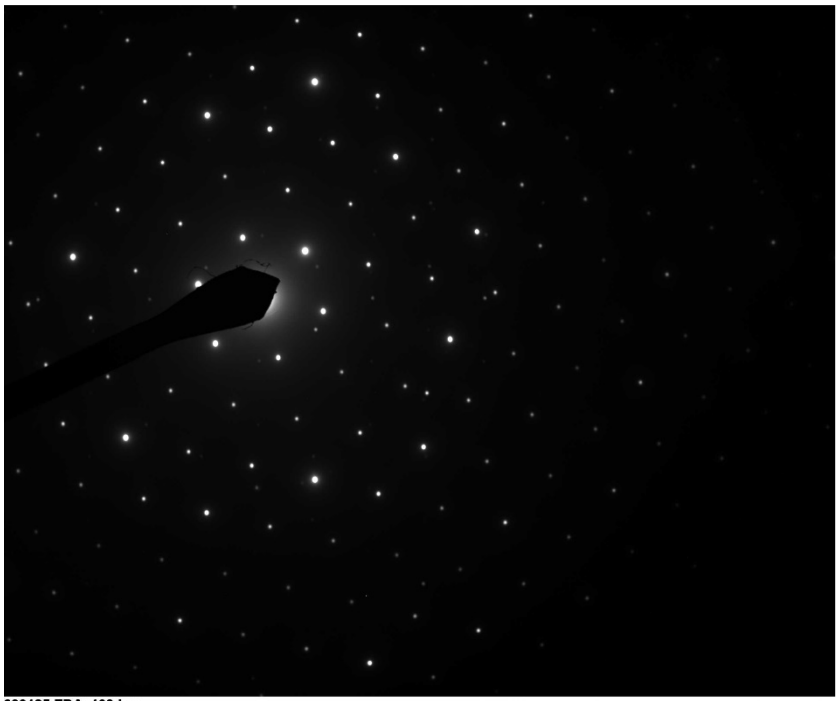
633185-9A, Talc Fiber



633185 FDA_110.jpg
633185-9A
Talc Fiber
Cal: 0.003702 µm/pix
12:27 3/23/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

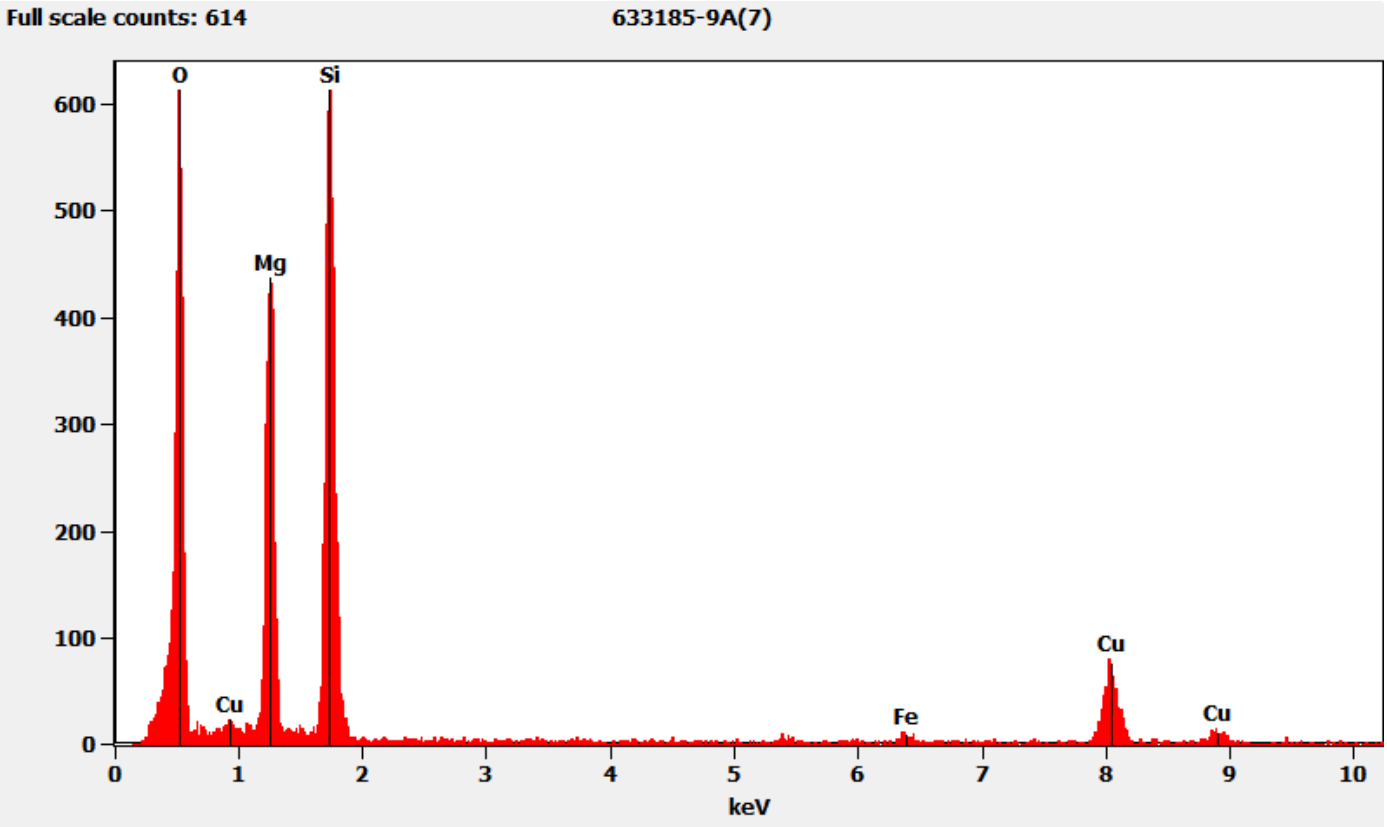
Hexagonal Diffraction Pattern from the Talc Fiber Pictured Above



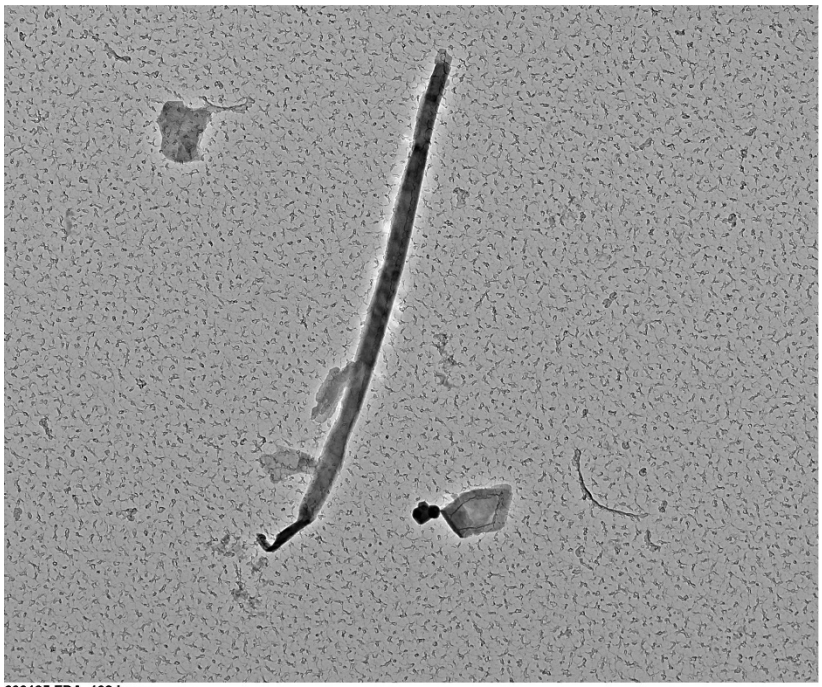
633185 FDA_109.jpg
633185-9A
Talc Fiber Dif
12:26 3/23/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Fiber pictured above



633185-9A, Talc Ribbon

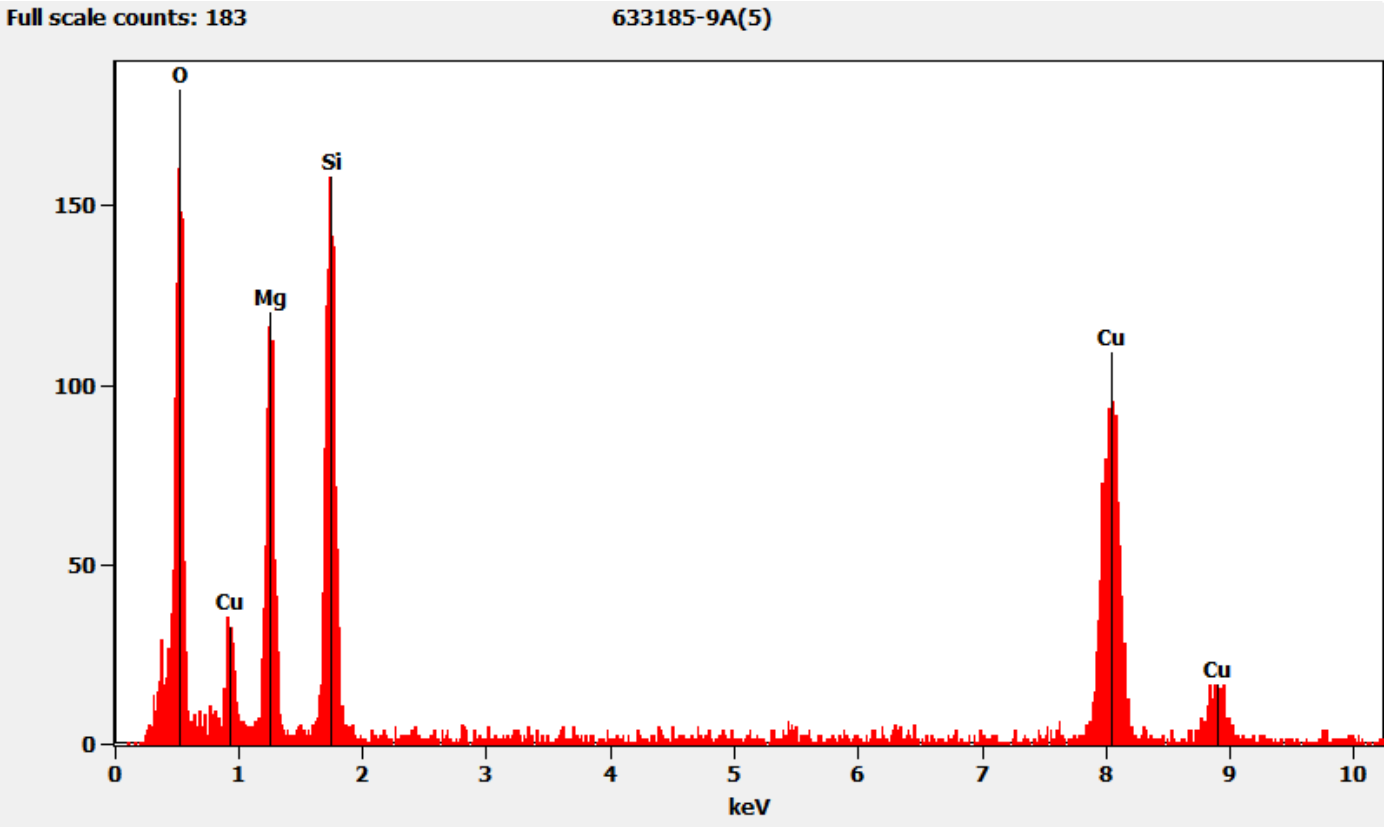


Diffraction Pattern from the Talc Ribbon Pictured Above

633185 FDA_107.jpg
633185-9A
Talc Ribbon Dif
12:08 3/23/2022
Microscopis(b) (6)
Camera: NA[illegible]T5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

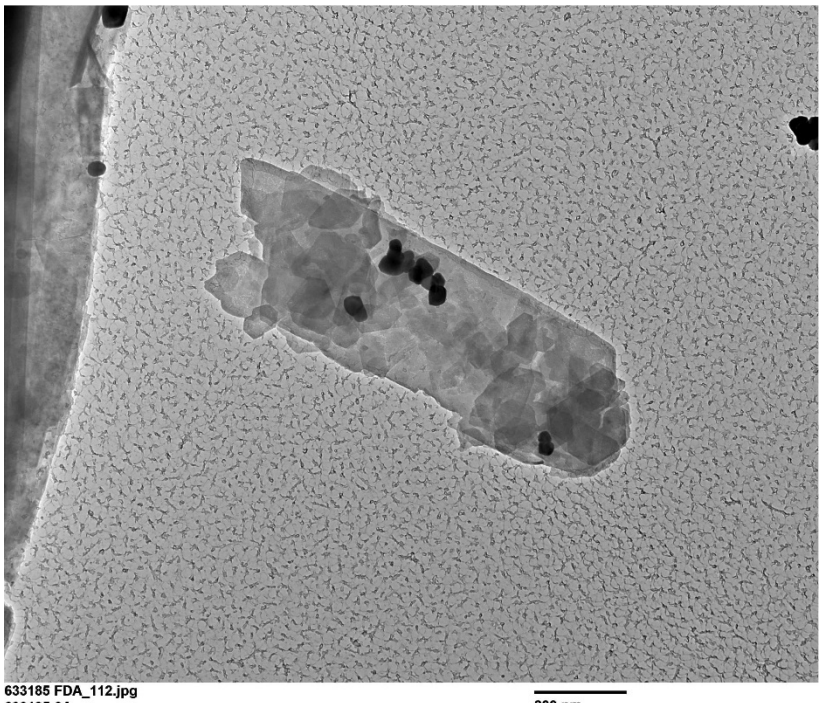
100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Ribbon Pictured Above



Asbestos · Lead · Mold · Nano

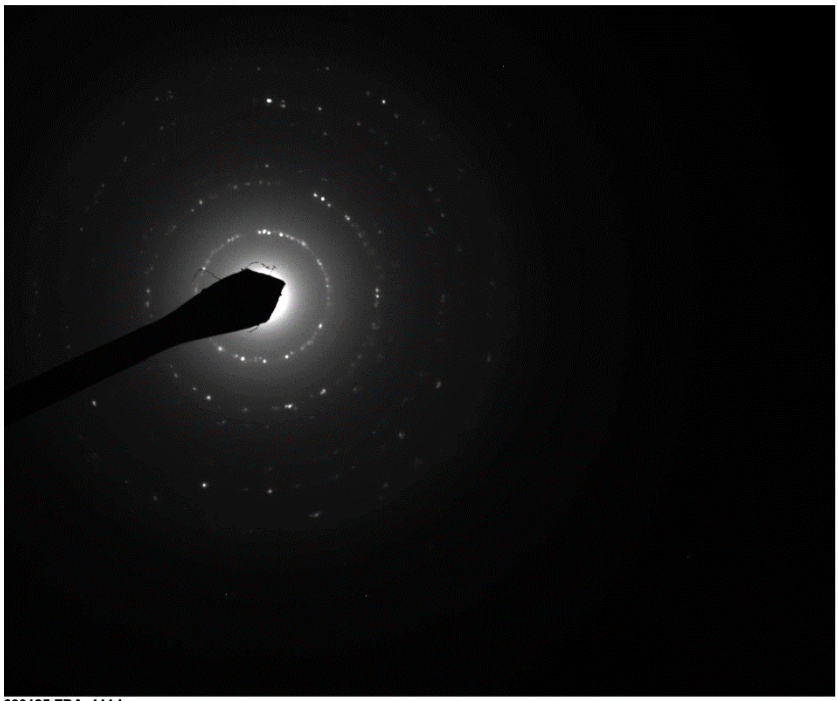
633185-9A, Silicon Particle



633185 FDA_112.jpg
633185-9A
Si Particle
Cal: 0.002860 µm/pix
12:48 3/23/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

800 nm
HV=100kV
Direct Mag: 3600 x
AMA Analytical Services, Inc

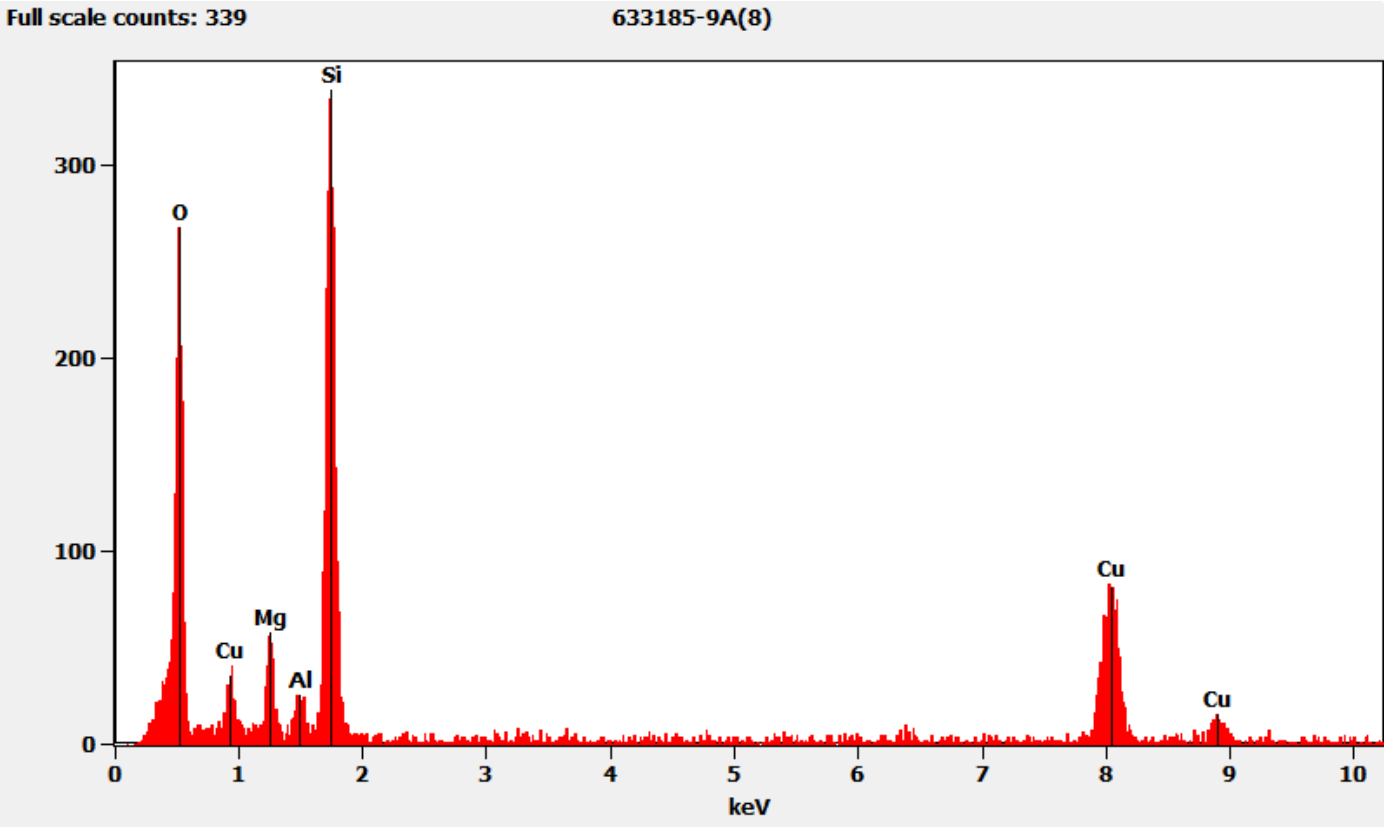
Diffraction Pattern from the Silicon Particle Pictured Above



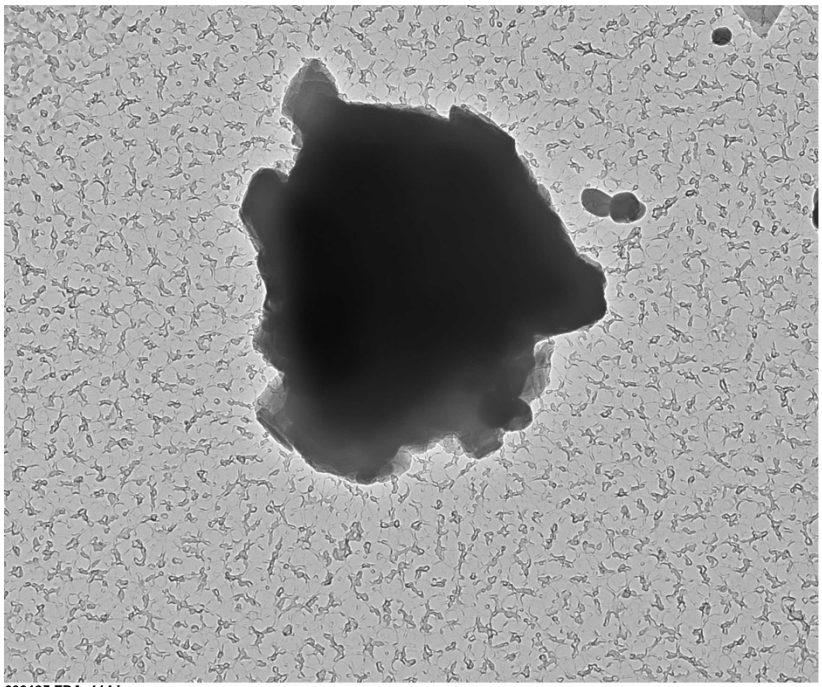
633185 FDA_111.jpg
633185-9A
Si Particle Dif
12:46 3/23/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

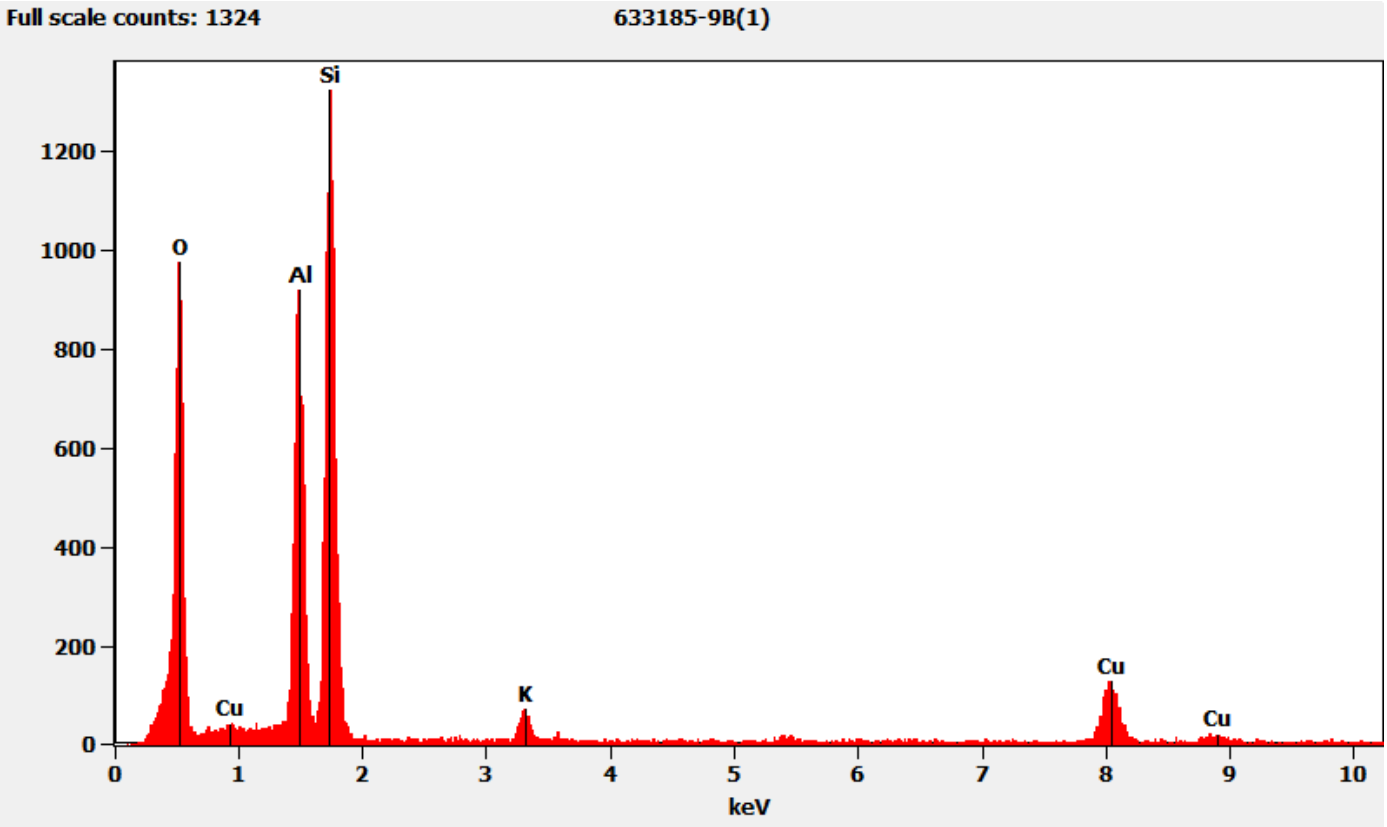
Chemistry from the Silicon Particle pictured above



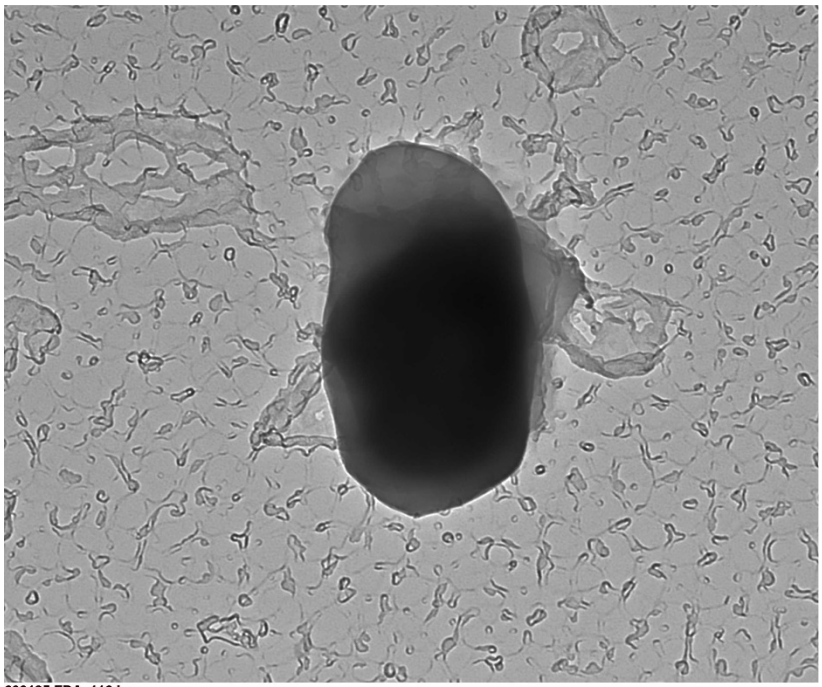
633185-9B, Particle Containing Silicon, Aluminum, and Potassium



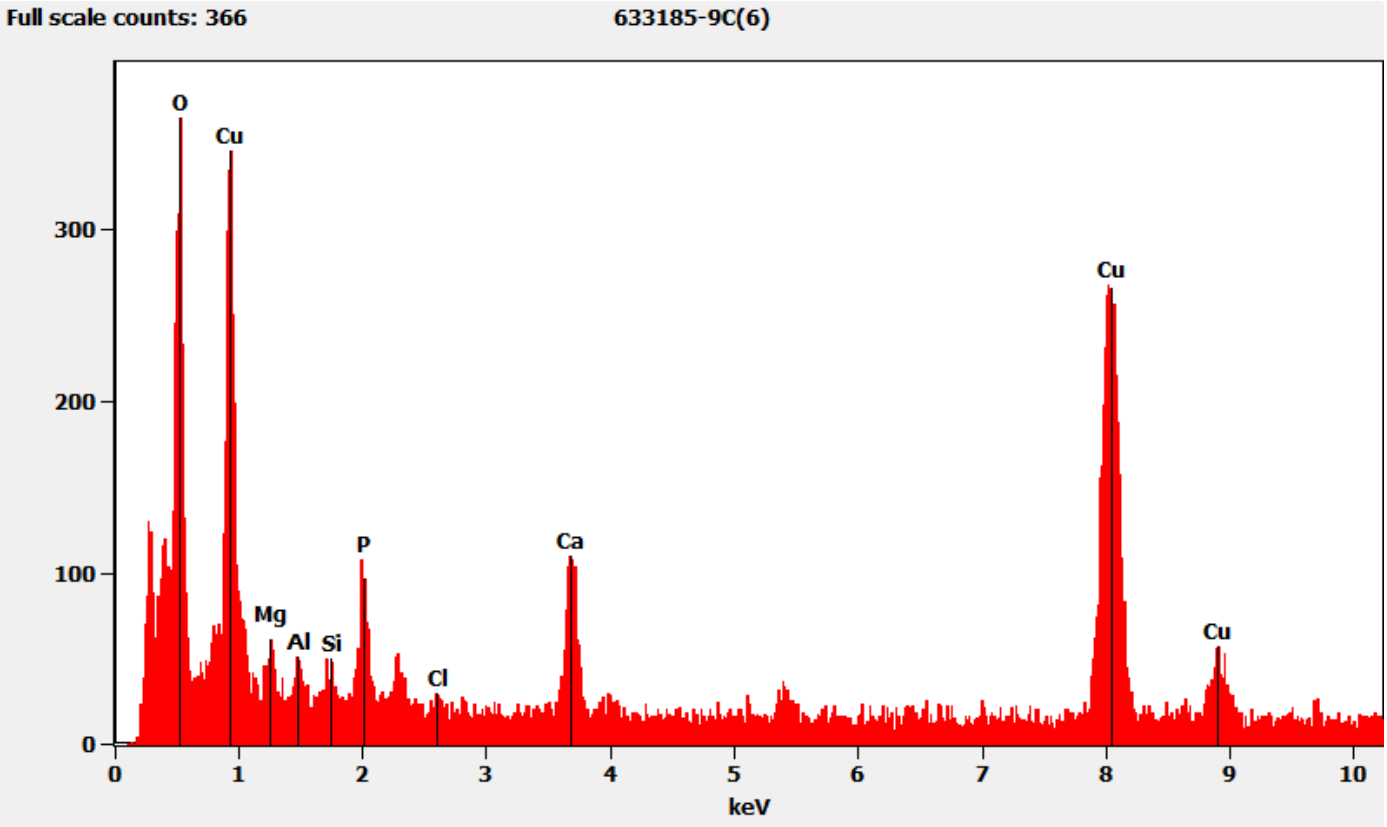
Chemistry from the Particle Silicon, Aluminum, and Potassium Pictured Above



633185-9C, Particle Containing Phosphorus and Calcium



Chemistry from the Particle Containing Phosphorus and Calcium Pictured Above



633185-10A, 10B, 10C/Client Sample: 01212022-10

PLM

All three aliquots of sample 01212022-10 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-10A	No Asbestos Detected
633185-10B	No Asbestos Detected
633185-10C	No Asbestos Detected

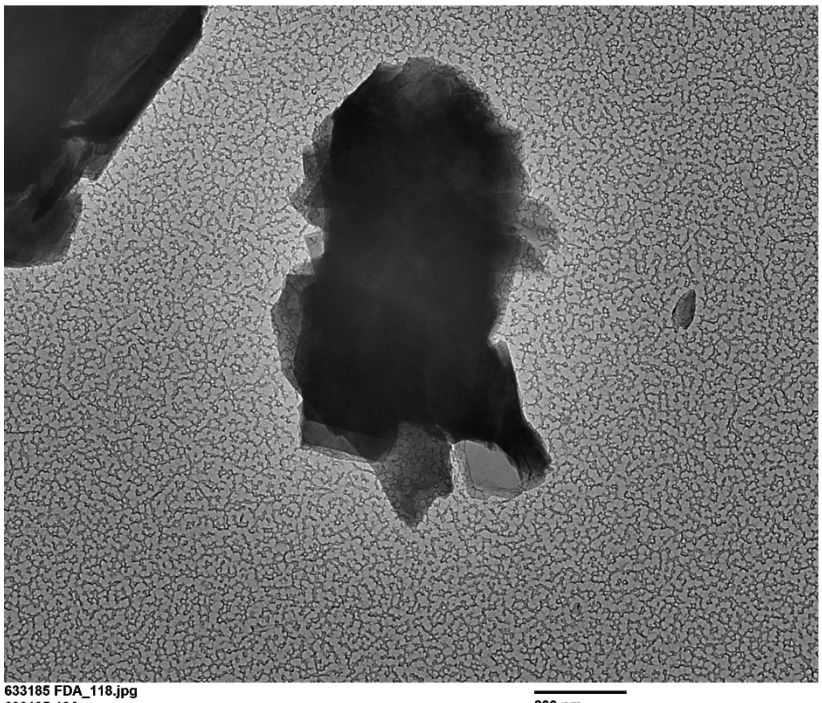
TEM

(b) (6) analyzed aliquots 10A, 10B, and 10C on March 24, 2022. The primary particle observed was talc; titanium and silicon particles were also observed along with talc fibers/ribbons. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-10A	No Asbestos Detected
633185-10B	No Asbestos Detected
633185-10C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder

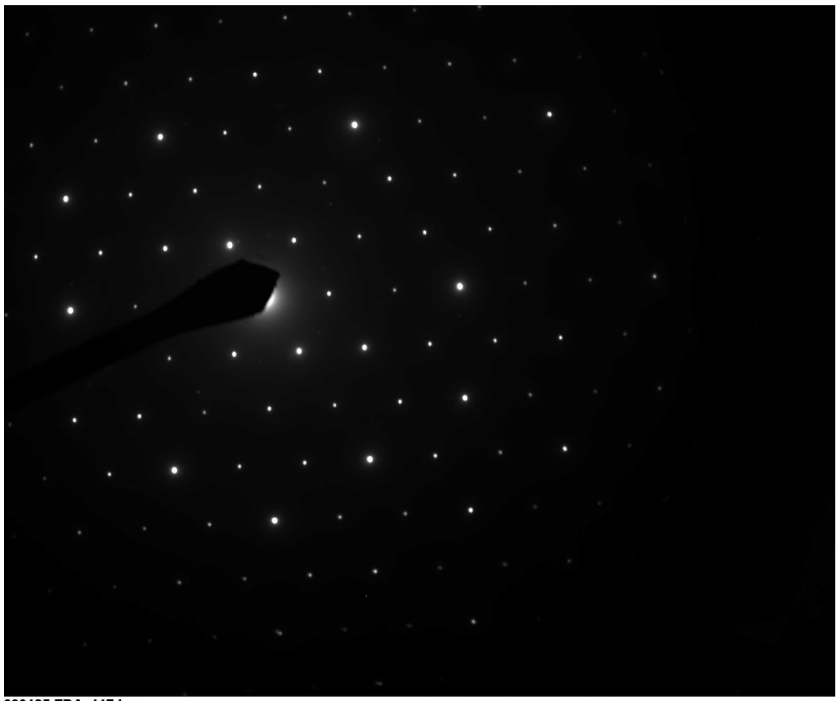
633185-10A, Talc Particle



633185 FDA_118.jpg
633185-10A
Talc Particle
Cal: 0.002860 µm/pix
09:54 3/24/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

800 nm
HV=100kV
Direct Mag: 3600 x
AMA Analytical Services, Inc

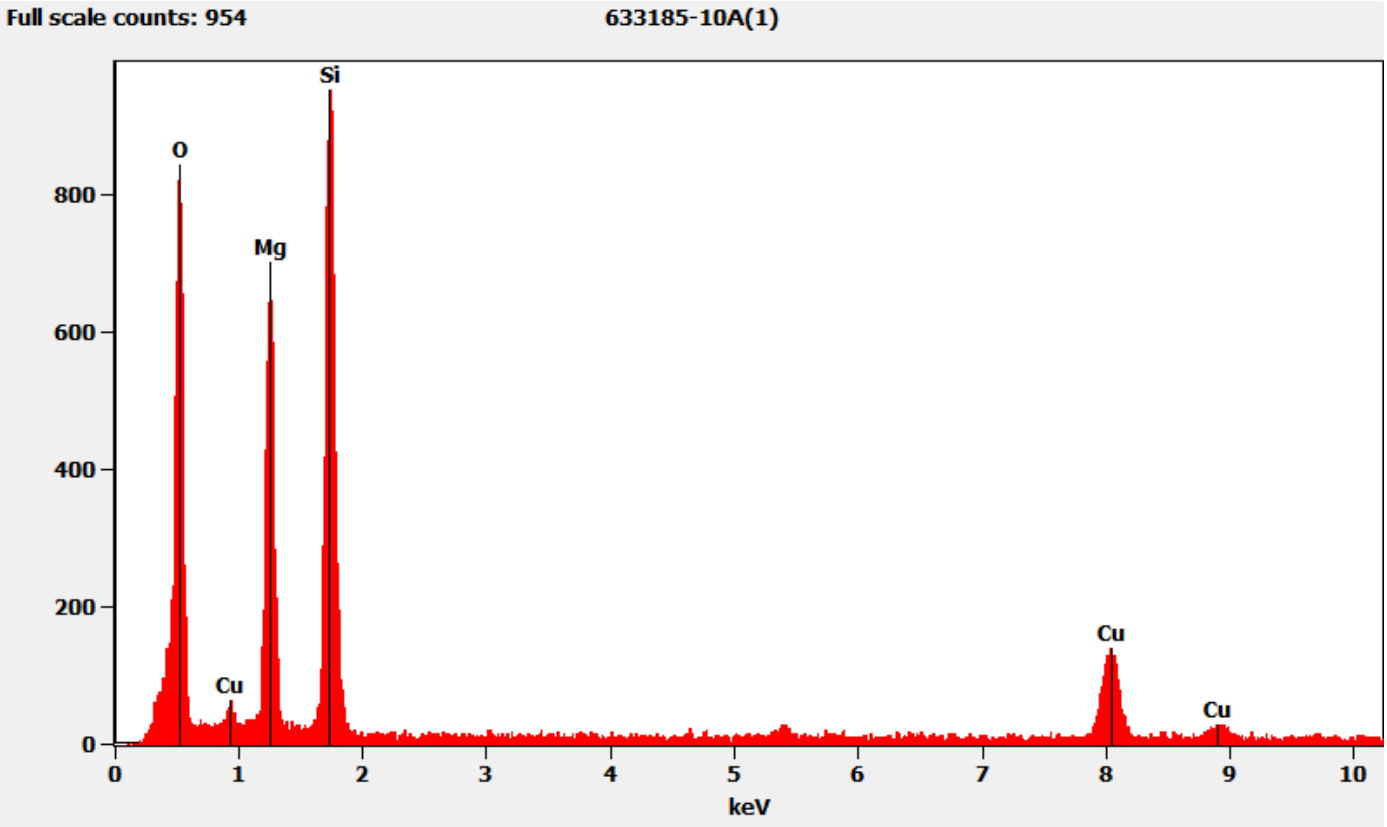
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



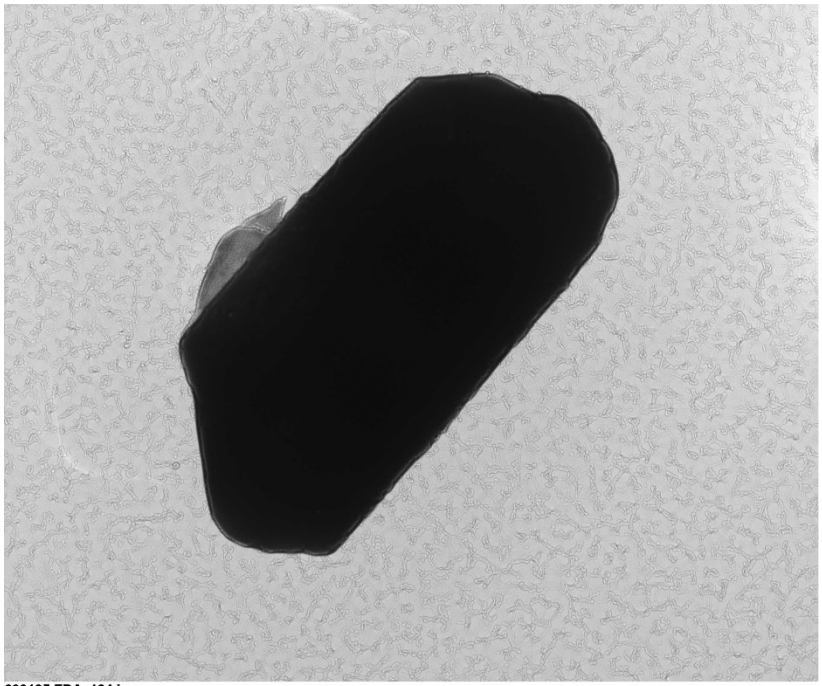
633185 FDA_117.jpg
633185-10A
Talc Particle
09:52 3/24/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle Pictured Above

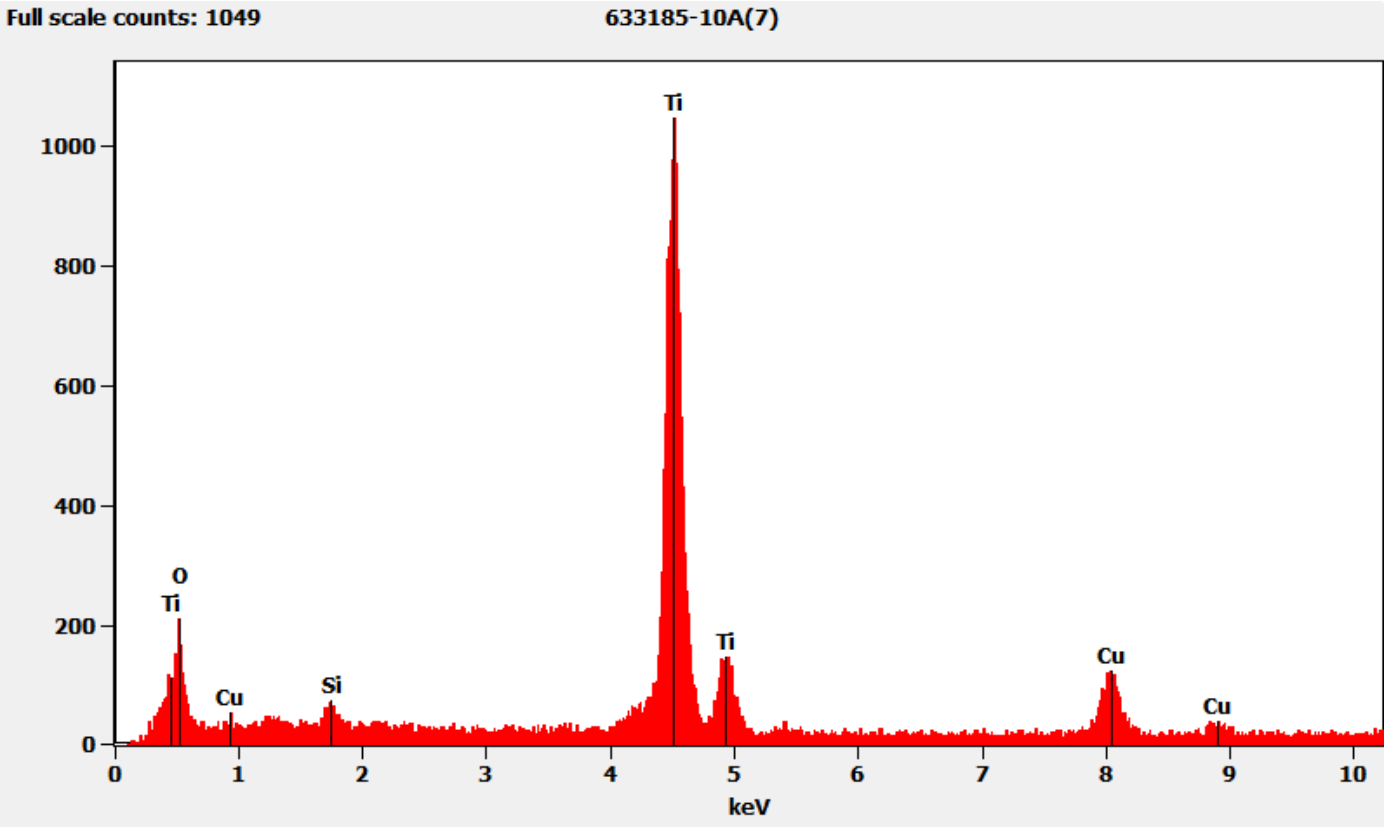


633185-10A, Titanium Particle

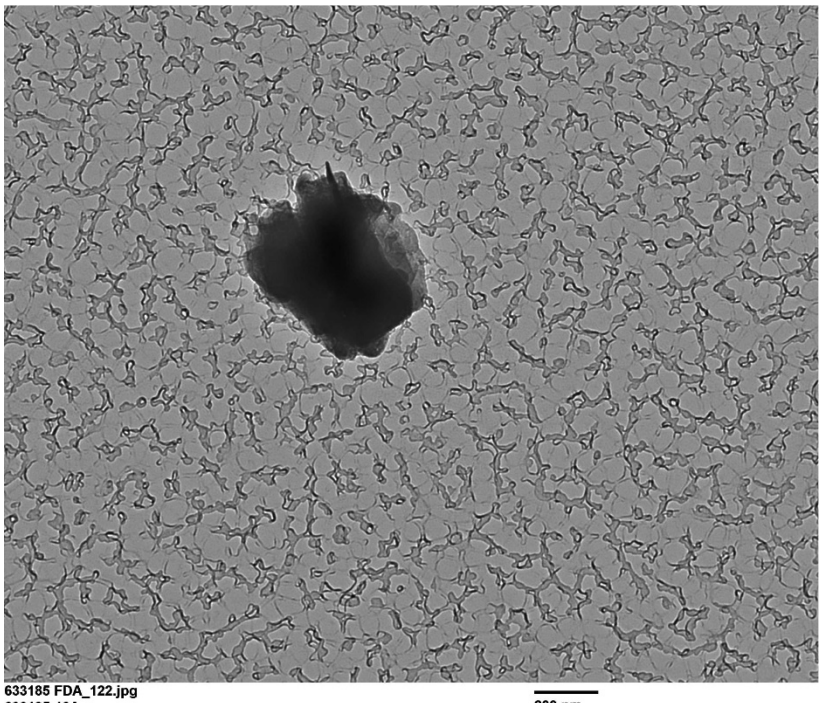


Diffraction Pattern from the Titanium Particle Pictured Above

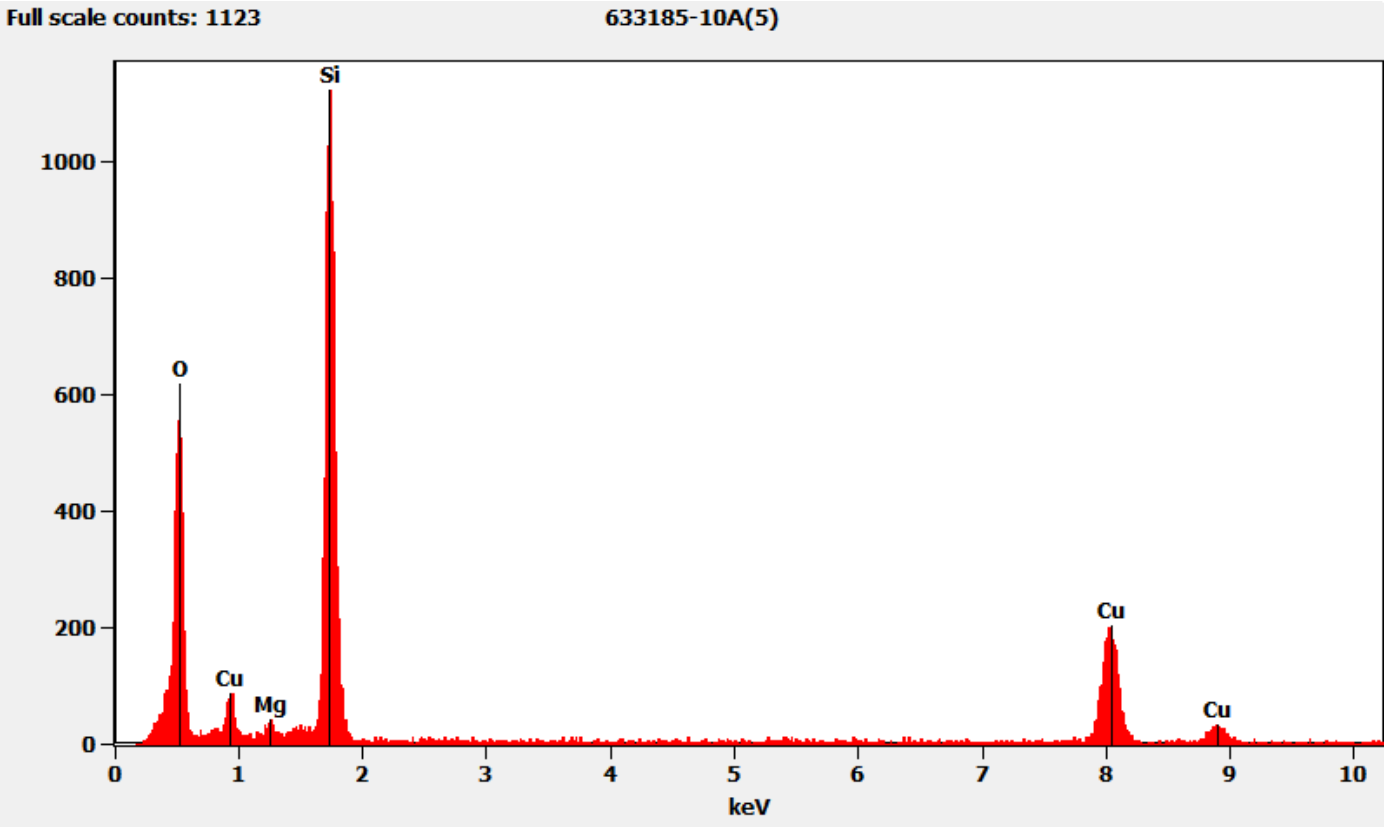
Chemistry from the Titanium Particle Pictured Above



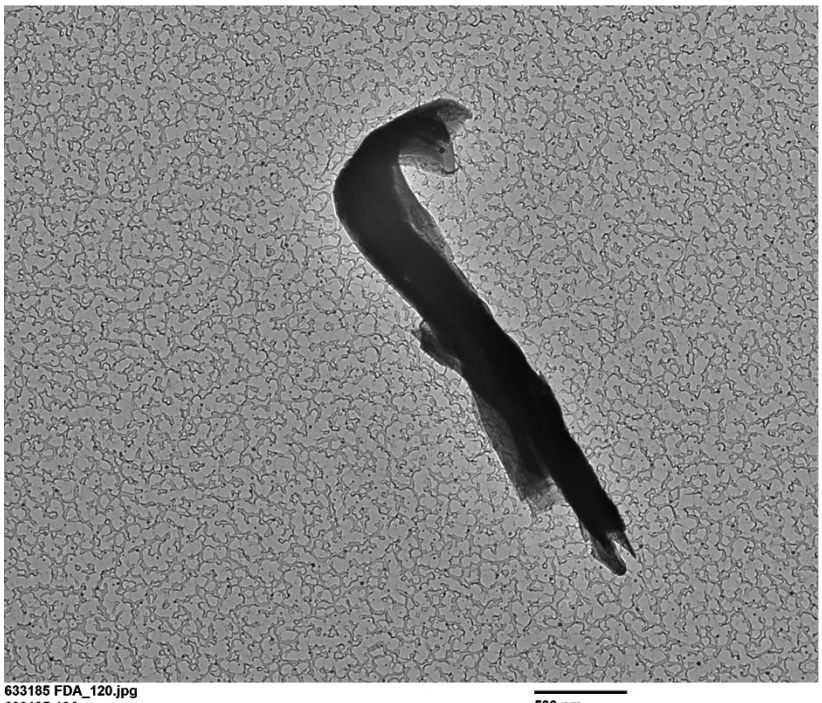
633185-10A, Silicon Particle



Chemistry from the Silicon Particle Pictured Above



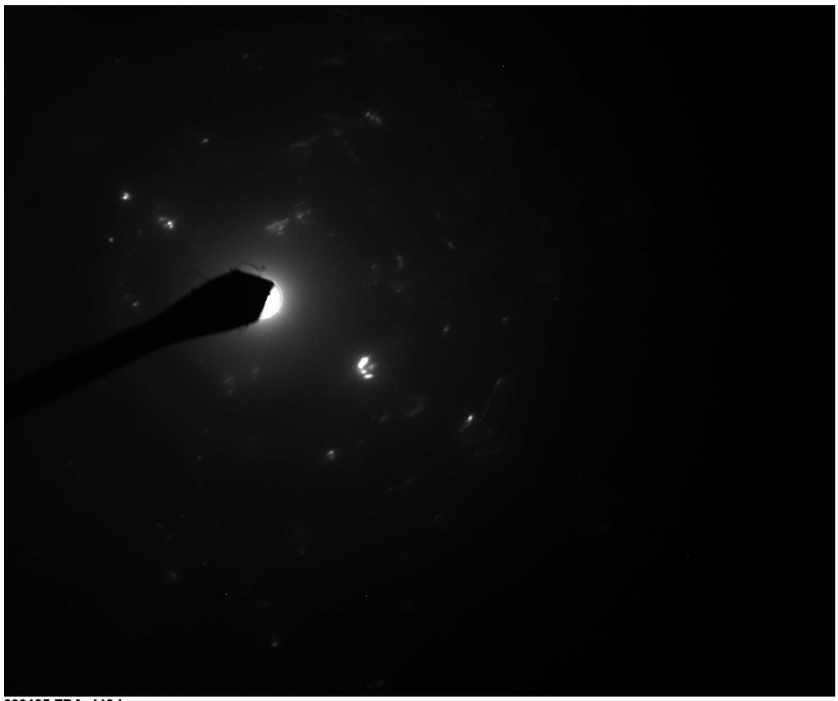
633185-10A, Talc Ribbon



633185 FDA_120.jpg
633185-10A
Talc Ribbon
Cal: 0.001775 µm/pix
10:20 3/24/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

500 nm
HV=100kV
Direct Mag: 5800 x
AMA Analytical Services, Inc

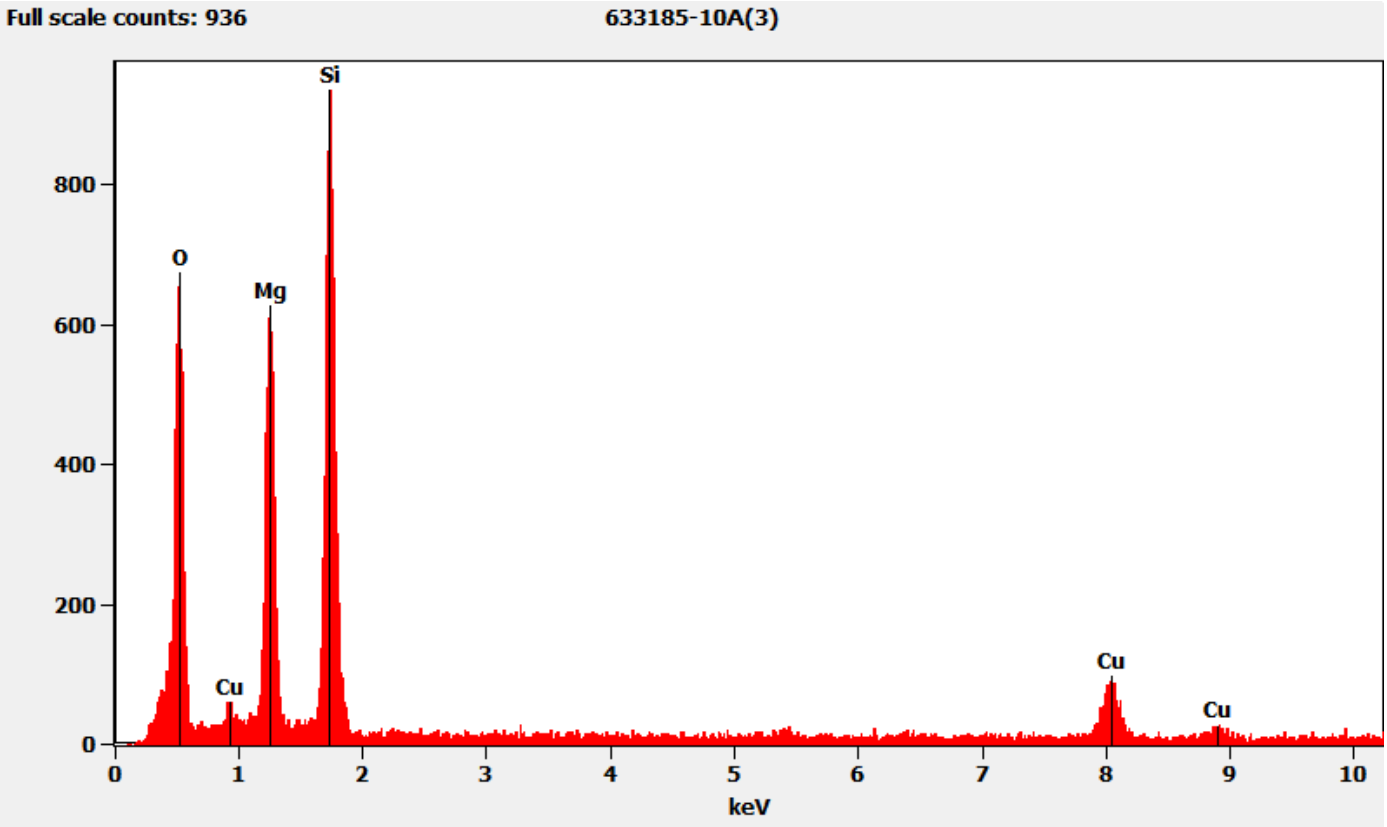
Diffraction Pattern from the Talc Ribbon Pictured Above



633185 FDA_119.jpg
633185-10A
Talc Ribbon
10:19 3/24/2022
Microscopis (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Ribbon Pictured Above



633185-11A, 11B, 11C/Client Sample: 01212022-11

PLM

All three aliquots of sample 01212022-11 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-11A	No Asbestos Detected
633185-11B	No Asbestos Detected
633185-11C	No Asbestos Detected

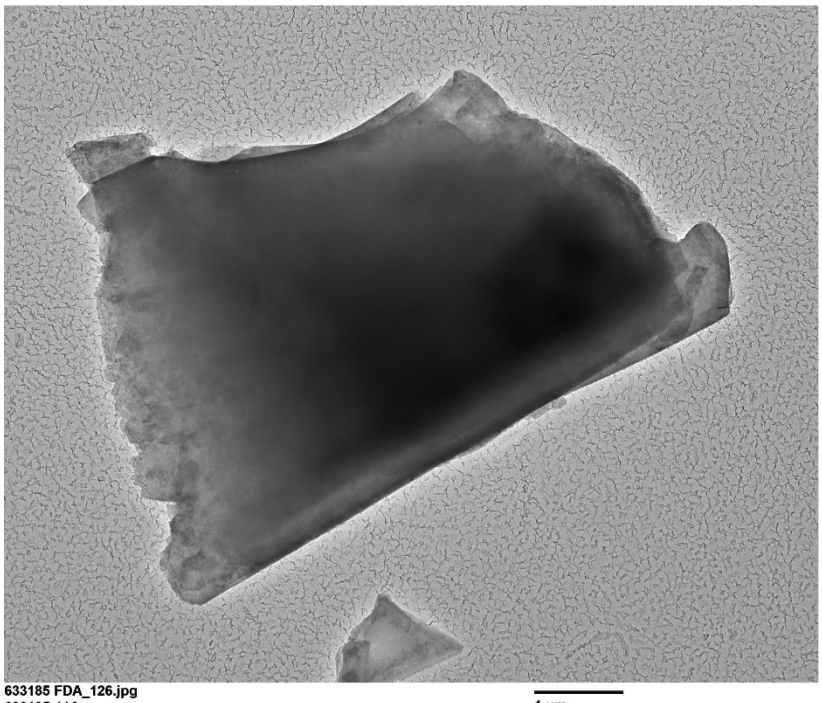
TEM

(b) (6) analyzed aliquots 11A, 11B, and 11C on March 25, 2022. The primary particle observed was talc; silicon particles were also observed along with calcium particles and talc fibers/ribbons. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-11A	No Asbestos Detected
633185-11B	No Asbestos Detected
633185-11C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder

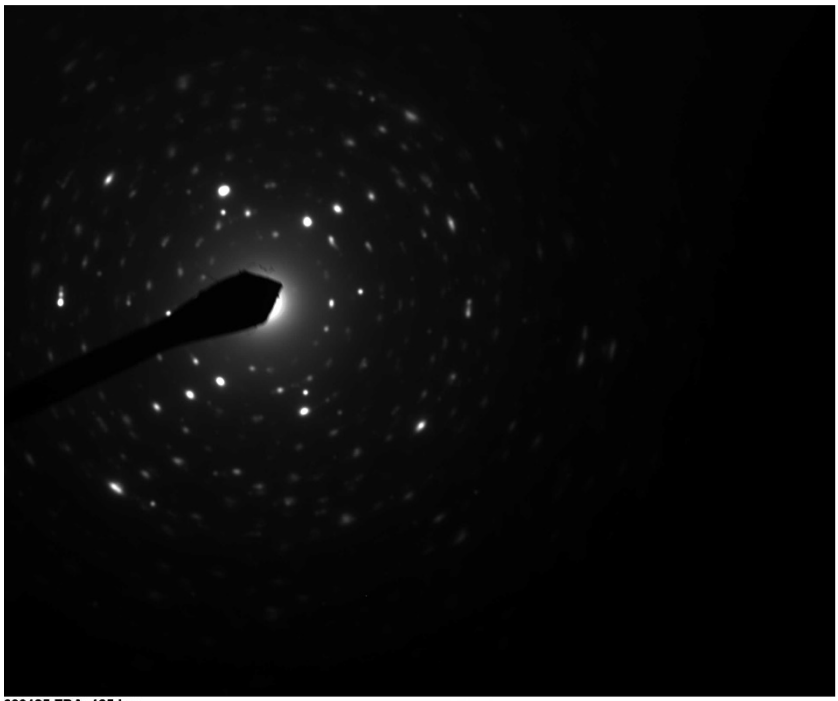
633185-11A, Layered Talc Particle



633185 FDA_126.jpg
633185-11A
Talc Particle
Cal: 0.003702 µm/pix
10:35 3/25/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

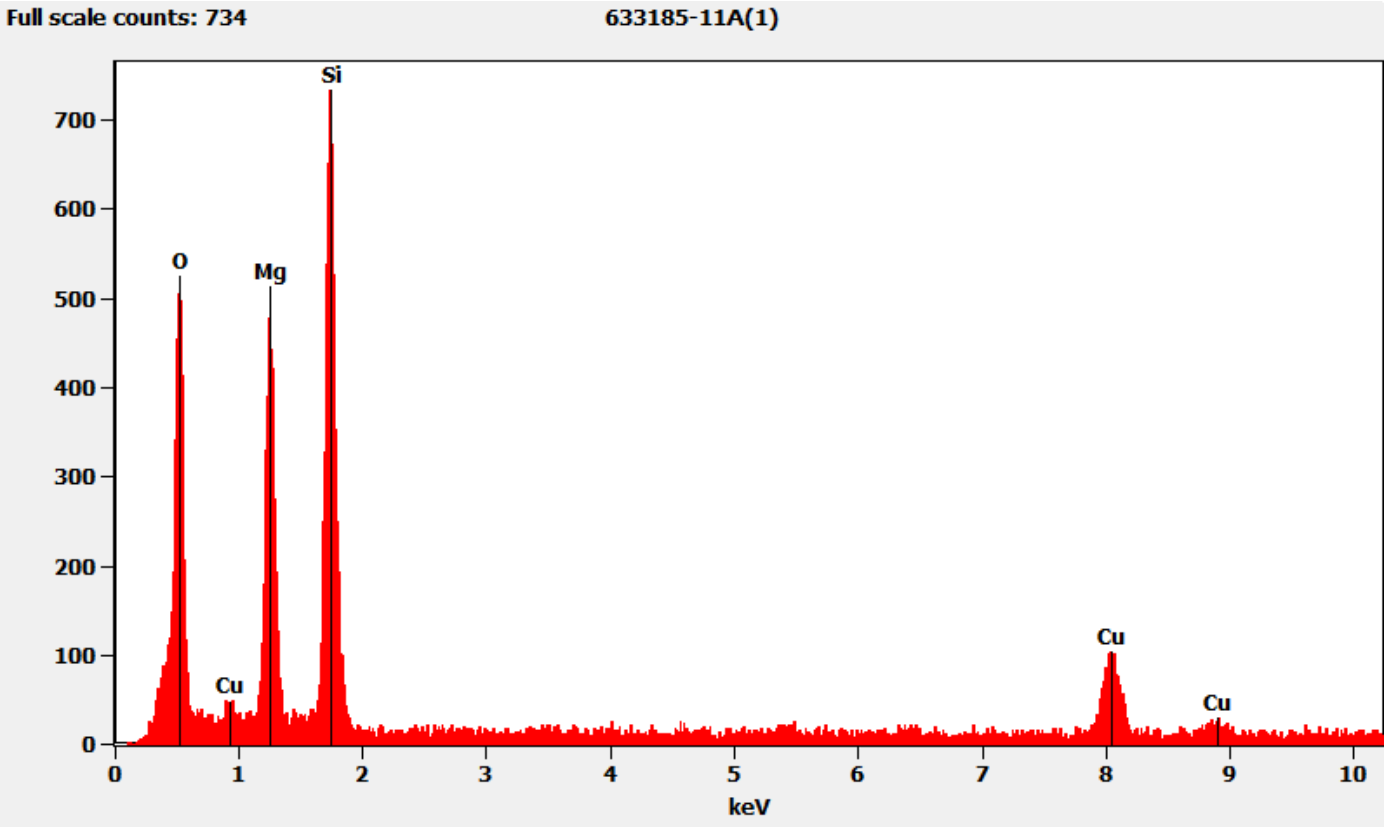
Diffraction Pattern from the Layered Talc Particle Pictured Above



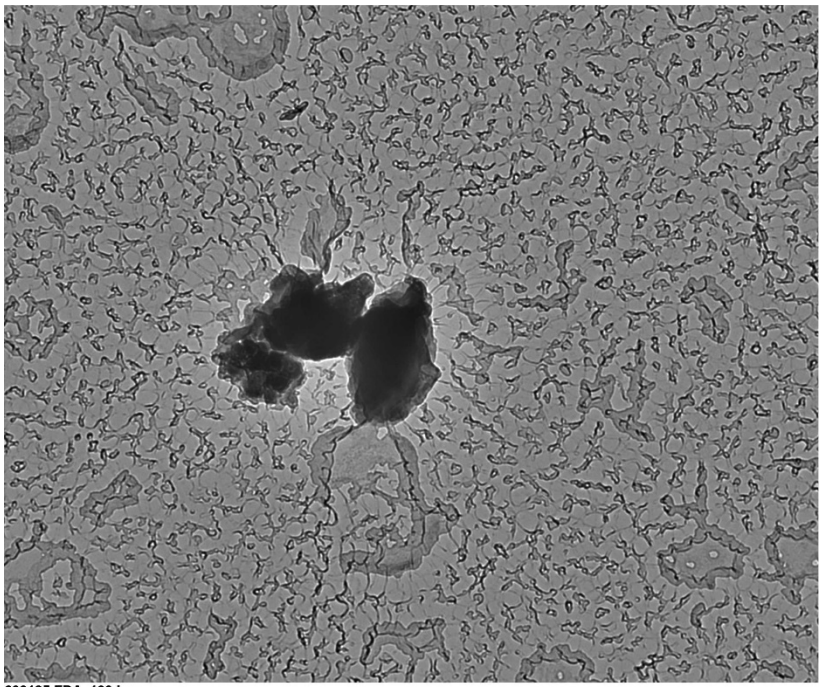
633185 FDA_125.jpg
633185-11A
Talc Particle
10:33 3/25/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

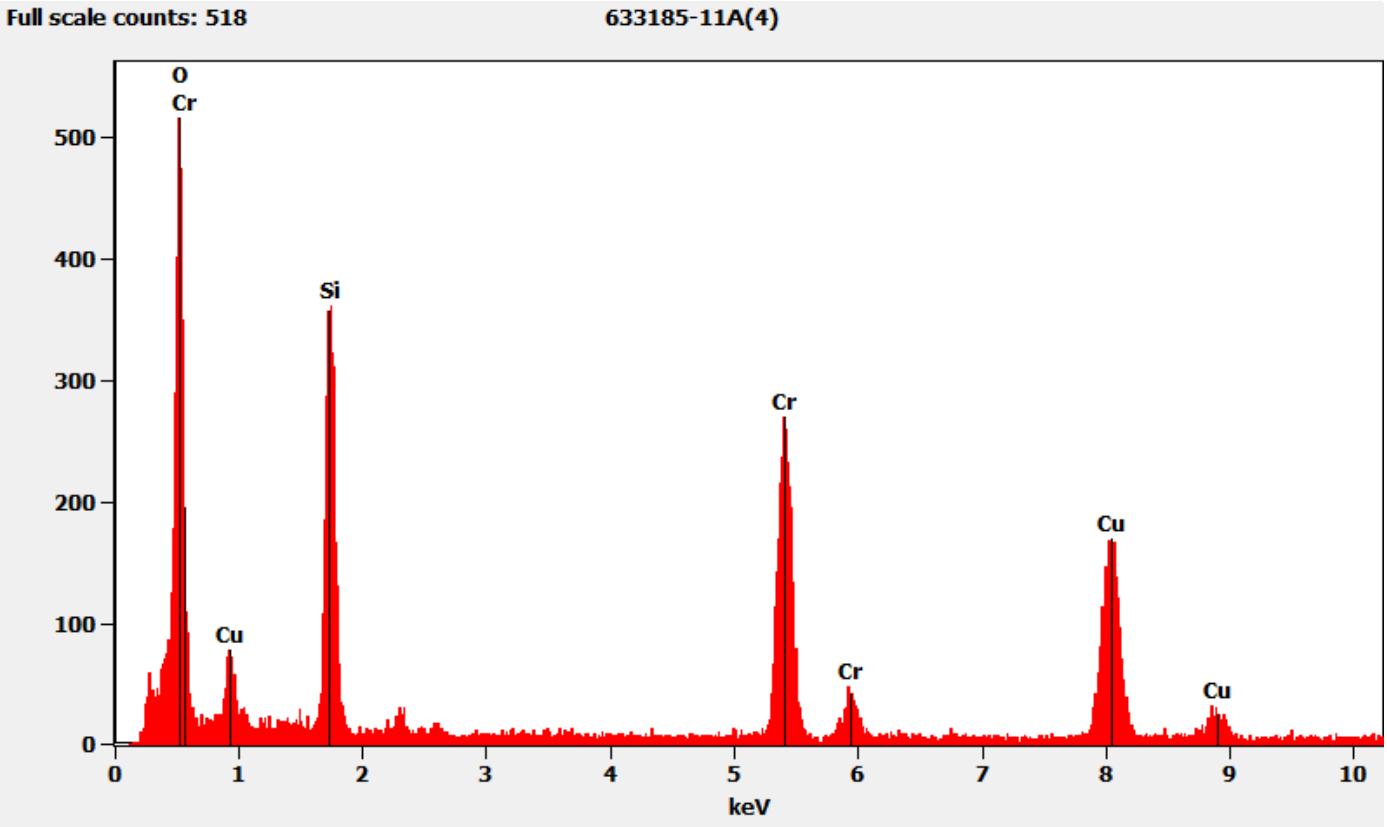
Chemistry from the Layered Talc Particle Pictured Above



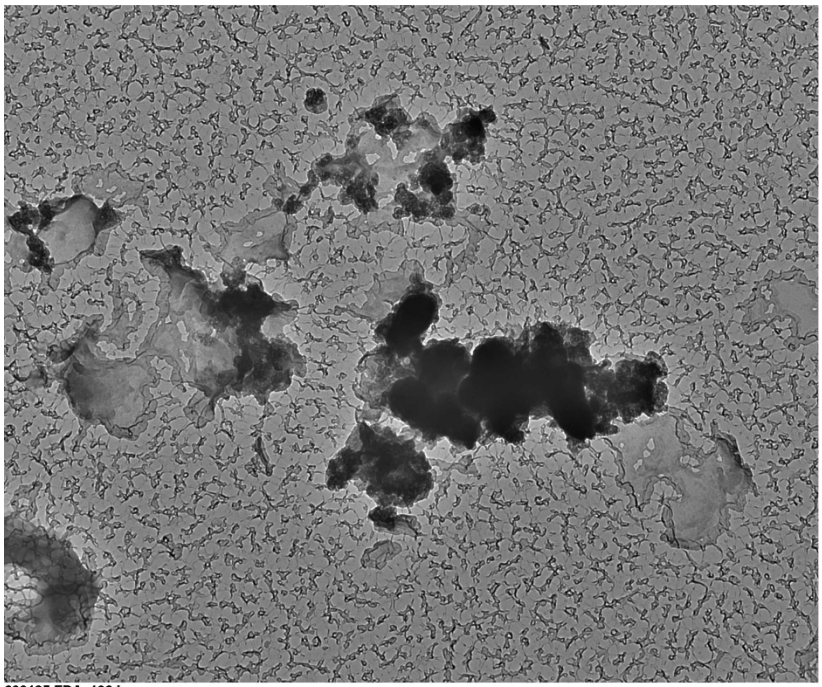
633185-11A, Particle Containing Silicon and Chromium



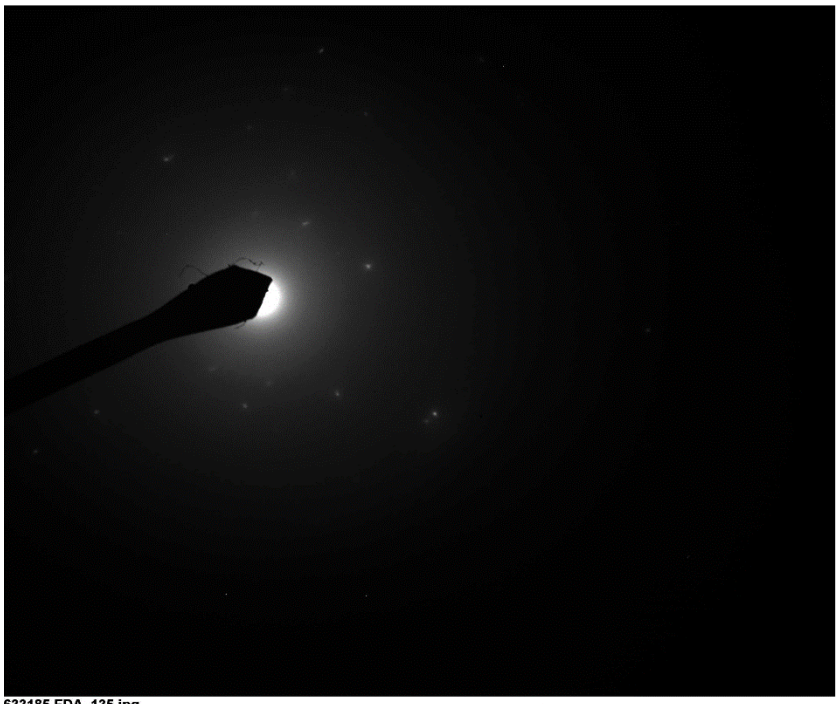
Chemistry from the Particle Containing Silicon and Chromium Pictured Above



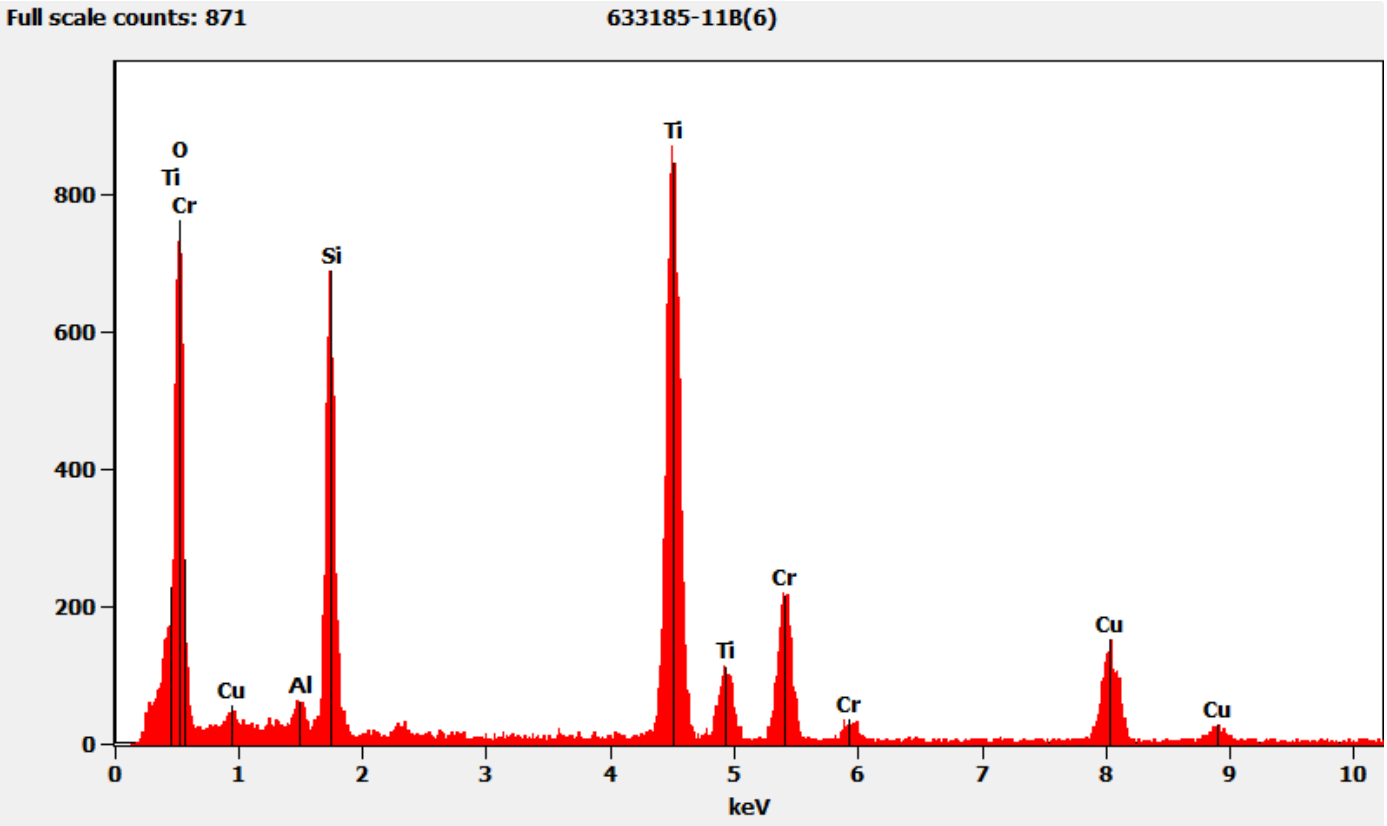
633185-11B, Particle Containing Silicon, Titanium, and Chromium



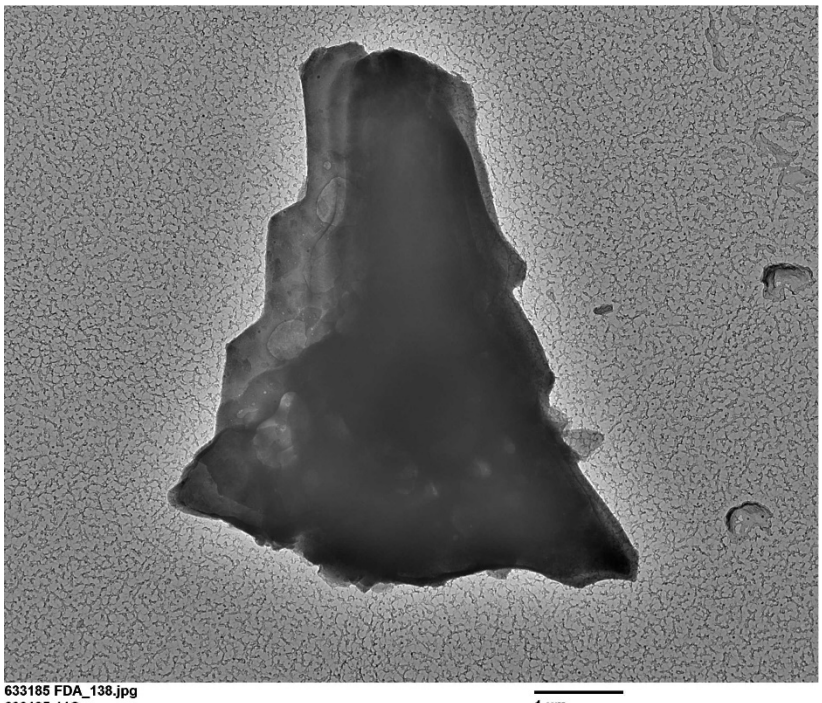
Diffraction Pattern from the Particle Containing Silicon, Titanium, and Chromium Pictured Above



Chemistry from the Particle Containing Silicon, Titanium, and Chromium Pictured Above



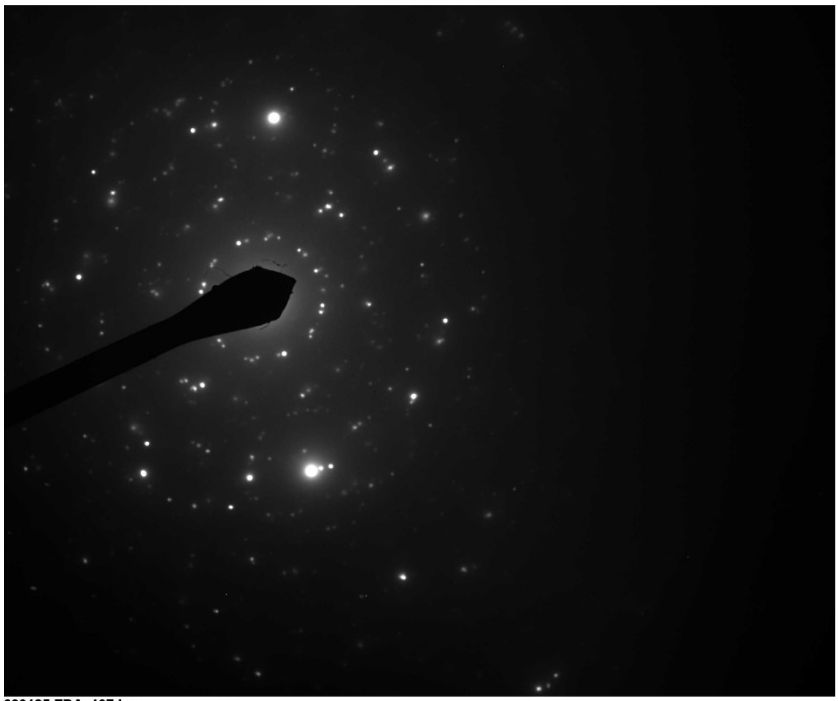
633185-11C, Particle Containing Magnesium, Aluminum, and Silicon



633185 FDA_138.jpg
633185-11C
SiMgAlFe Particle
Cal: 0.003702 µm/pix
13:52 3/25/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

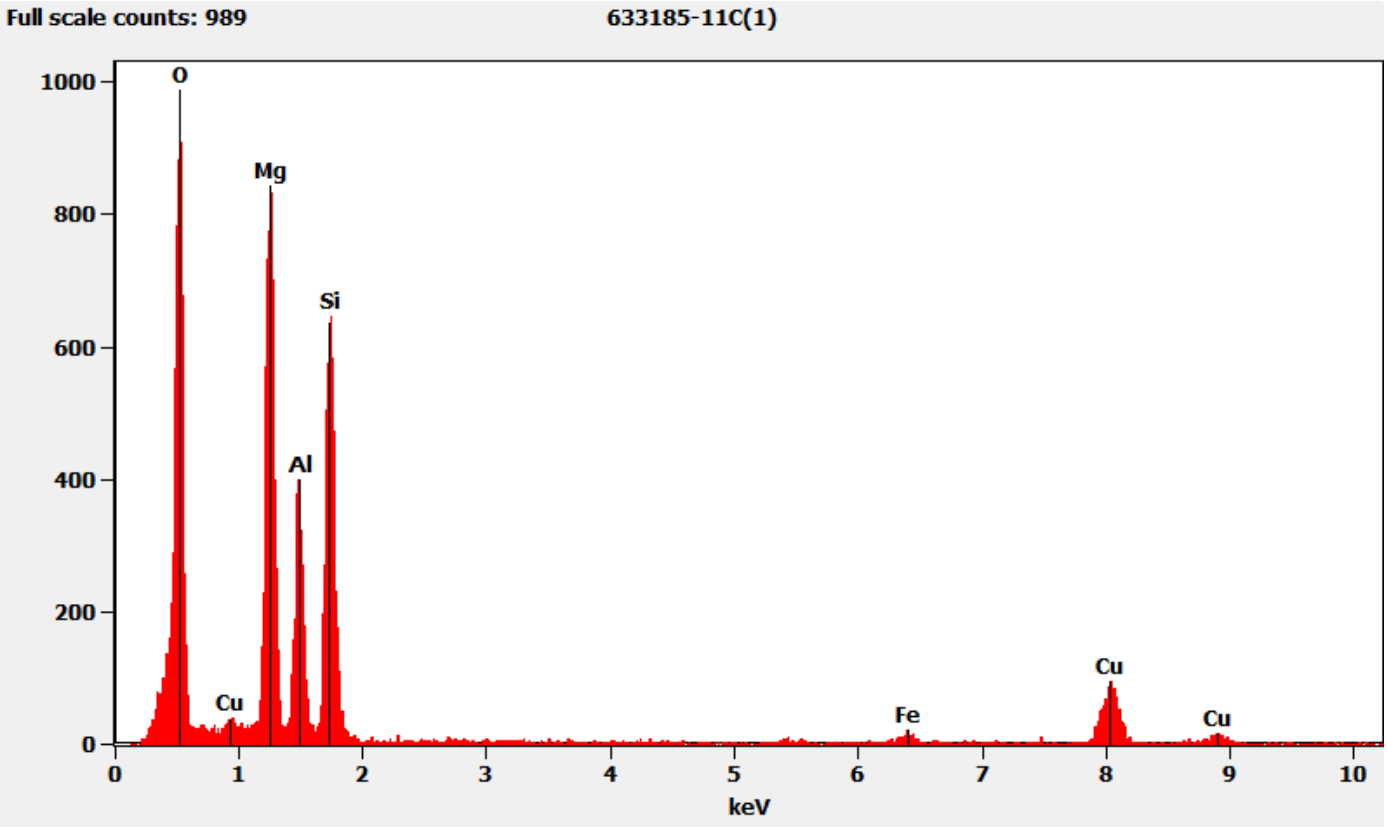
Diffraction Pattern from the Particle Containing Magnesium, Aluminum, and Silicon Pictured Above



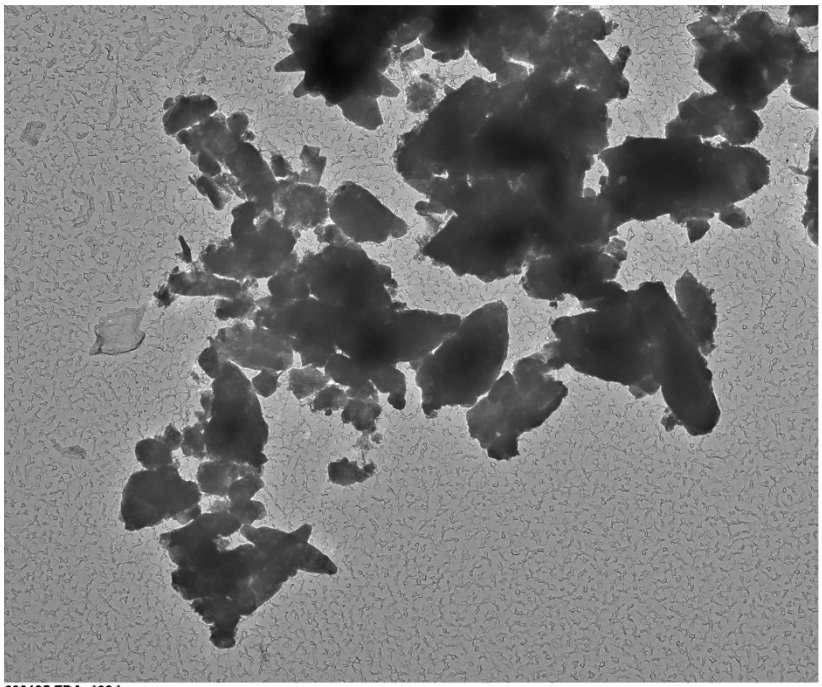
633185 FDA_137.jpg
633185-11C
SiMgAlFe Particle Dif
13:51 3/25/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Particle Containing Magnesium, Aluminum, and Silicon Pictured Above



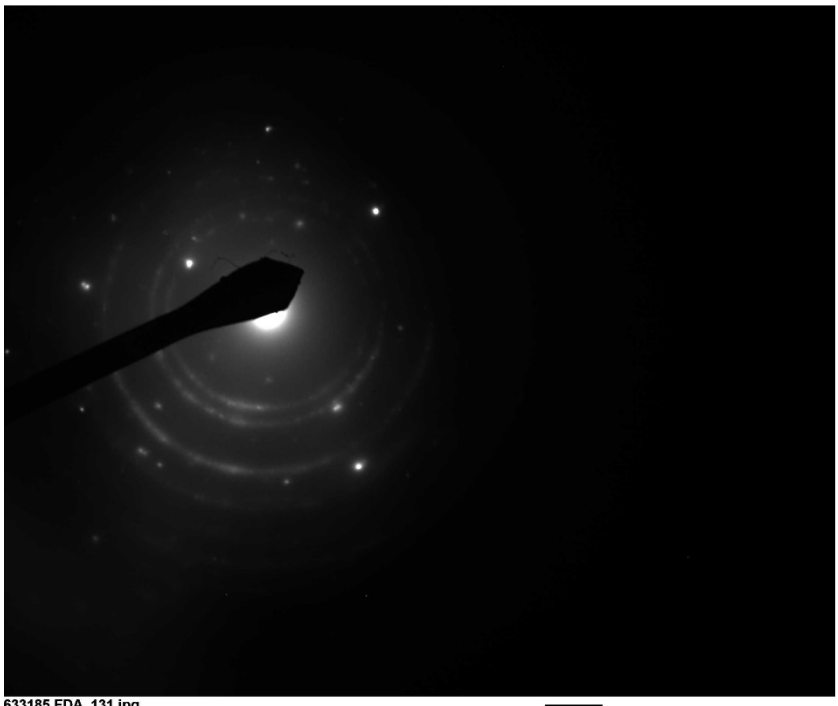
633185-11A, Calcium Particle



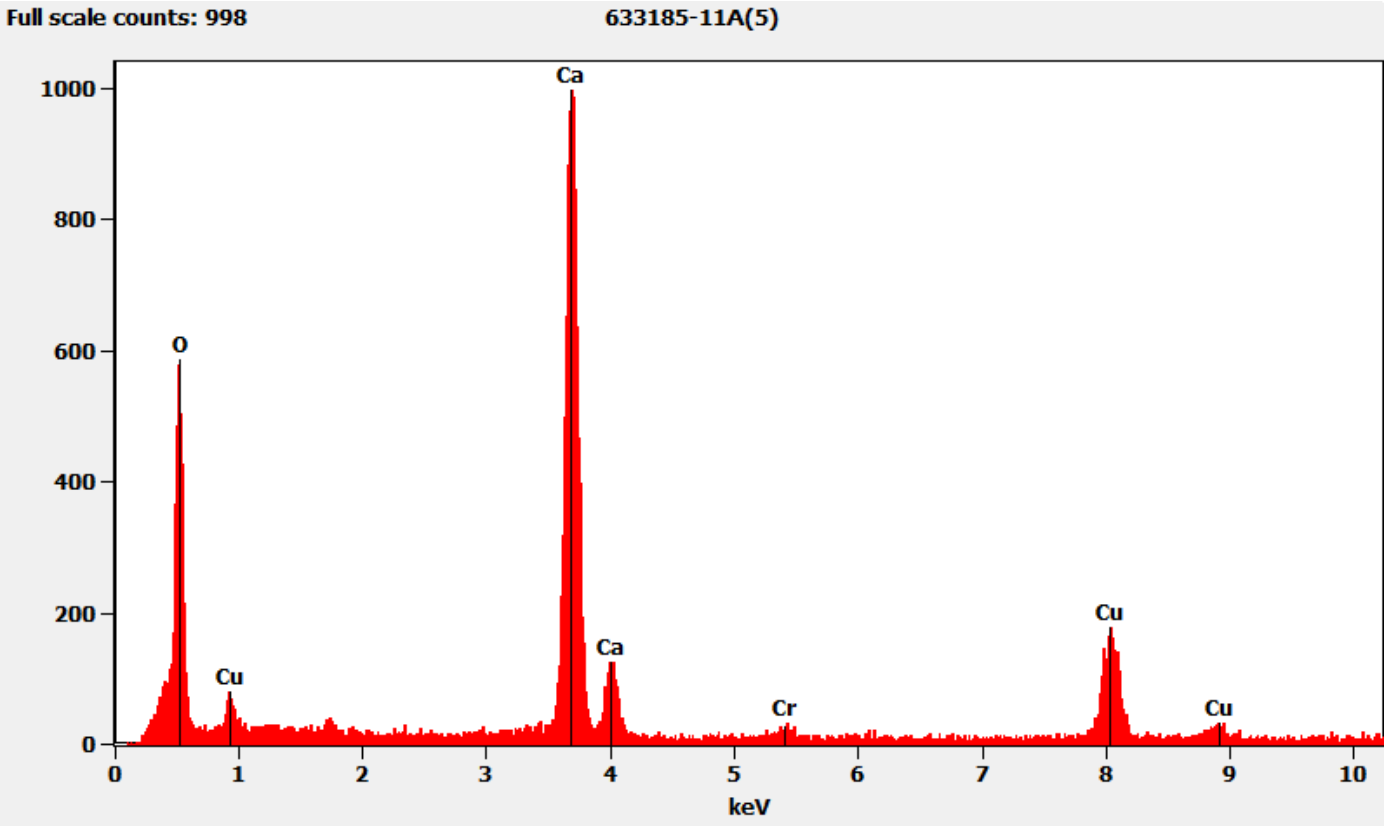
633185 FDA_132.jpg
633185-11A
Ca Particle
Cal: 0.002860 µm/pix
11:22 3/25/2022
Microscopist: (b) (6)
Camera: NANO... 1.15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

800 nm
HV=100kV
Direct Mag: 3600 x
AMA Analytical Services, Inc

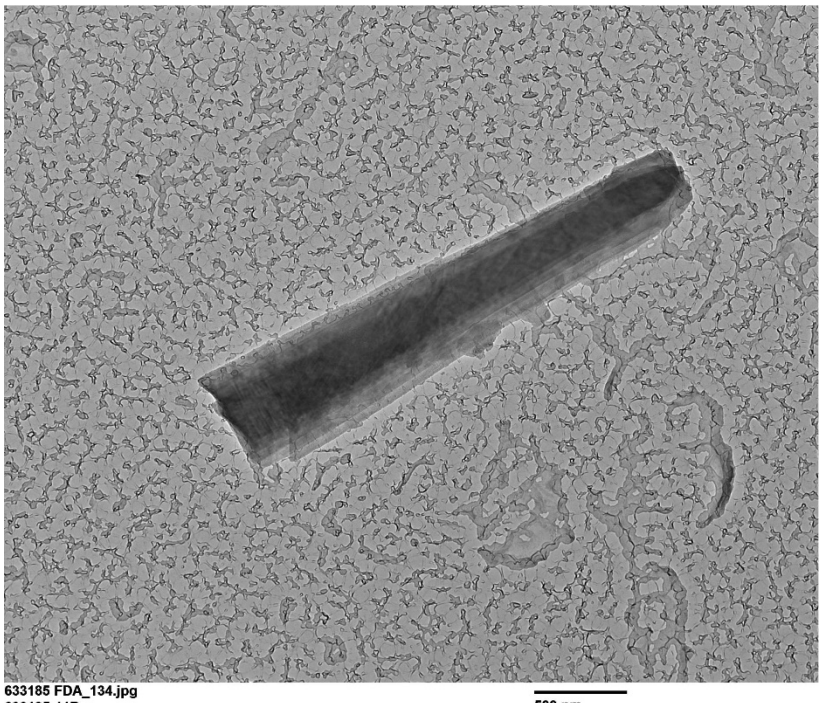
Diffraction Pattern from the Calcium Particle Pictured Above



Chemistry from the Calcium Particle Pictured Above



633185-11B, Talc Fiber



633185 FDA_134.jpg
633185-11B
Talc Fiber
Cal: 0.001775 µm/pix
12:55 3/25/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

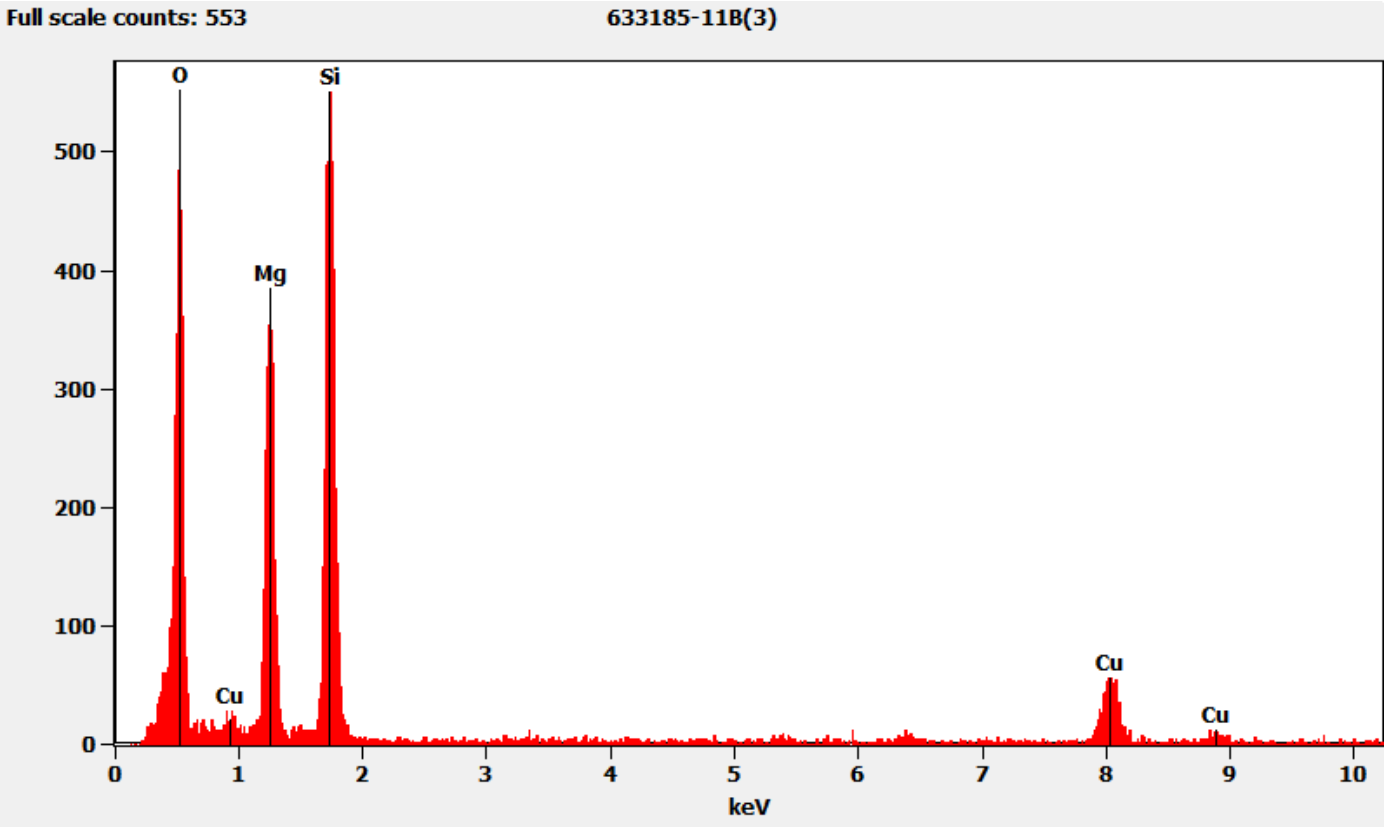
500 nm
HV=100kV
Direct Mag: 5800 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Fiber Pictured Above

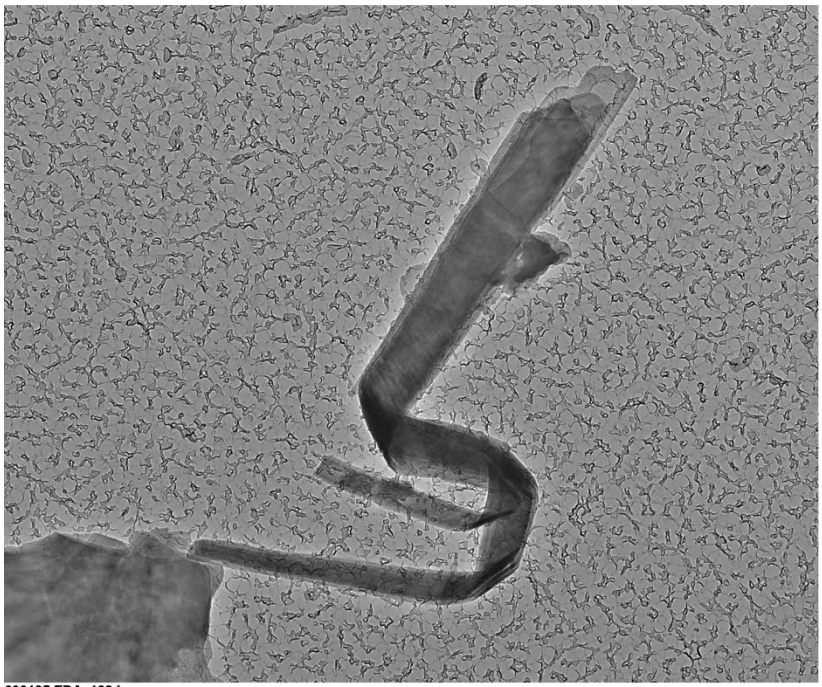
633185 FDA_133.jpg
633185-11B
Talc Fiber Dif
12:53 3/25/2022
Microscopist: (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Fiber Pictured Above

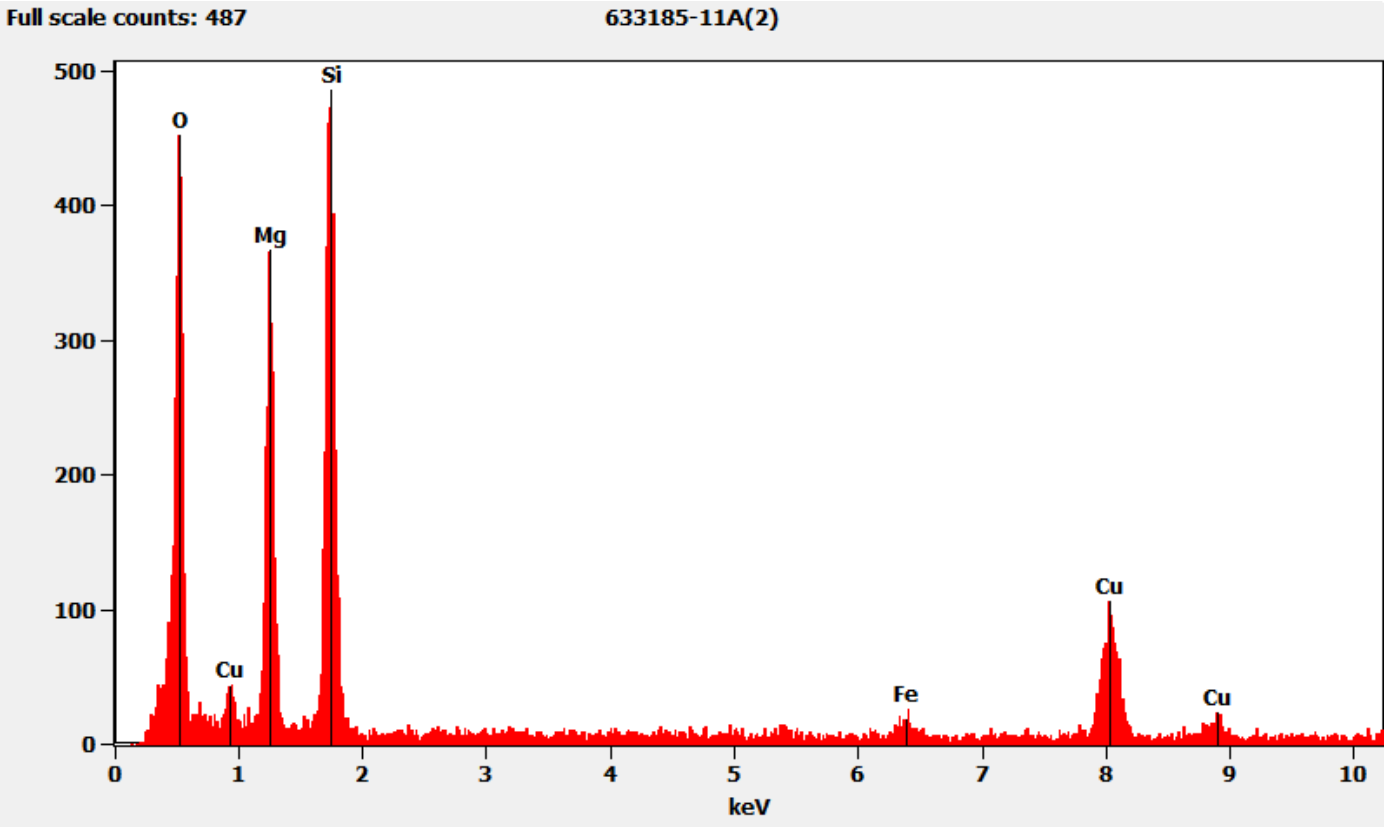


633185-11A, Talc Ribbon



Diffraction Pattern from the Talc Ribbon Pictured Above

Chemistry from the Talc Ribbon Pictured Above



633185-12A, 12B, 12C/Client Sample: 01212022-12

PLM

All three aliquots of sample 01212022-12 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-12A	No Asbestos Detected
633185-12B	No Asbestos Detected
633185-12C	No Asbestos Detected

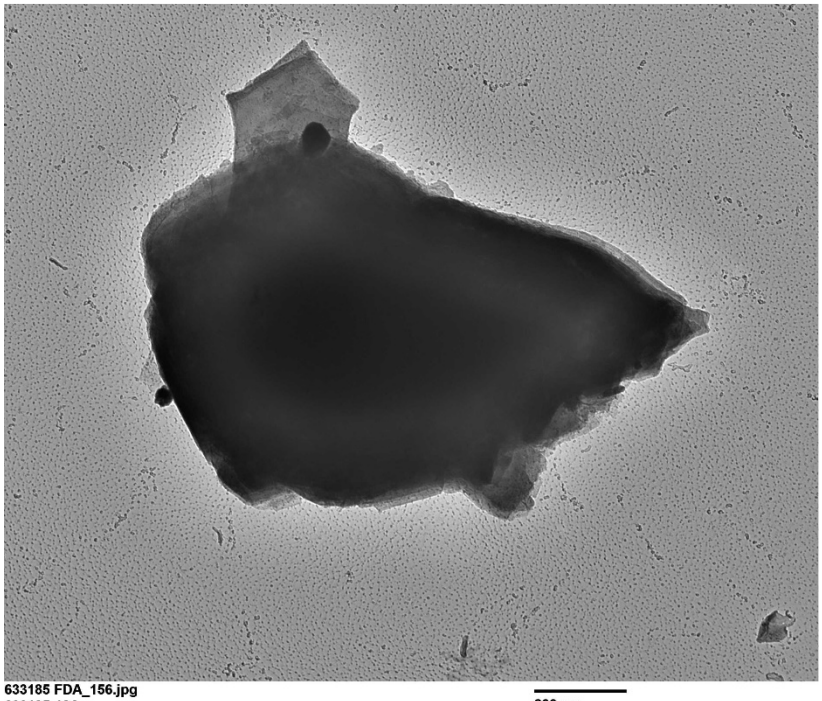
TEM

(b) (6) analyzed aliquots 12A and 12B on March 29, 2022. Andreas Saldivar analyzed aliquot 12C on March 30, 2022. The primary particles observed were talc and mica; titanium and iron particles were also observed along with silica spheres, and talc fibers/ribbons. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-12A	No Asbestos Detected
633185-12B	No Asbestos Detected
633185-12C	No Asbestos Detected

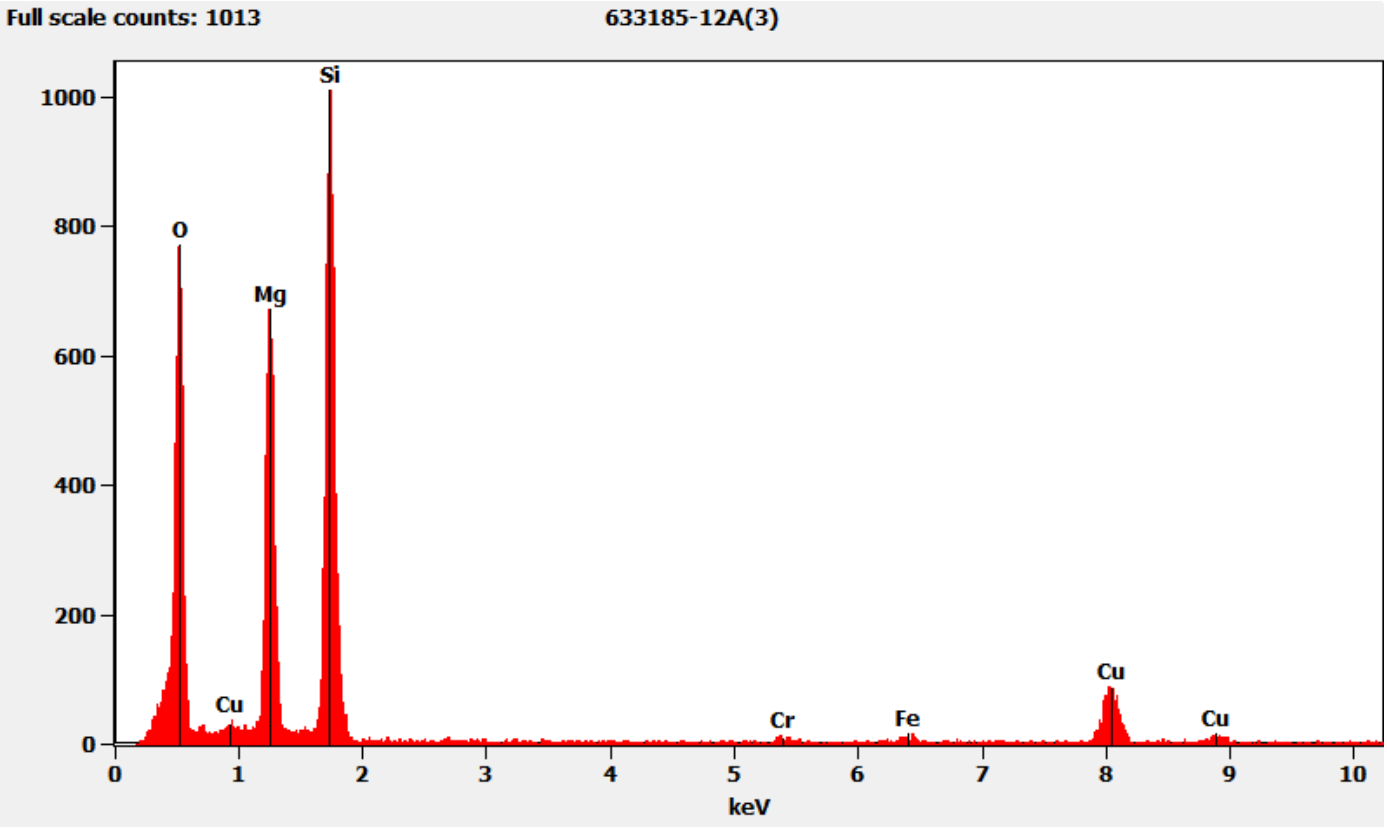
Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder

636185-12A, Talc Particle



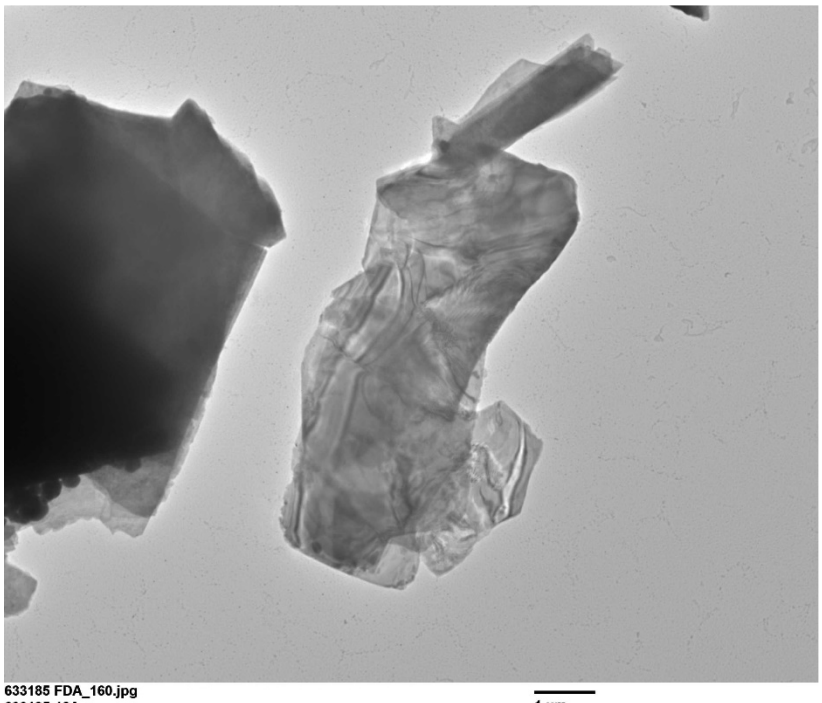
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above

Chemistry from the Talc Particle Pictured Above



Asbestos · Lead · Mold · Nano

636185-12A, Mica Particle



633185 FDA_160.jpg
633185-12A
Mica Particle
Cal: 0.005419 µm/pix
15:52 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRI5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

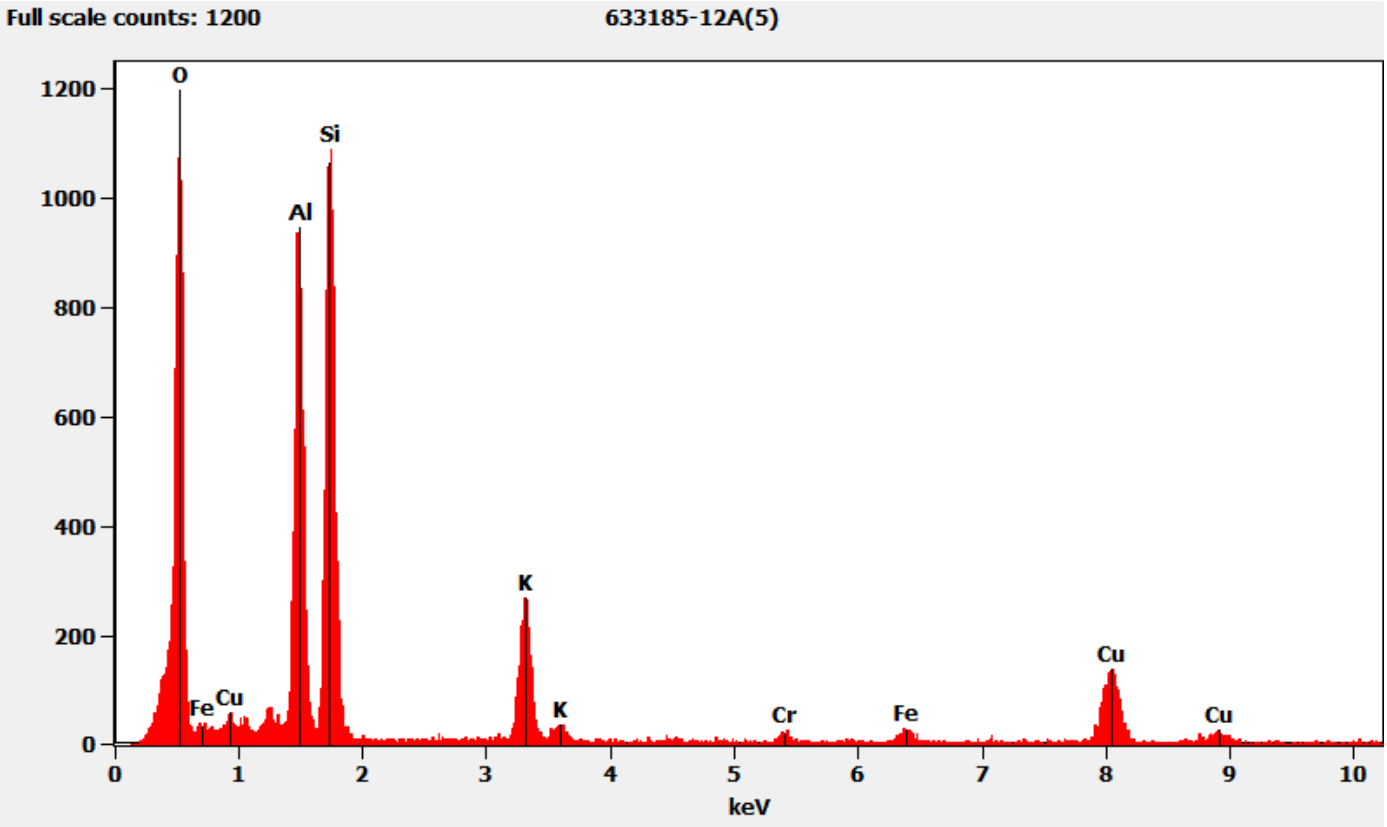
1 µm
HV=100kV
Direct Mag: 1900 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Mica Particle Pictured Above

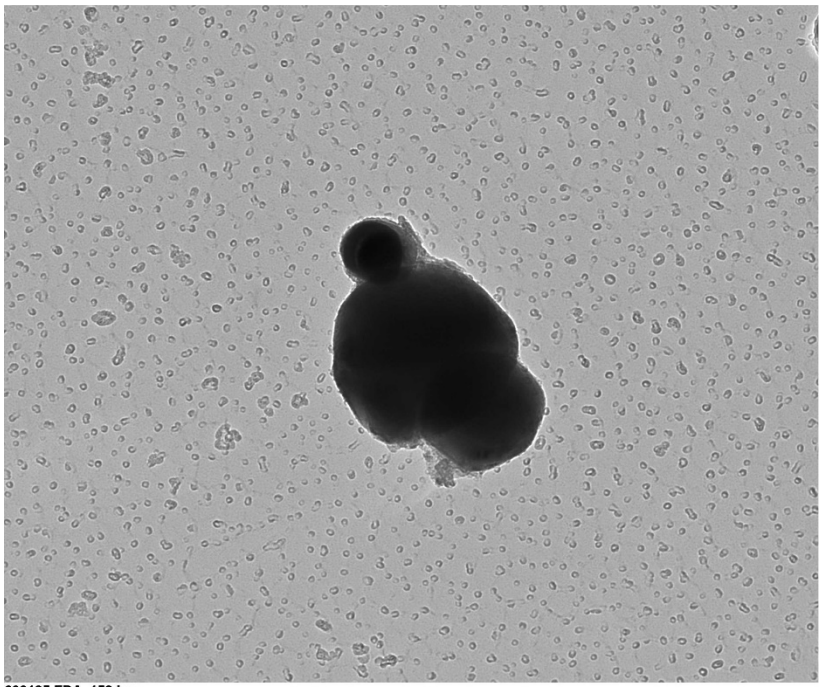
633185 FDA_159.jpg
633185-12A
Mica Particle
15:50 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRI5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above



636185-12A, Titanium Particle

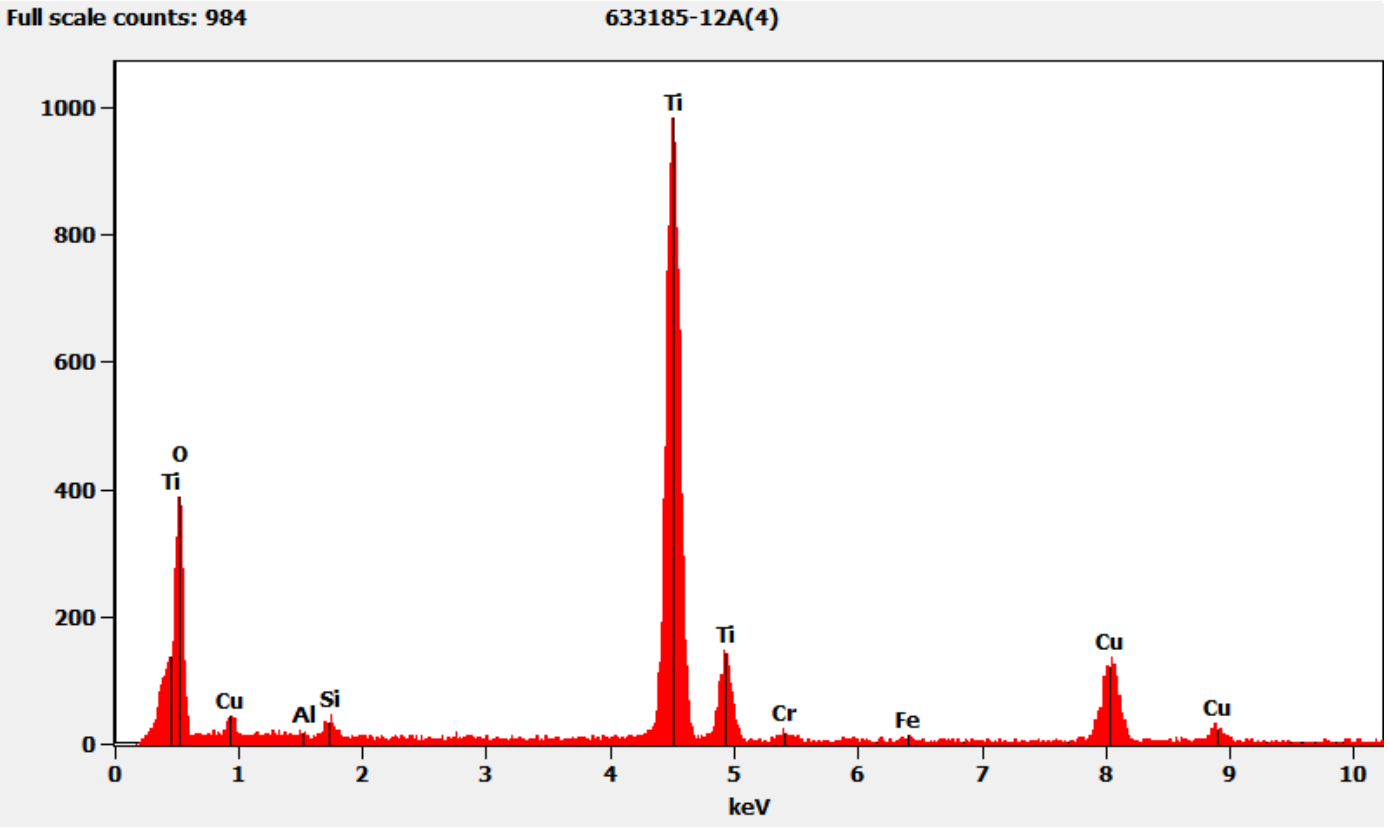


Diffraction Pattern from the Titanium Particle Pictured Above

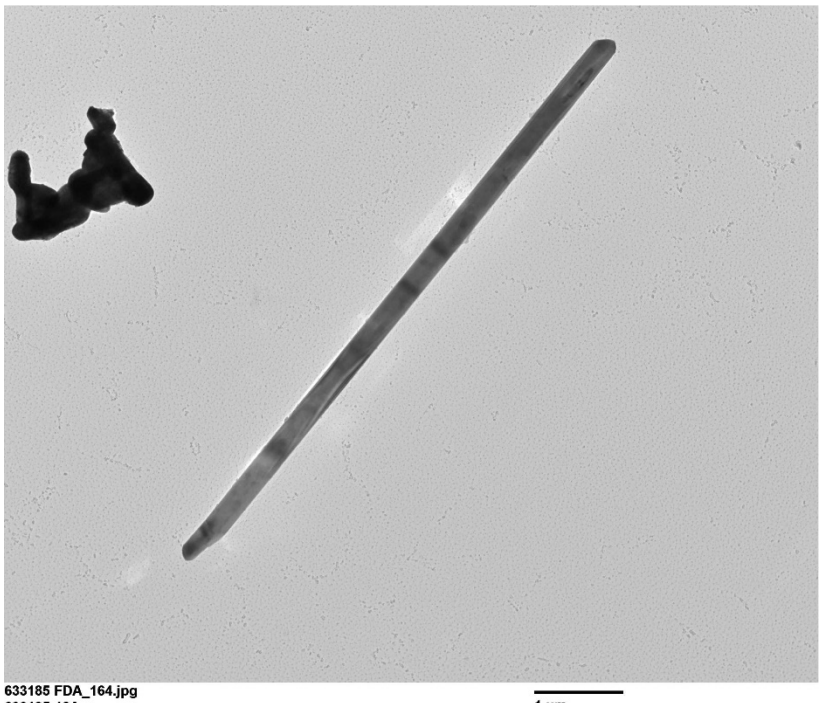
633185 FDA_157.jpg
633185-12A
Ti Particle
15:45 3/29/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Titanium Particle Pictured Above

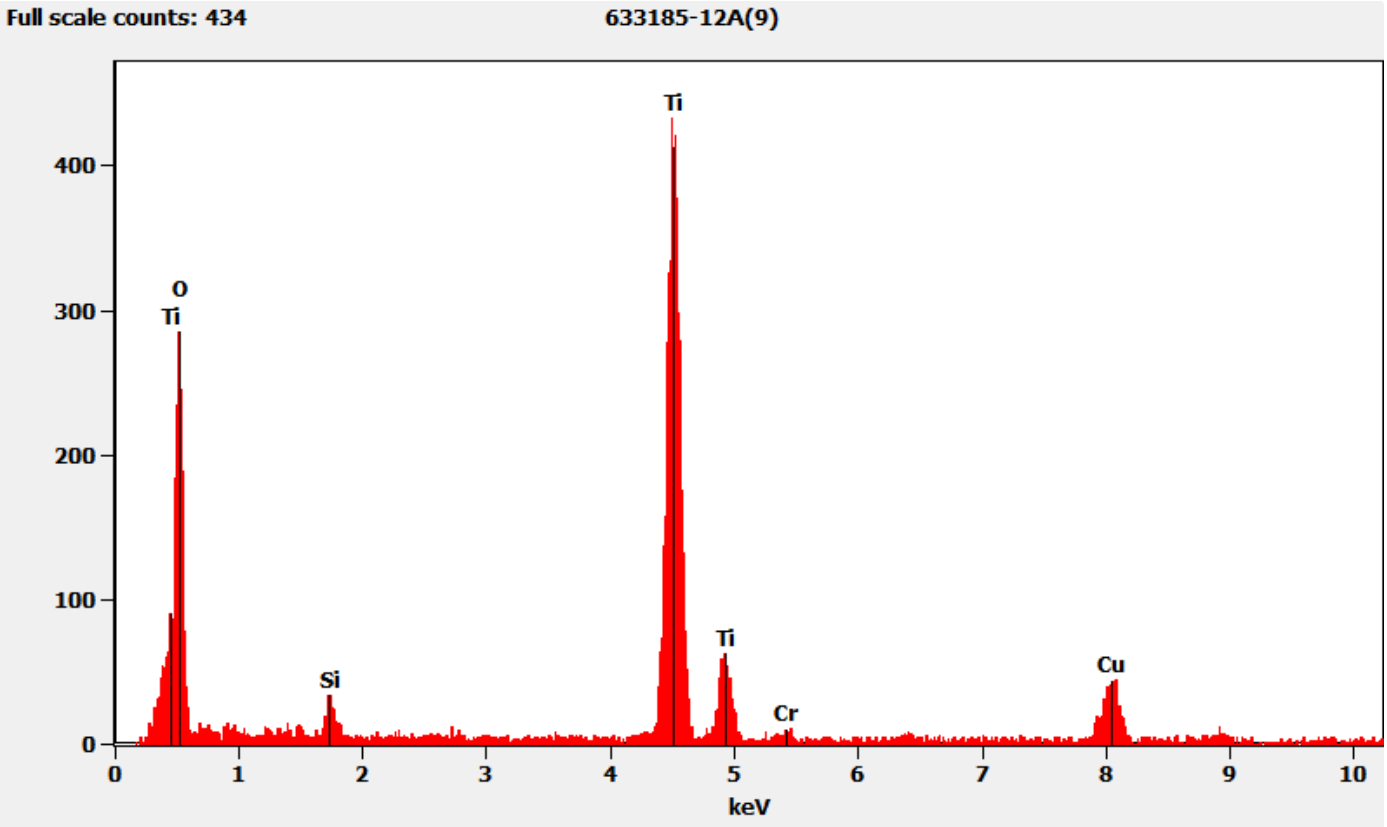


636185-12A, Elongated Titanium Particle

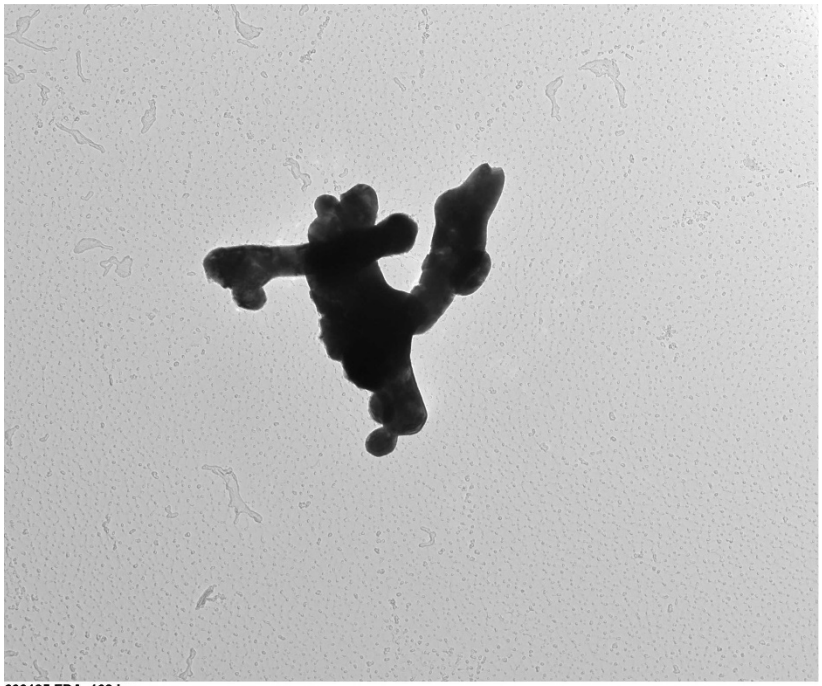


Diffraction Pattern from the Elongated Titanium Particle Pictured Above

Chemistry from the Elongated Titanium Particle Pictured Above

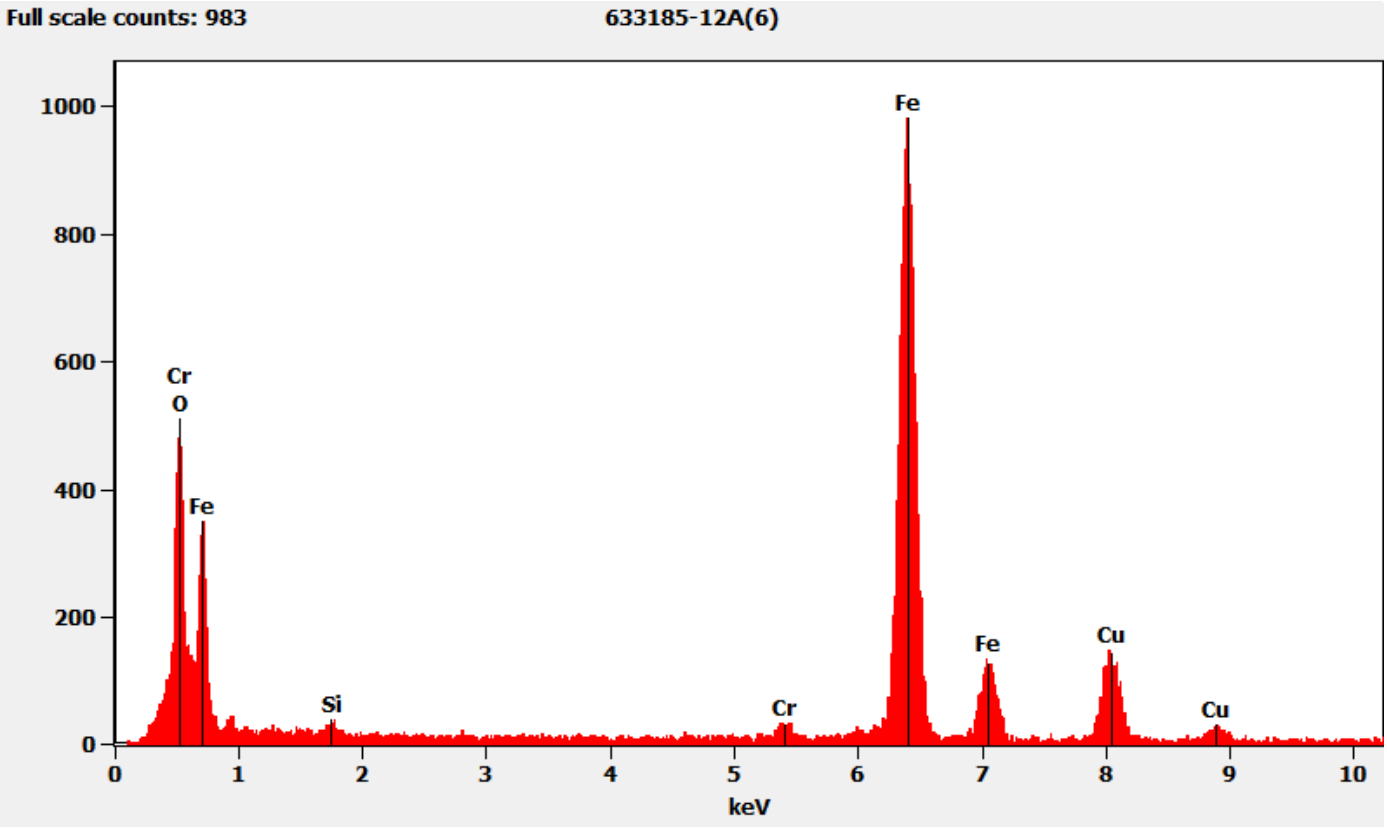


636185-12A, Iron Particle

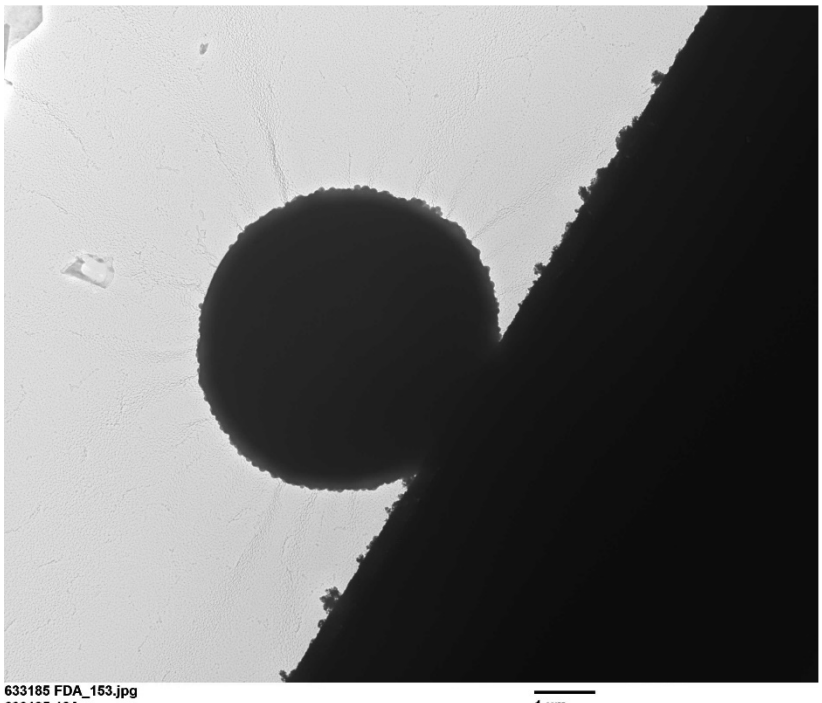


Diffraction Pattern from the Iron Particle Pictured Above

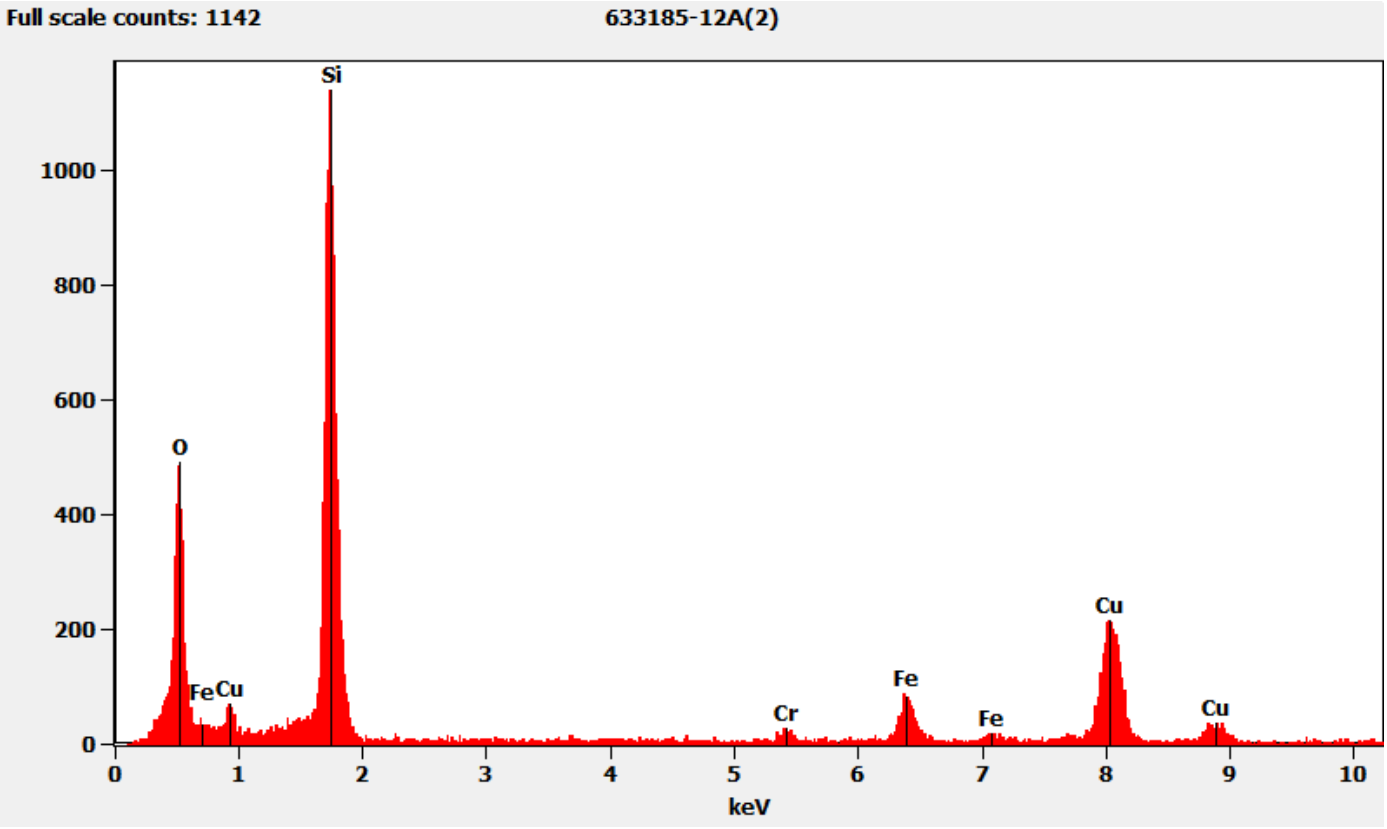
Chemistry from the Iron Particle Pictured Above



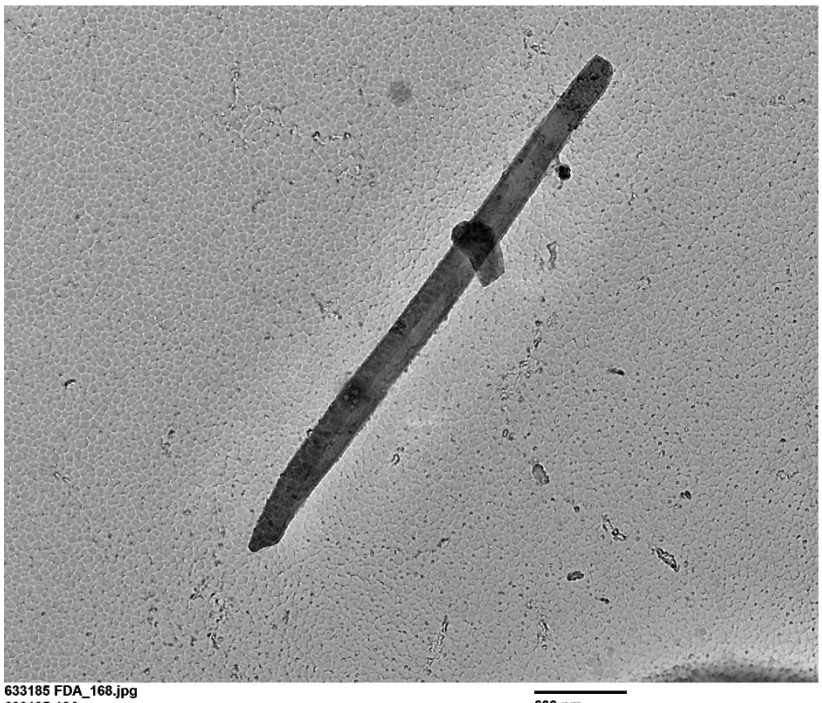
636185-12A, Silica Sphere



Chemistry from the Silica Sphere Pictured Above



636185-12A, Talc Fiber



633185 FDA_168.jpg
633185-12A
Elongated Talc Particle
Cal: 0.002145 µm/pix
16:44 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

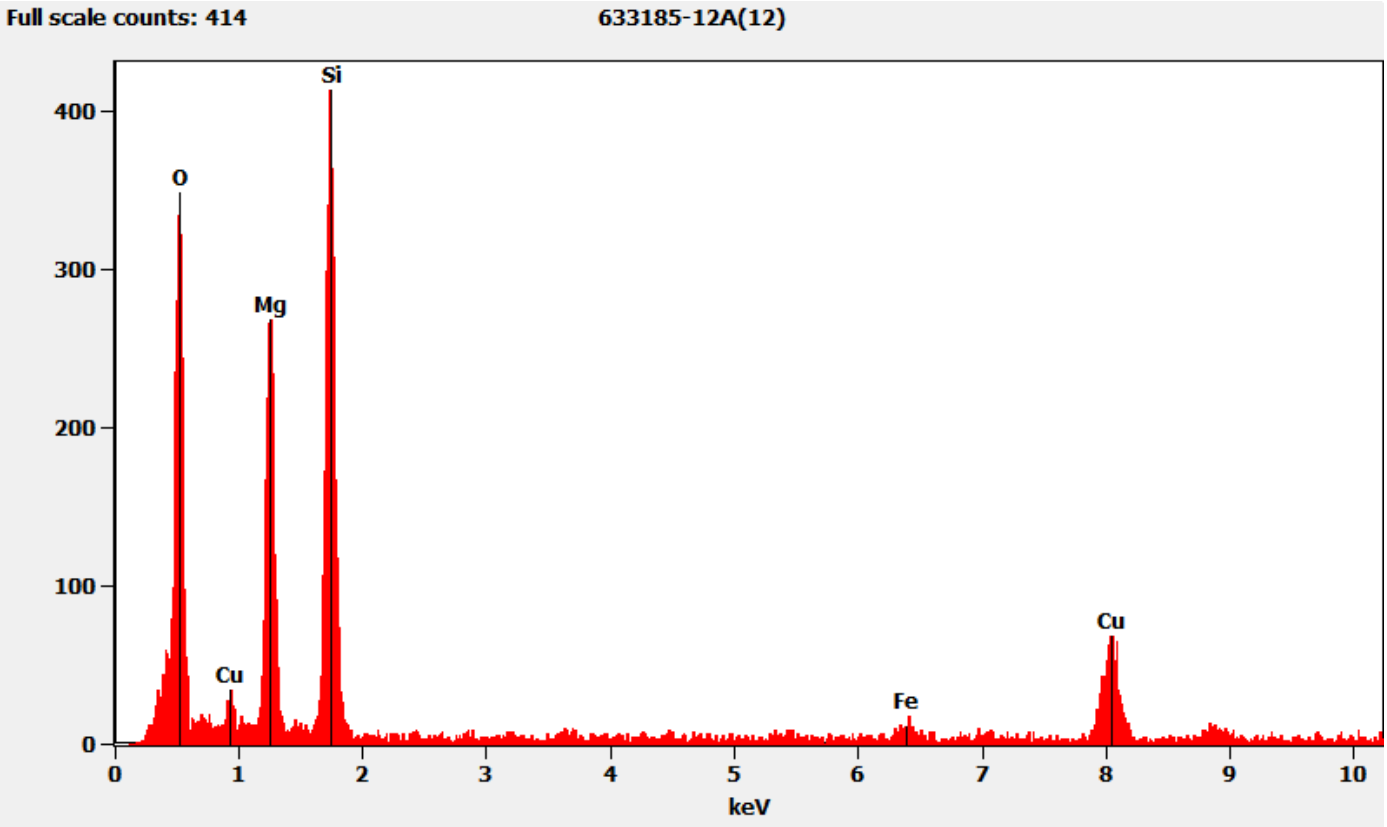
600 nm
HV=100kV
Direct Mag: 4800 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Fiber Pictured Above

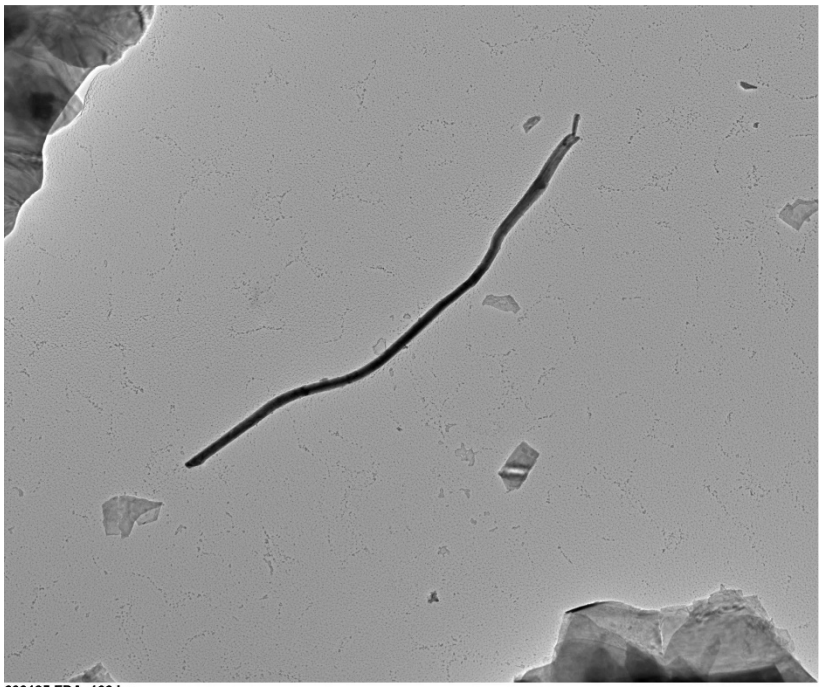
633185 FDA_167.jpg
633185-12A
Elongated Talc Particle
16:42 3/29/2022
Microscopist: (b) (6)
Camera: NAN[illegible], Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Fiber Pictured Above

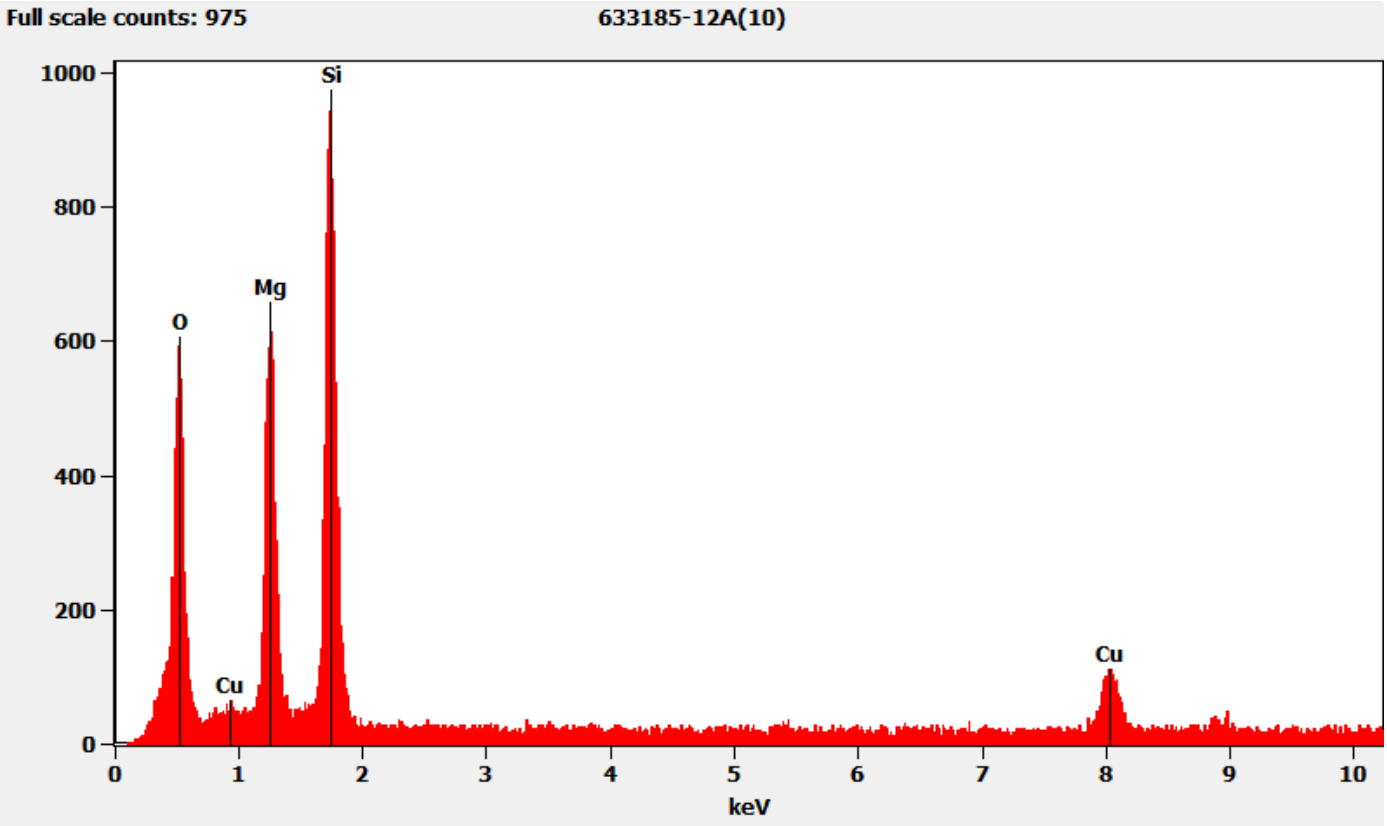


636185-12A, Talc Ribbon



Diffraction Pattern from the Talc Ribbon Pictured Above

Chemistry from the Talc Ribbon Pictured Above



633185-13A, 13B, 13C/Client Sample: 01212022-13

PLM

All three aliquots of sample 01212022-13 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-13A	No Asbestos Detected
633185-13B	No Asbestos Detected
633185-13C	No Asbestos Detected

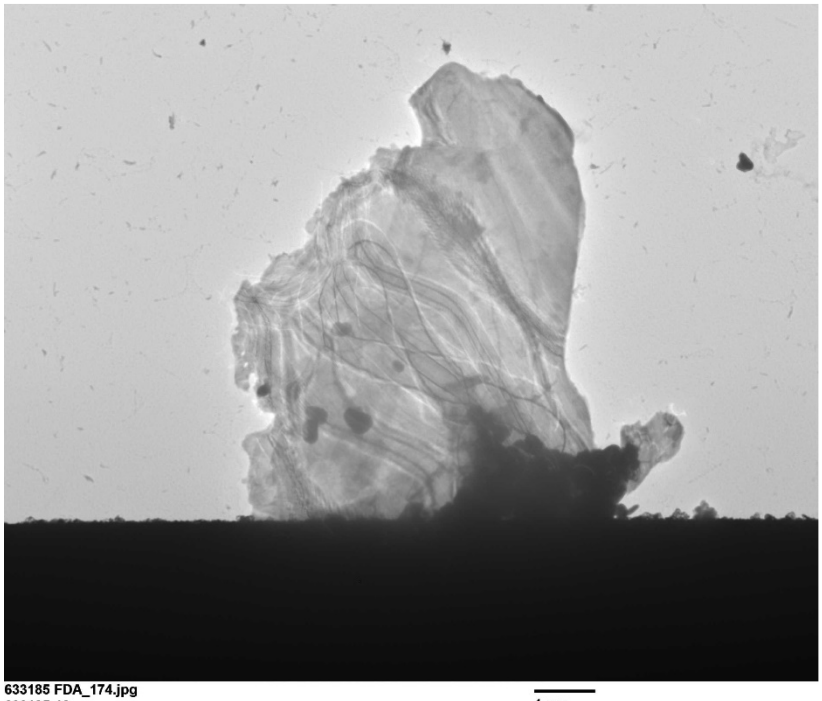
TEM

(b) (6) analyzed aliquots 13A, 13B, and 13C on March 30, 2022. The primary particles observed were mica and titanium; iron particles were also observed along with silica spheres, and talc fibers. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-13A	No Asbestos Detected
633185-13B	No Asbestos Detected
633185-13C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-13A, Mica Particle

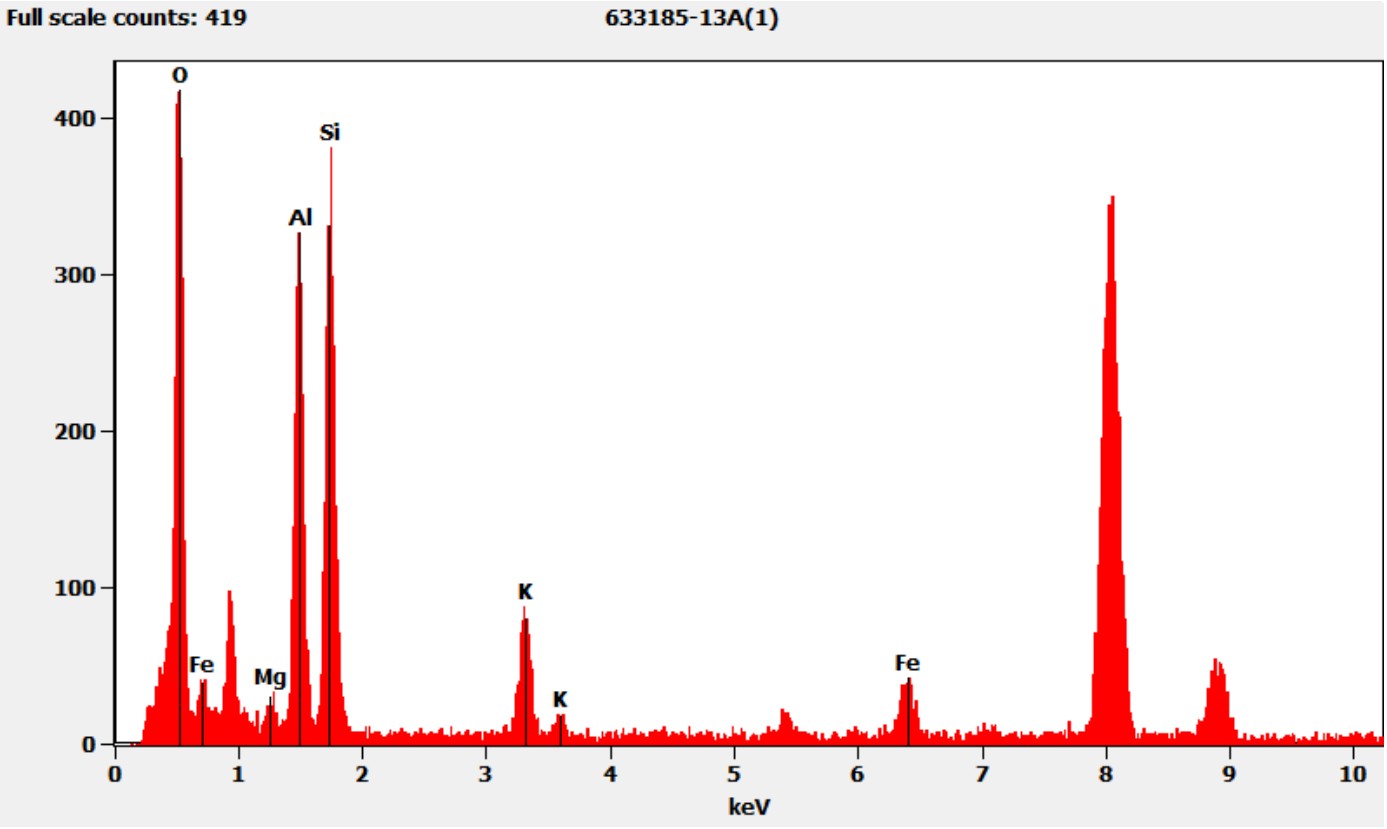


Hexagonal Diffraction Pattern from the Mica Particle Pictured Above

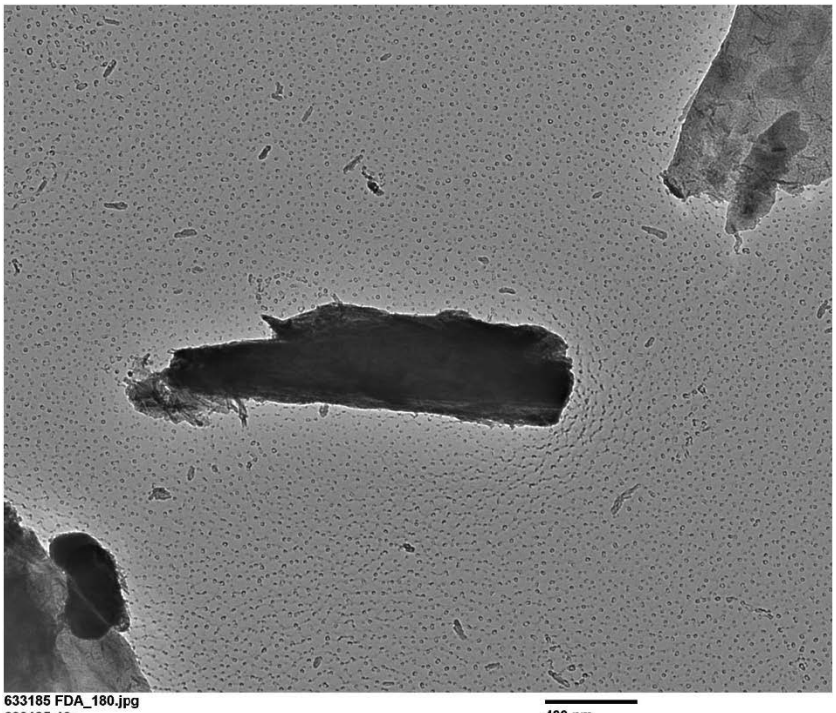
633185 FDA_173.jpg
633185-13a
Mica Particle
15:05 3/30/2022
Microscopist (b) (6)
Camera: NANOSPRING, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Mica Particle Pictured Above



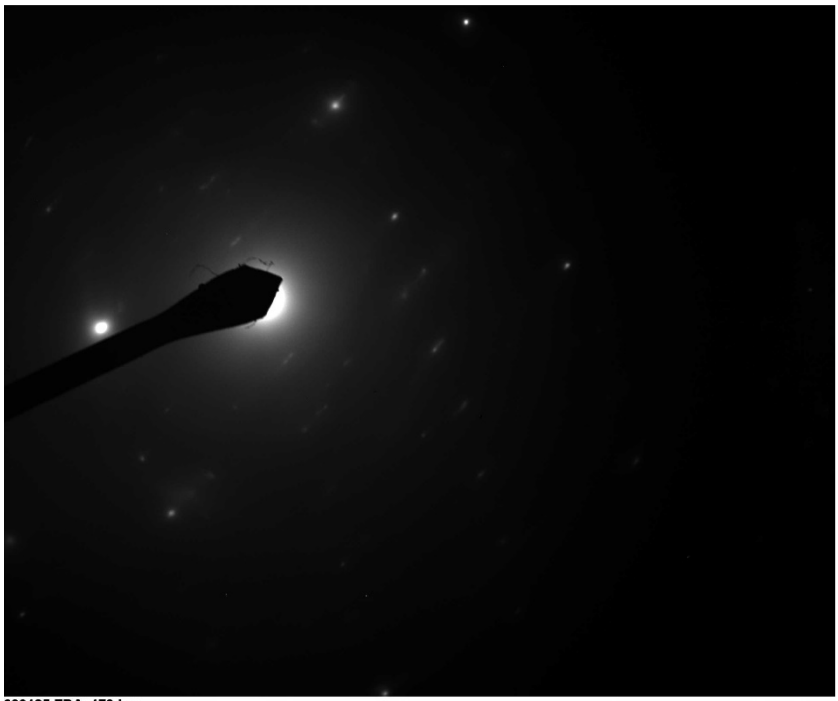
633185-13A, Elongated Mica Particle



633185 FDA_180.jpg
633185-13a
Elongated Mica w/Mg
15:29 3/30/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

400 nm
HV=100kV
Direct Mag: 7200 x
AMA Analytical Services, Inc

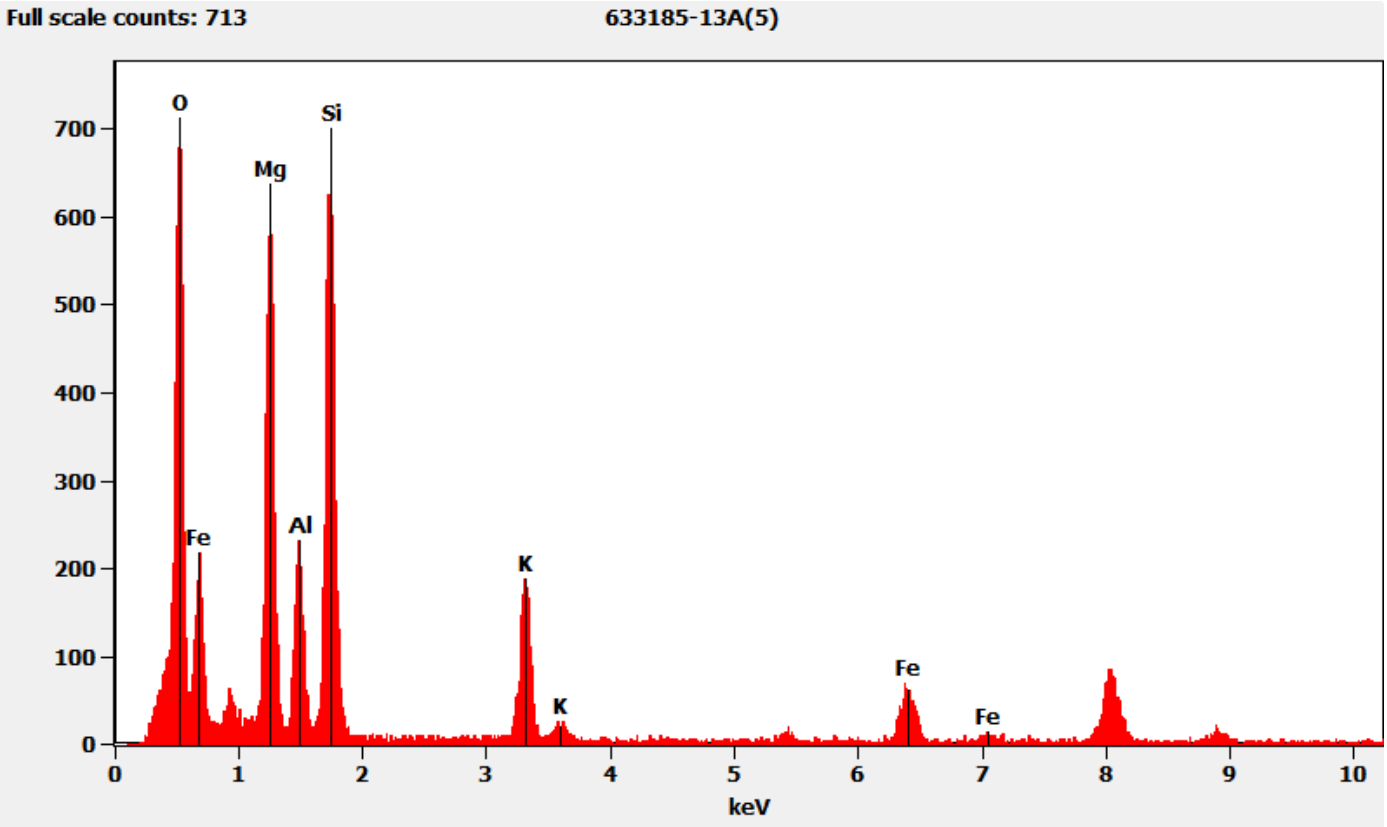
Diffraction Pattern from the Elongated Mica Particle Pictured Above



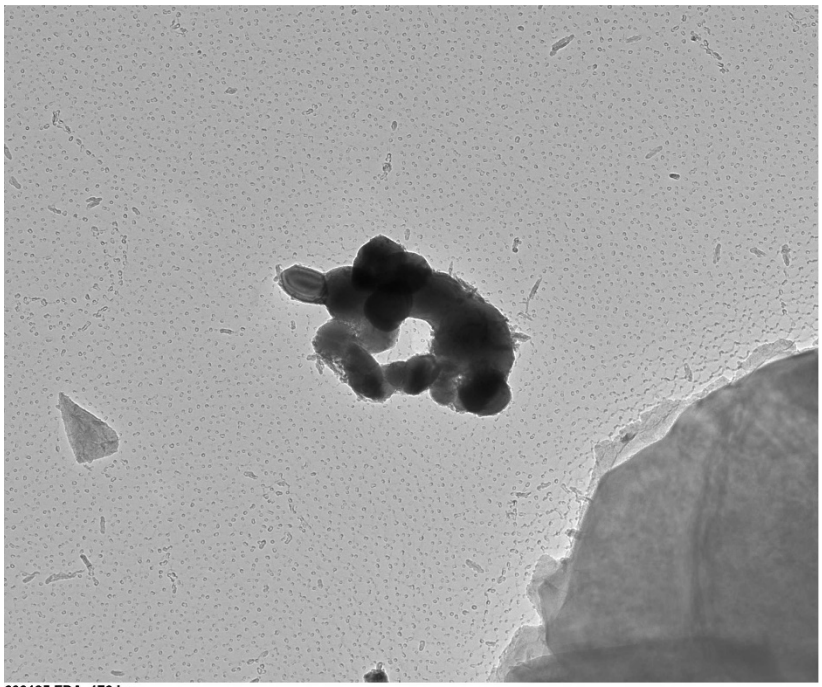
633185 FDA_179.jpg
633185-13a
Elongated Mica w/Mg
15:28 3/30/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Elongated Mica Particle Pictured Above



633185-13A, Titanium Particle

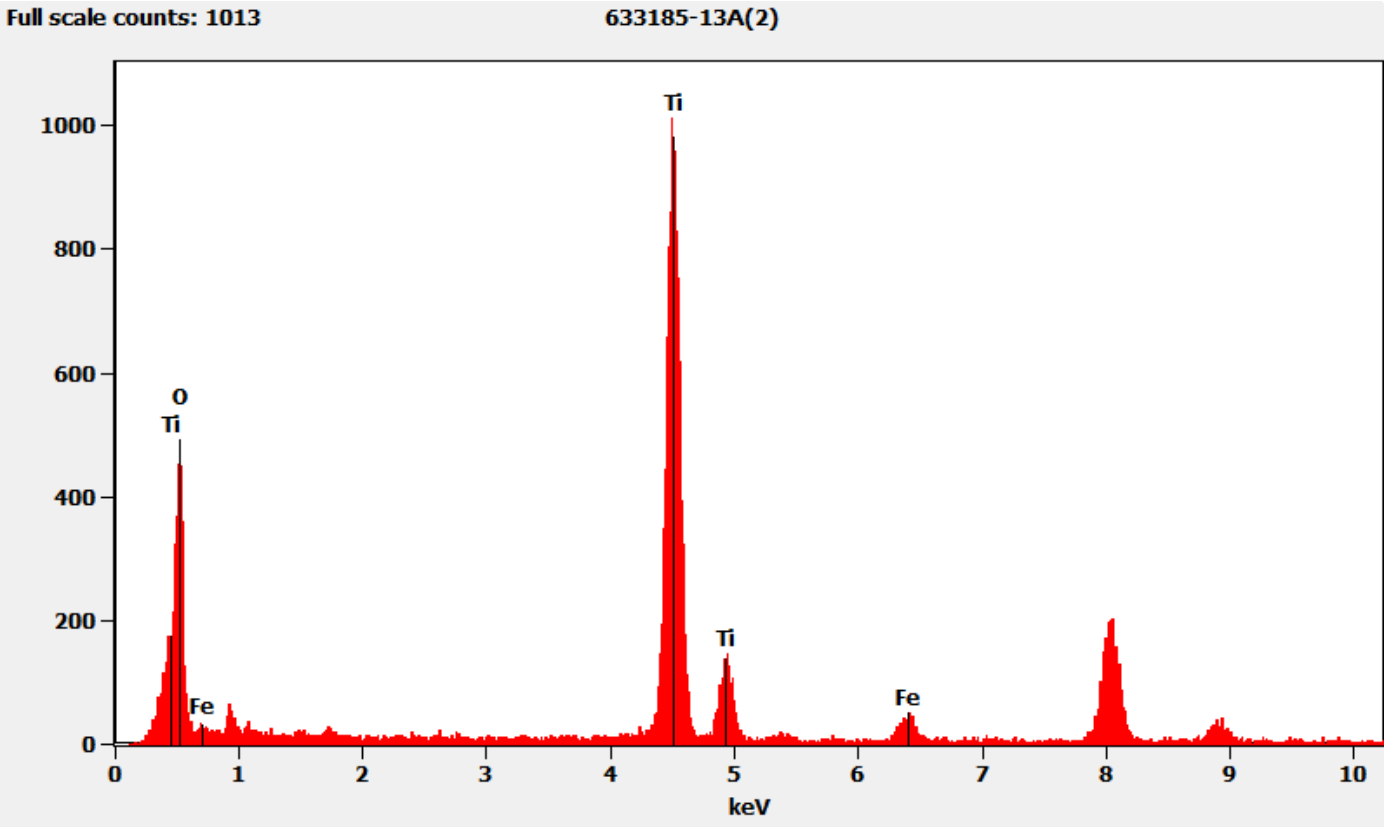


Diffraction Pattern from the Titanium Particle Pictured Above

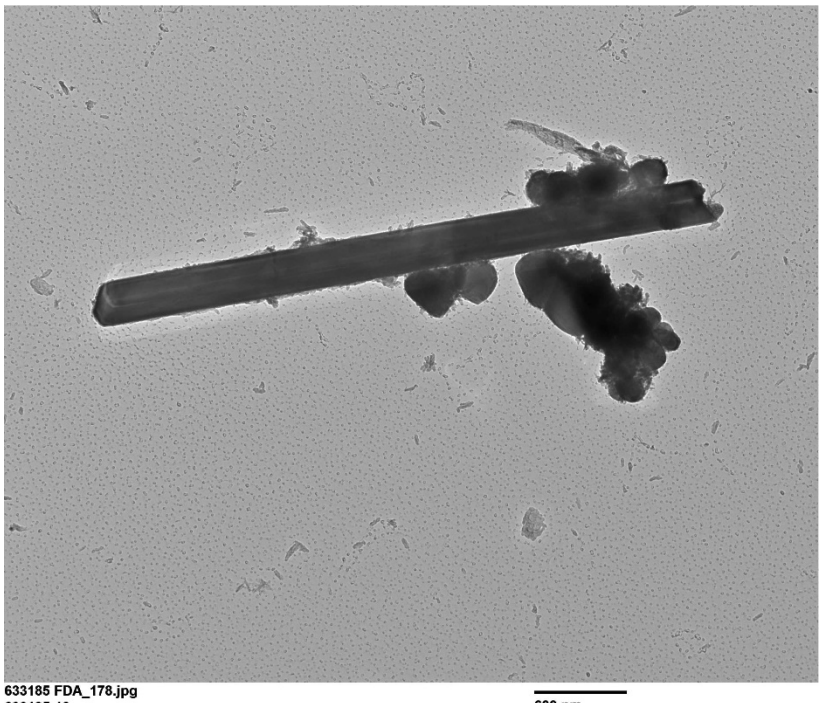
633185 FDA_175.jpg
633185-13a
Ti Particle
15:09 3/30/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

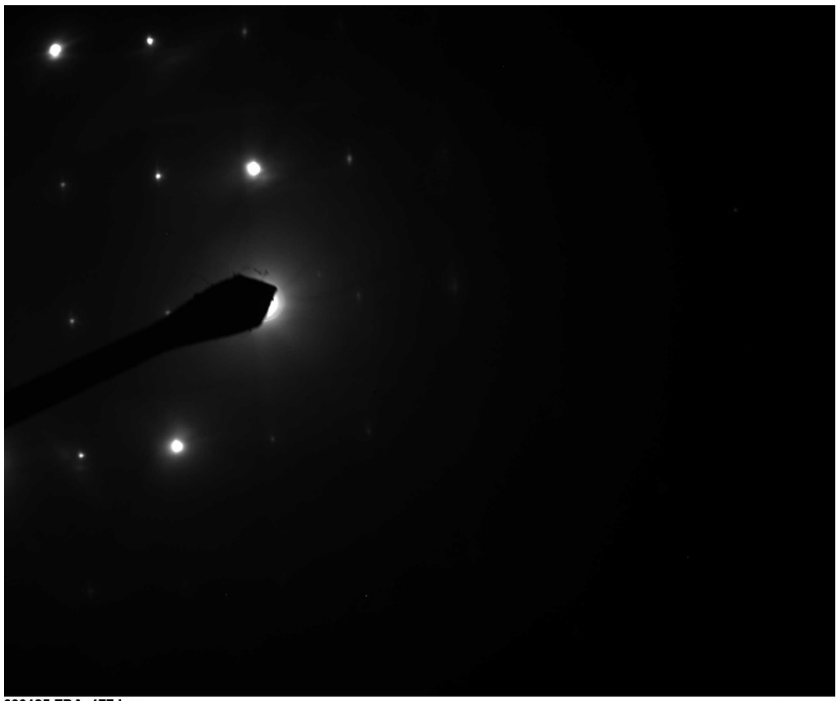
Chemistry from the Titanium Particle Pictured Above



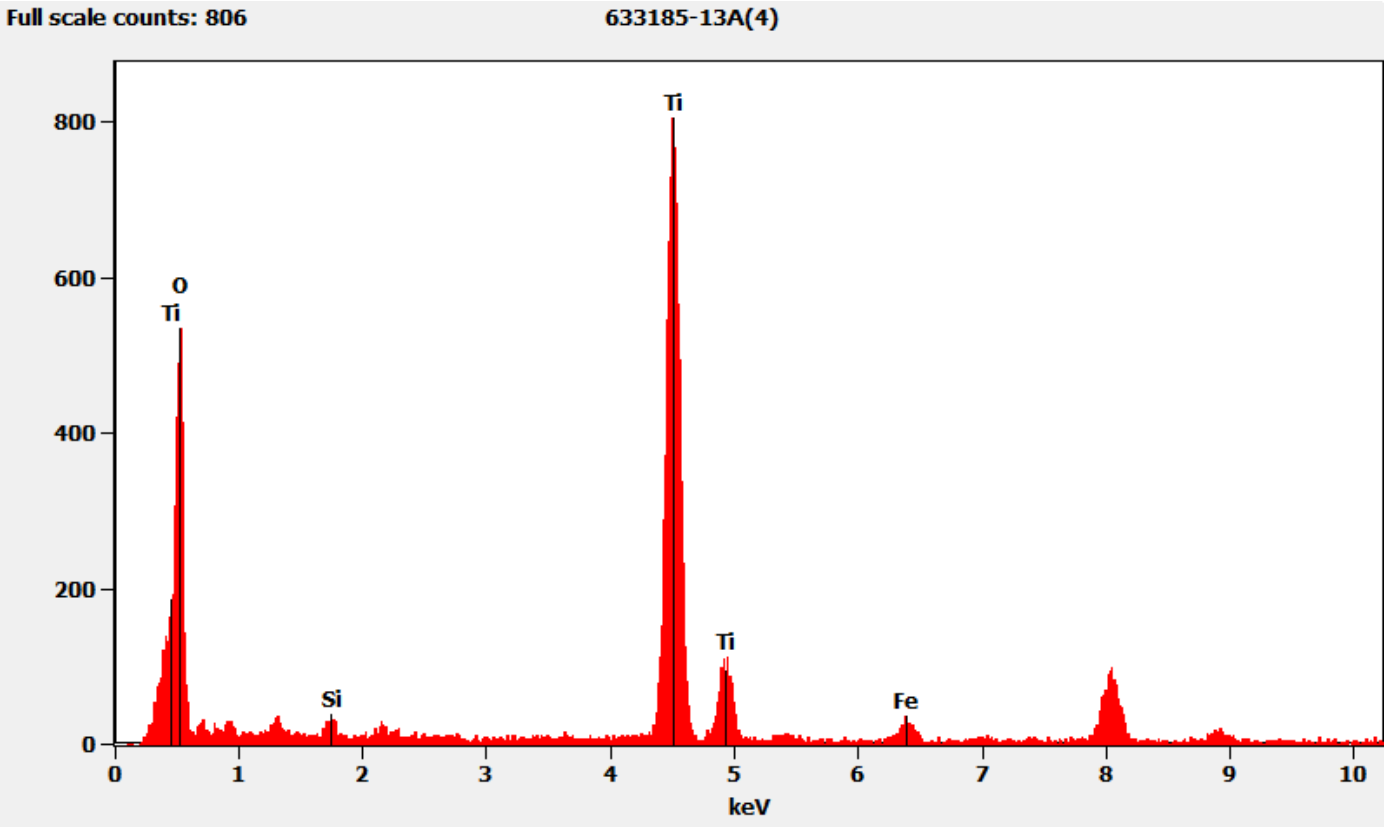
633185-13A, Elongated Titanium Particle



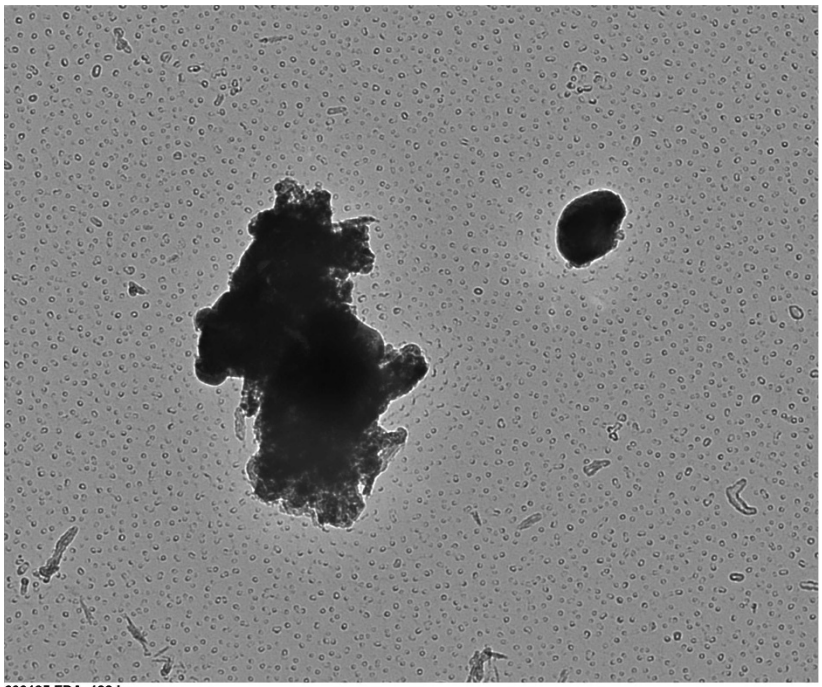
Diffraction Pattern from the Elongated Titanium Particle Pictured Above



Chemistry from the Elongated Titanium Particle Pictured Above



633185-13A, Iron Particle

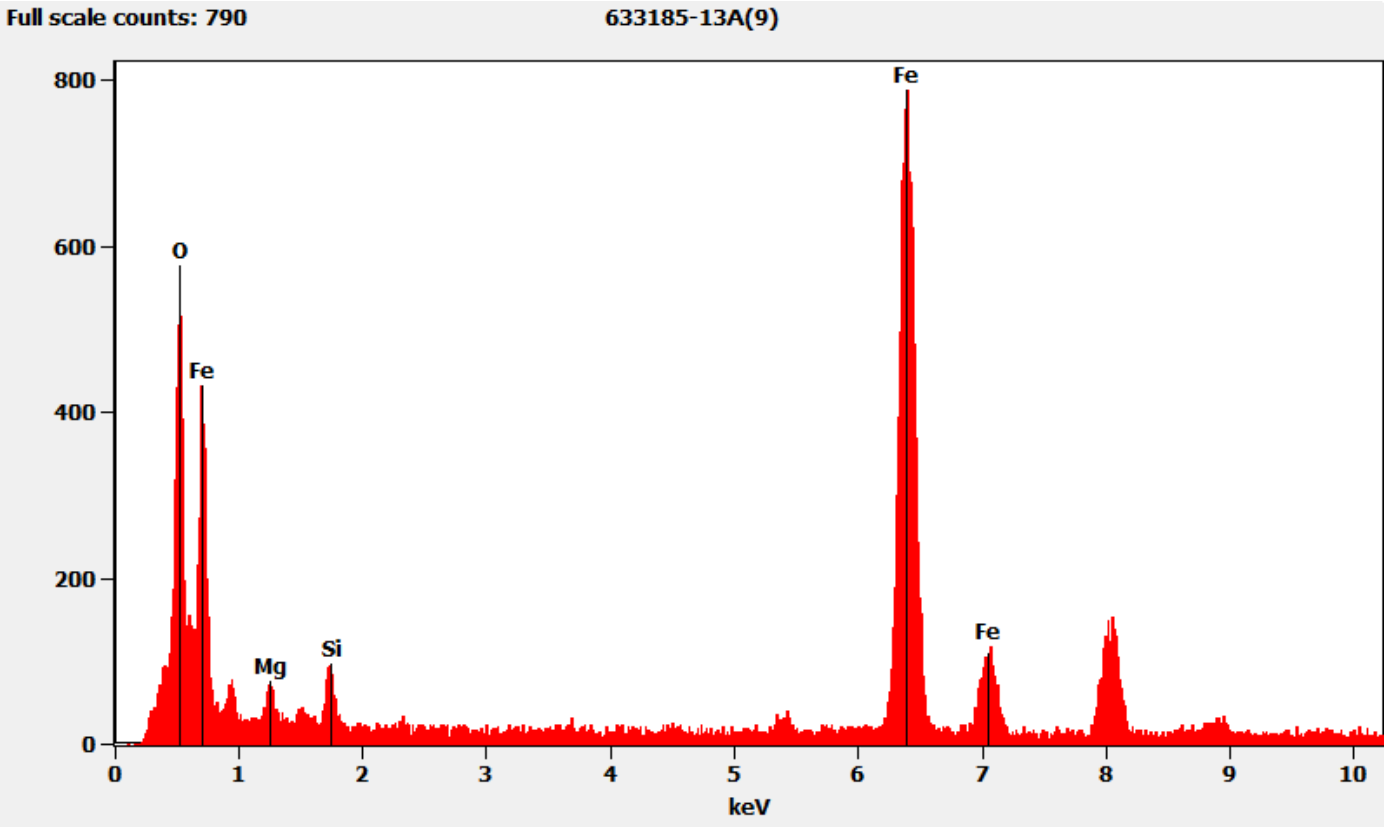


Diffraction Pattern from the Iron Particle Pictured Above

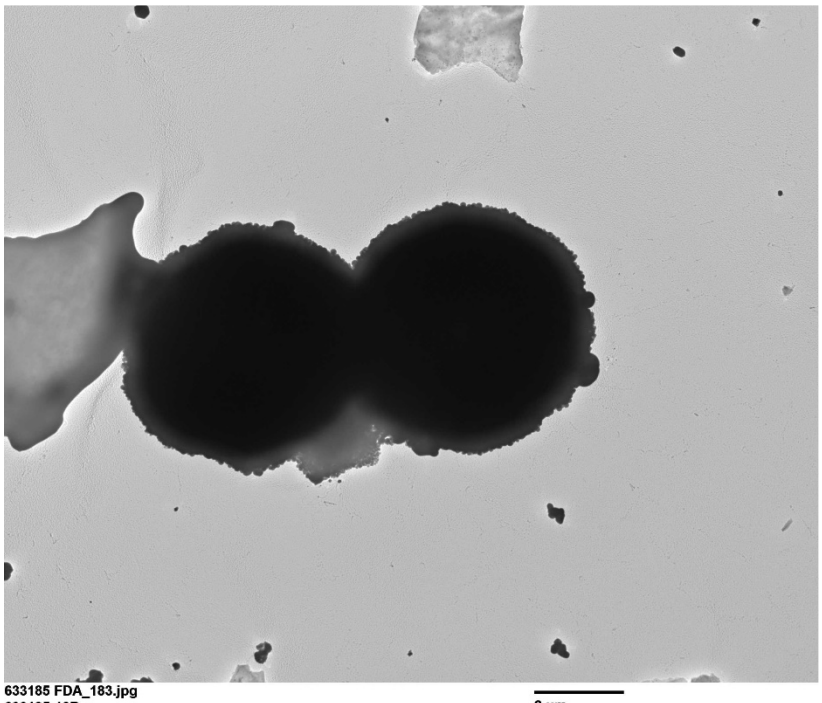
633185 FDA_181.jpg
633185-13a
Fe Particle
15:57 3/30/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

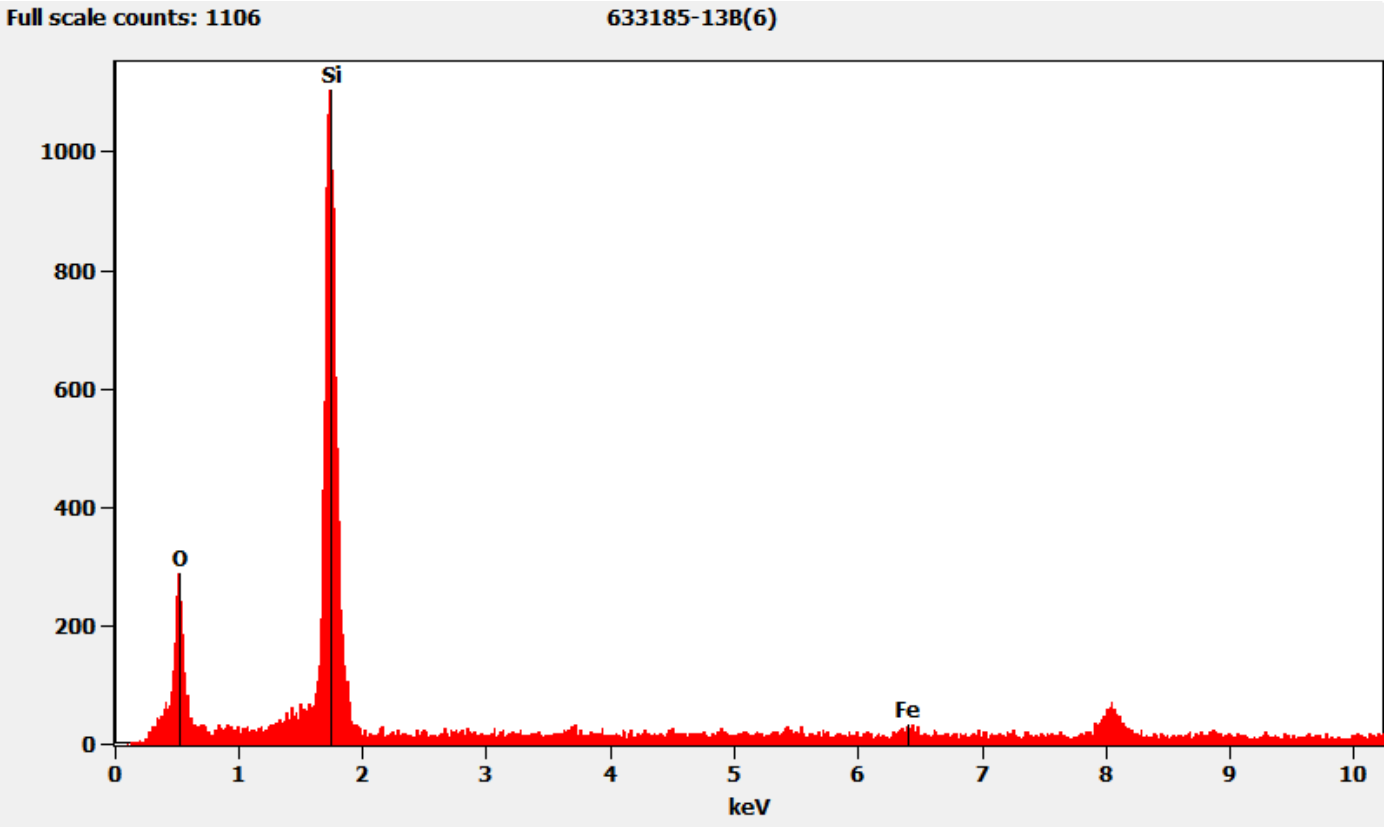
Chemistry from the Iron Particle Pictured Above



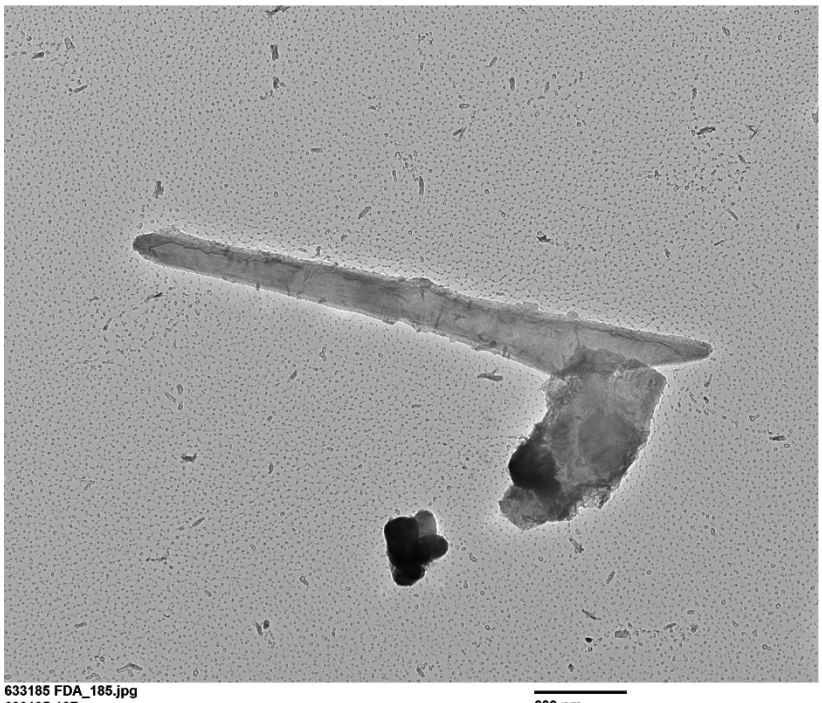
633185-13B, Silica Spheres



Chemistry from the Silica Spheres Pictured Above



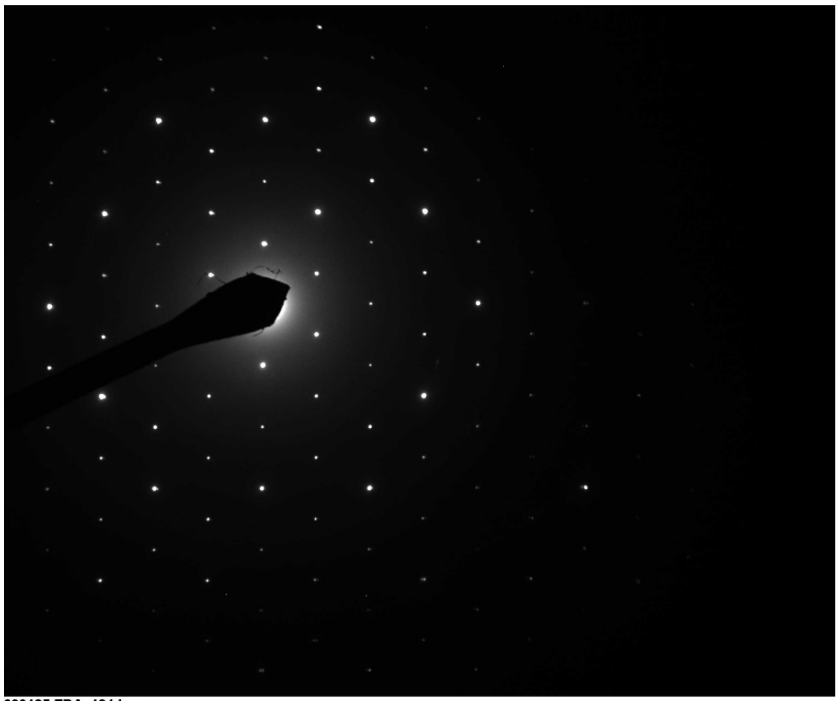
633185-13B, Talc Fiber



633185 FDA_185.jpg
633185-13B
Elongated Talc Particle
Cal: 0.002145 µm/pix
10:02 3/31/2022
Microscopist (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

600 nm
HV=100kV
Direct Mag: 4800 x
AMA Analytical Services, Inc

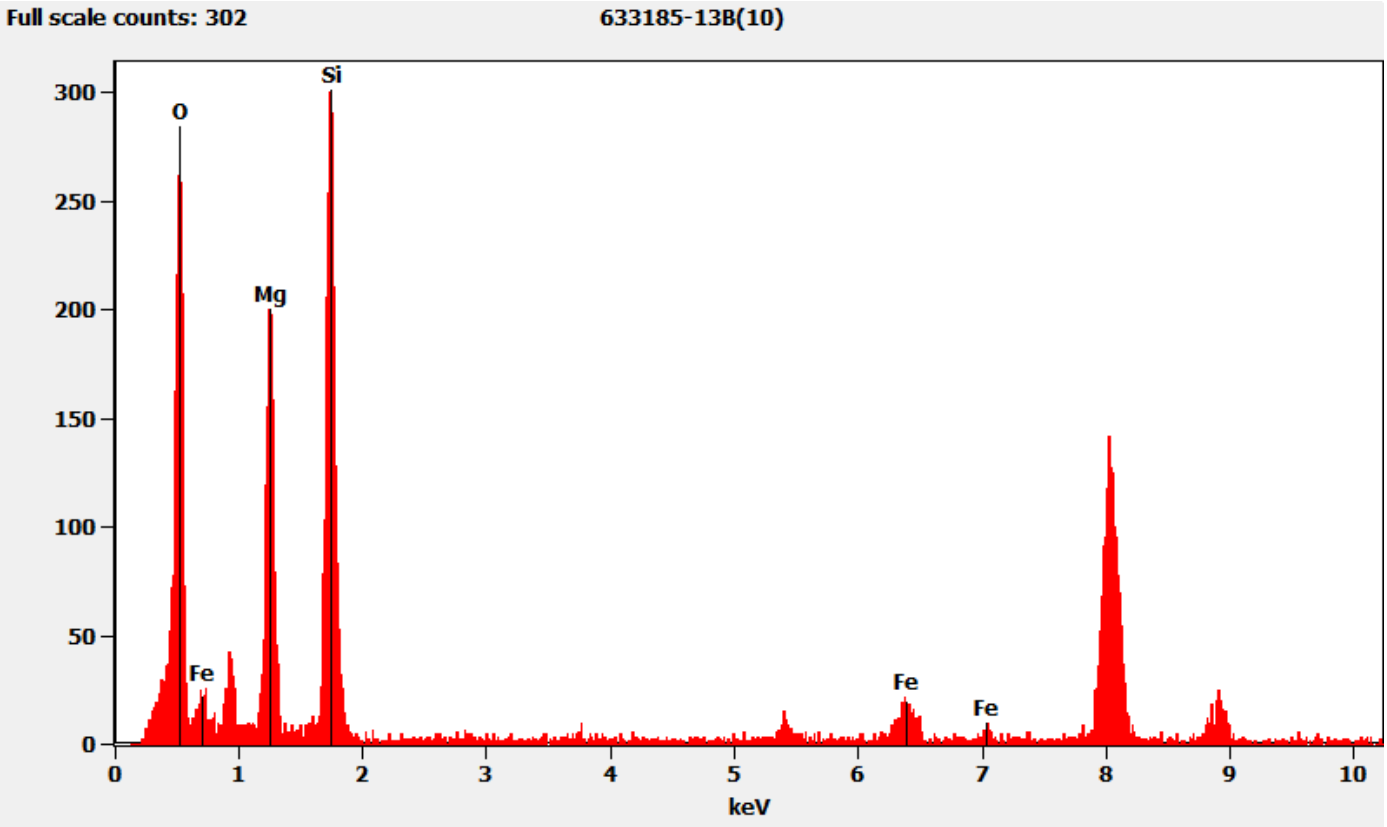
Hexagonal Diffraction Pattern from the Talc Fiber Pictured Above



633185 FDA_184.jpg
633185-13B
Elongated Talc Particle
10:01 3/31/2022
Microscopist (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Fiber Pictured Above



633185-14A, 14B, 14C/Client Sample: 01212022-14

PLM

All three aliquots of sample 01212022-14 were analyzed by (b) (6) on March 31, 2022. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-14A	No Asbestos Detected
633185-14B	No Asbestos Detected
633185-14C	No Asbestos Detected

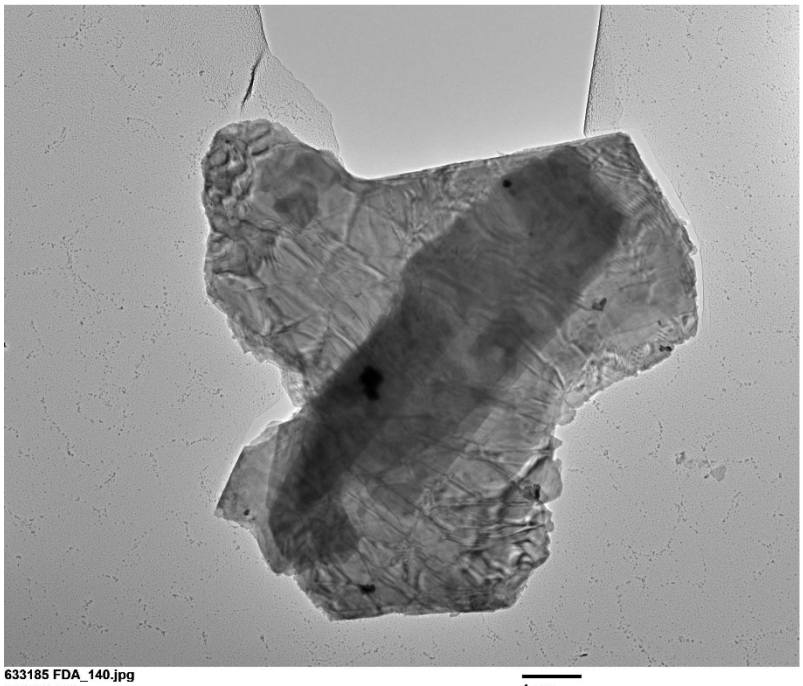
TEM

(b) (6) analyzed aliquot 14A on March 29, 2022, and aliquot 14C on March 31, 2022. (b) (6) analyzed aliquot 14B on March 30, 2022. The primary particle observed was mica; talc particles were also observed along with iron particles, silica spheres, and particles containing titanium, silicon, and iron. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

633185-14A	No Asbestos Detected
633185-14B	No Asbestos Detected
633185-14C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. The copper peaks in the chemistry spectra are from the TEM grid. The unidentified (and some identified) peaks in the chemistry spectra are zinc and carbon from the TEM specimen holder.

633185-14A, Mica Particle

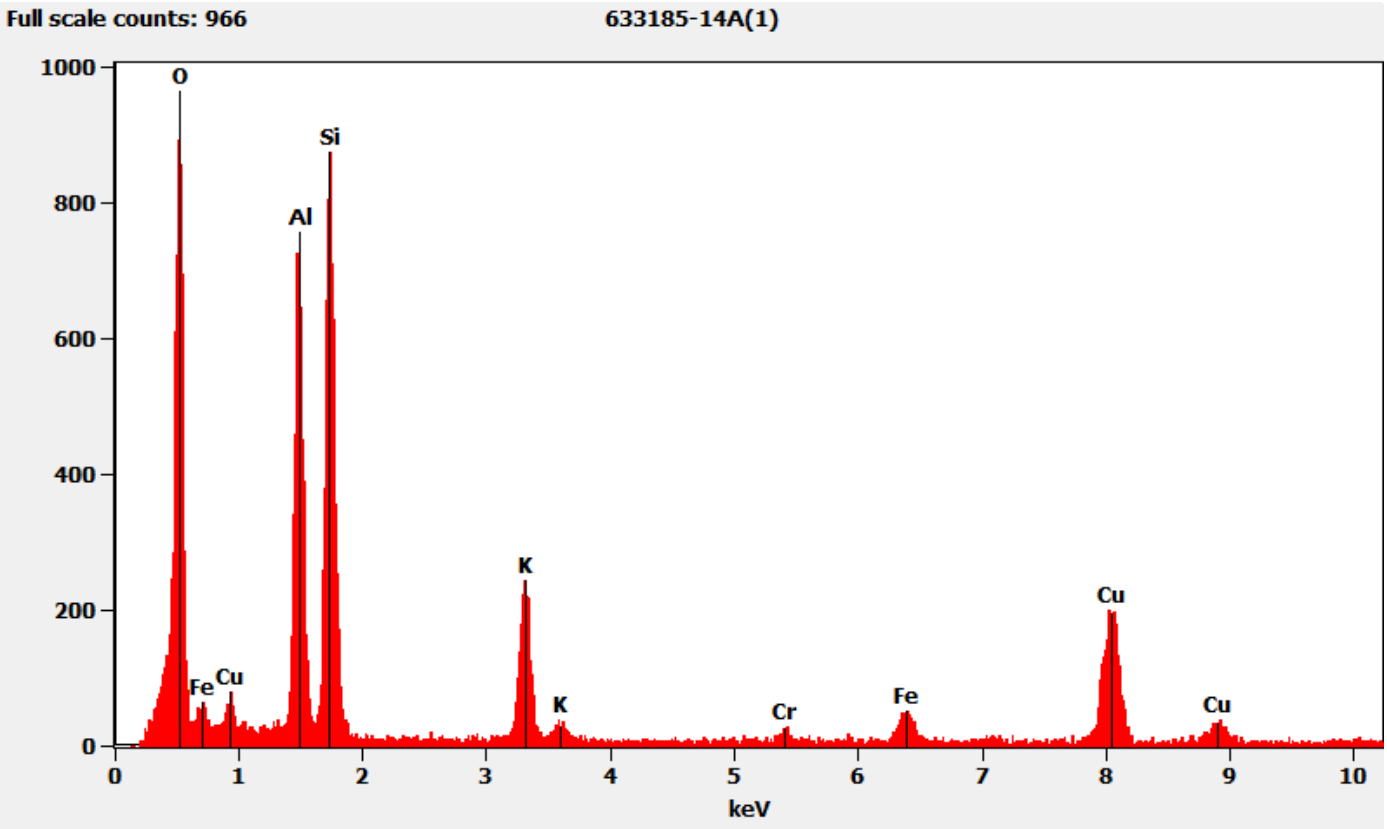


633185 FDA_140.jpg
633185-14A
Mica Particle
Cal: 0.005419 µm/pix
13:13 3/29/2022
Microscopist (b) (6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

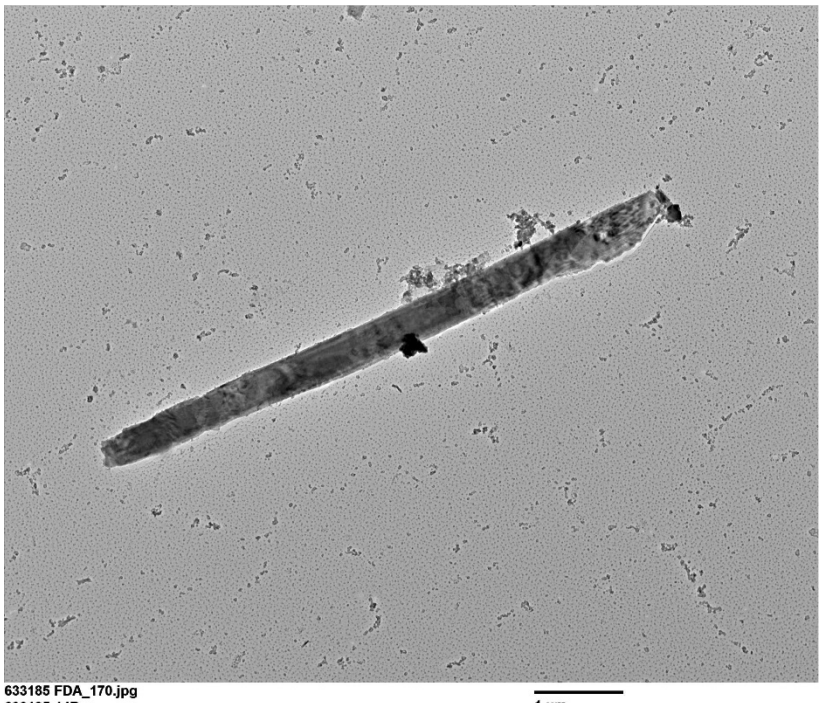
1 µm
HV=100kV
Direct Mag: 1900 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Mica Particle Pictured Above

Chemistry from the Mica Particle Pictured Above



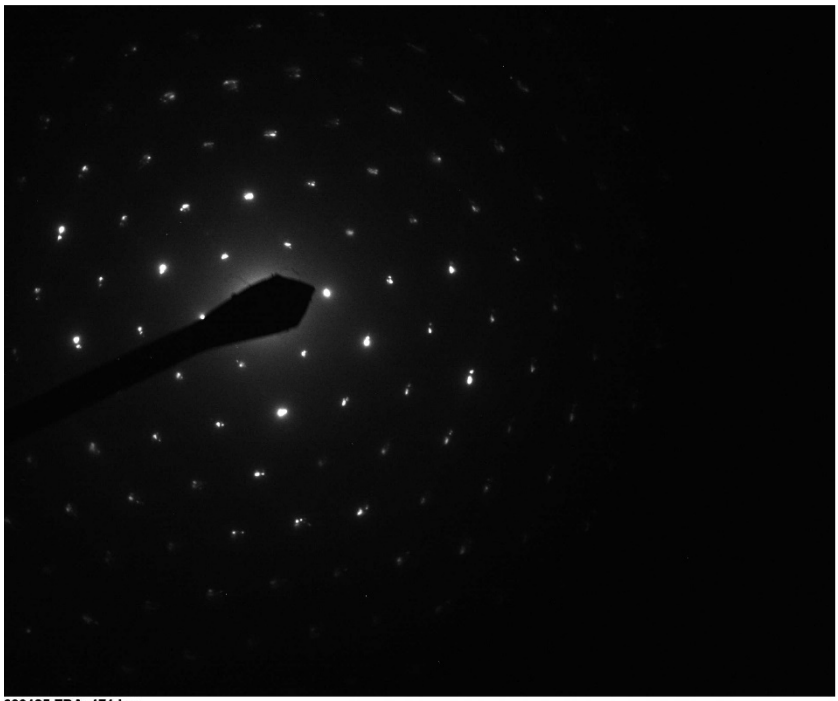
633185-14B, Elongated Mica Particle



633185 FDA_170.jpg
633185-14B
Elongated Mica
Cal: 0.003702 µm/pix
11:13 3/30/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

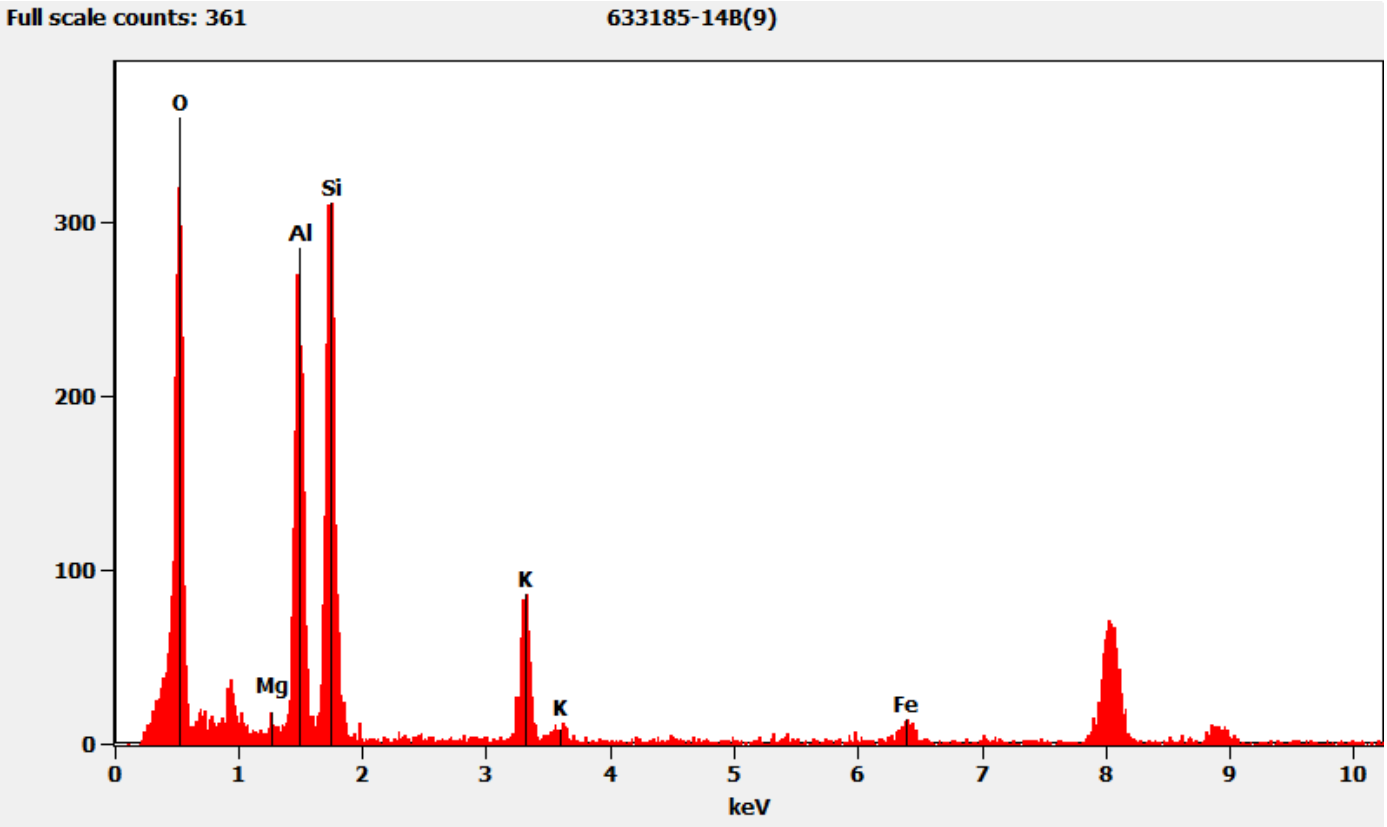
Diffraction Pattern from the Elongated Mica Particle Pictured Above



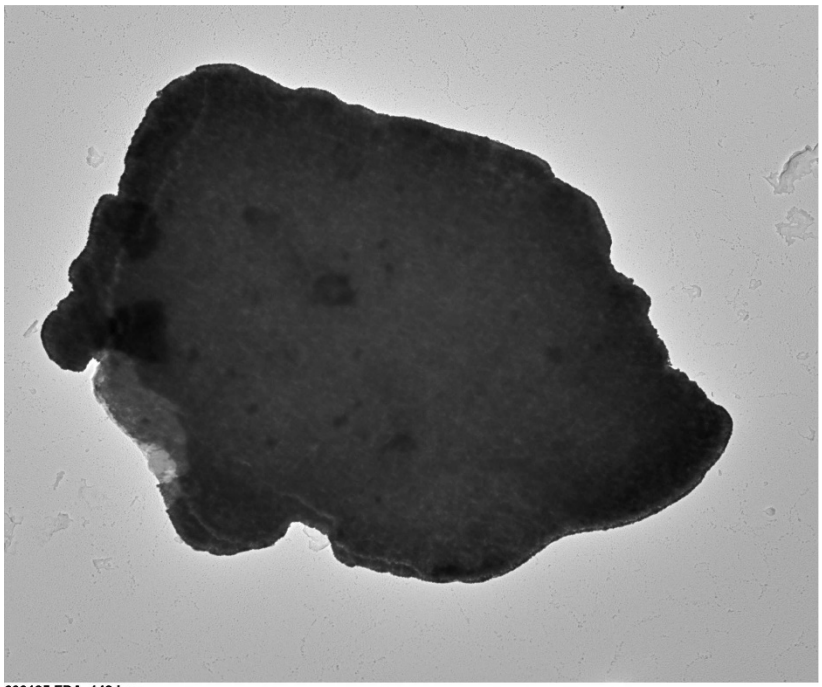
633185 FDA_171.jpg
633185-14B
Elongated Mica
11:15 3/30/2022
Microscopist (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Elongated Mica Particle Pictured Above

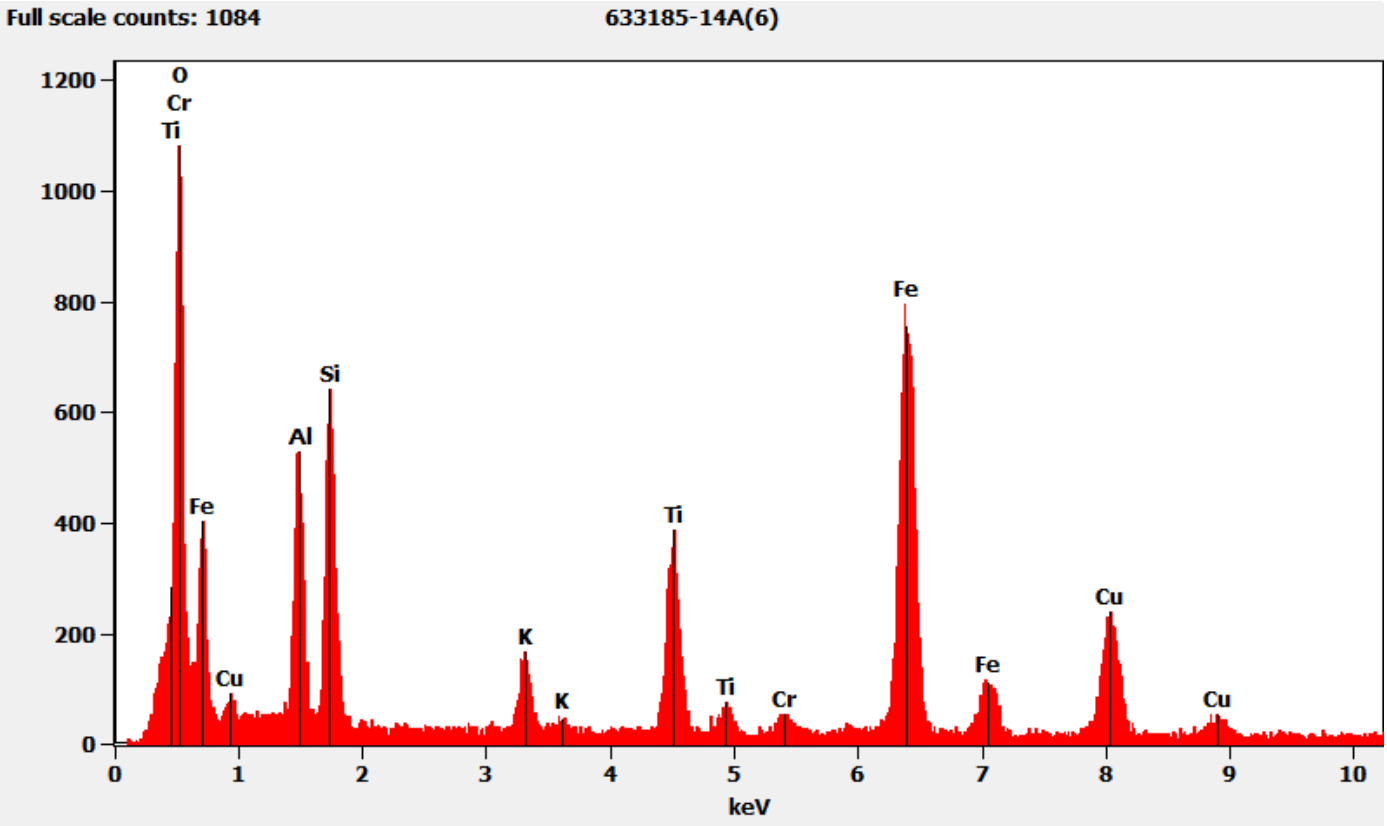


633185-14A, Mica Particle with Titanium and Iron

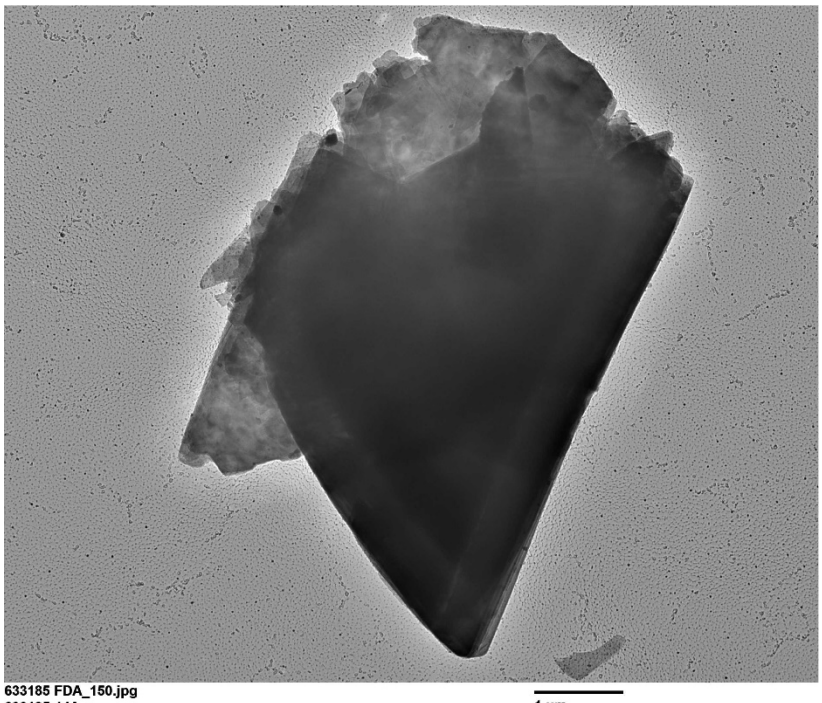


Diffraction Pattern from the Mica Particle with Titanium and Iron Pictured Above

Chemistry from the Mica Particle with Titanium and Iron Pictured Above



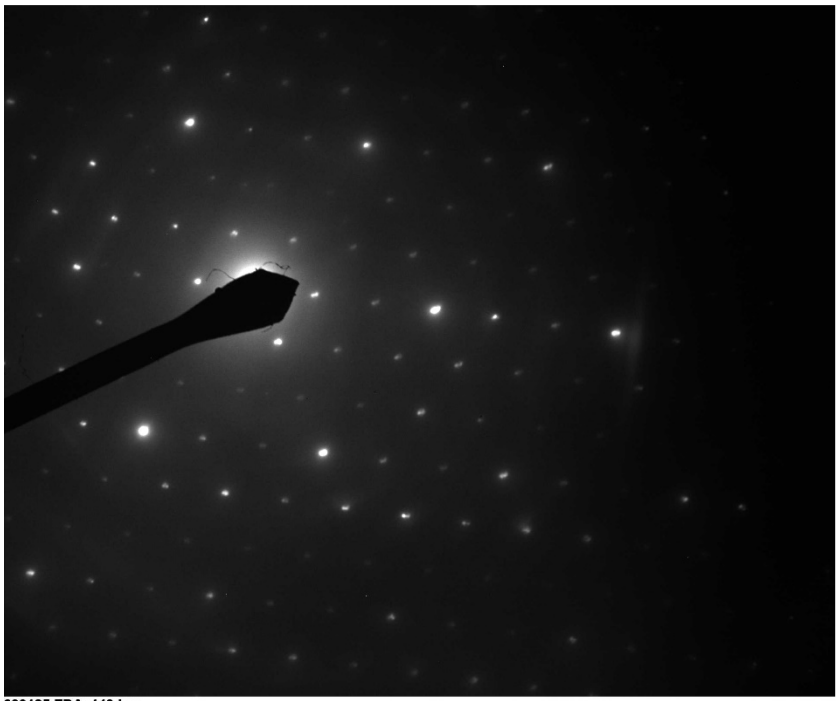
633185-14A, Talc Particle



633185 FDA_150.jpg
633185-14A
Talc Particle
Cal: 0.003702 µm/pix
14:37 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

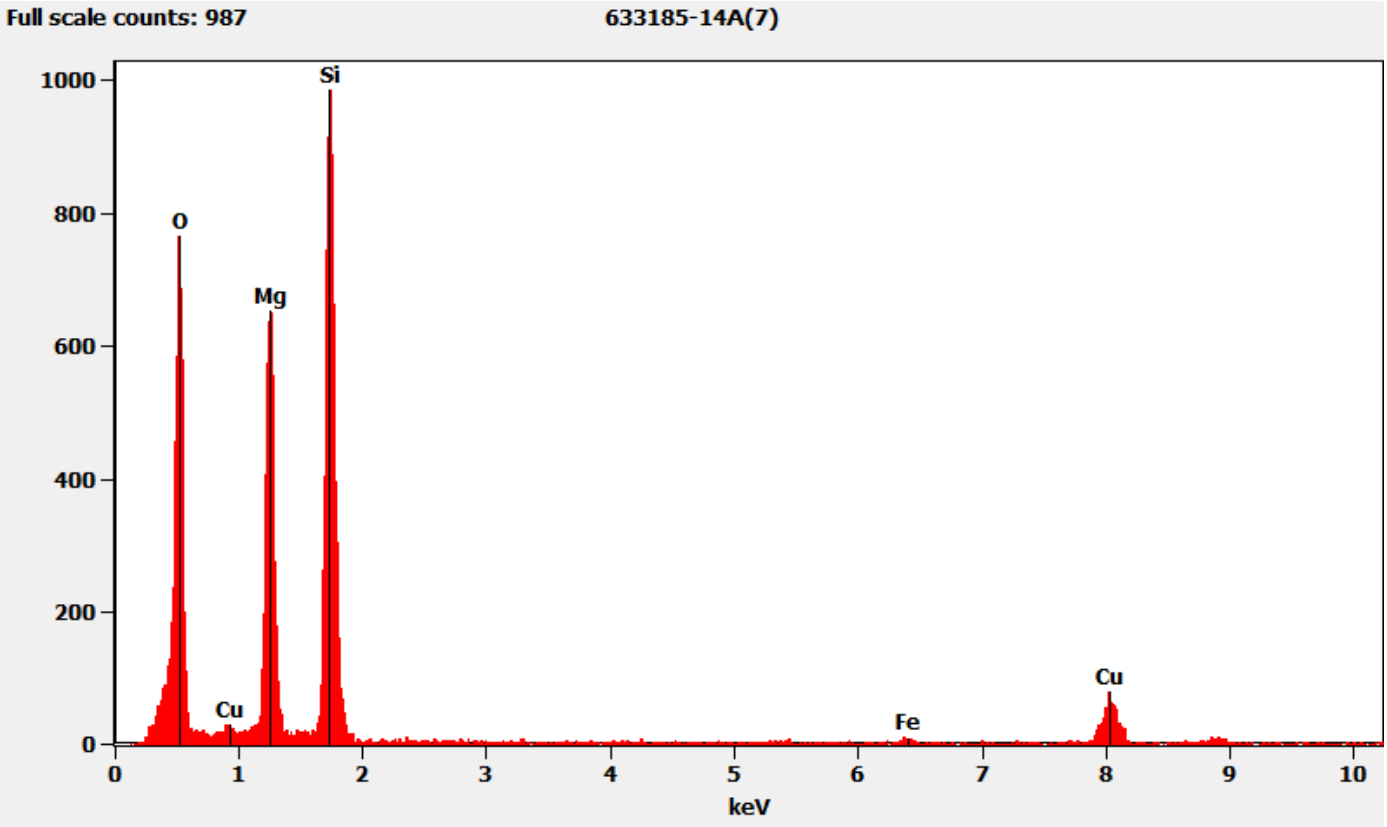
Hexagonal Diffraction Pattern from the Talc Particle Pictured Above



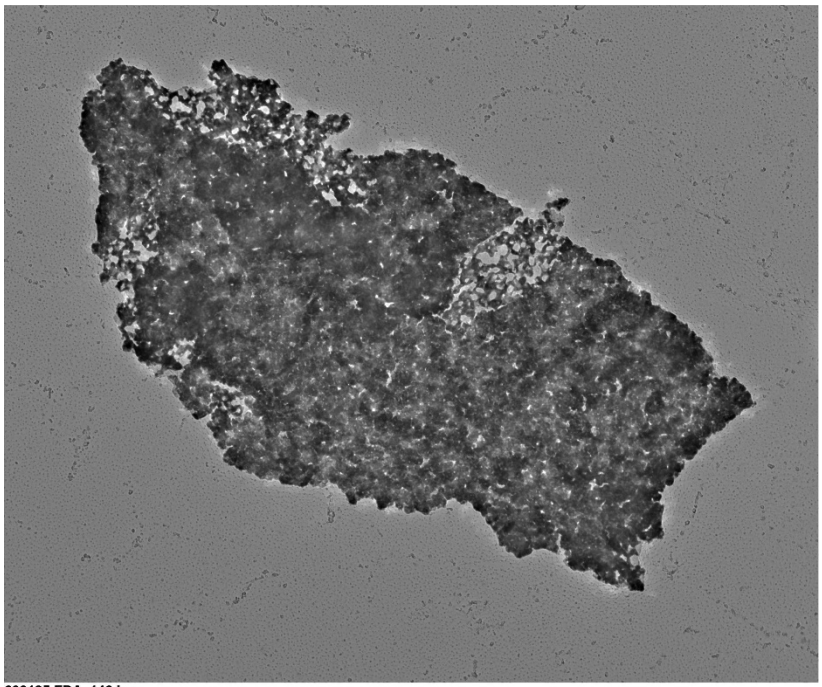
633185 FDA_149.jpg
633185-14A
Talc Particle
14:36 3/29/2022
Microscopist: (b) (6)
Camera: NA[illegible], Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Talc Particle Pictured Above



633185-14A, Iron Particle

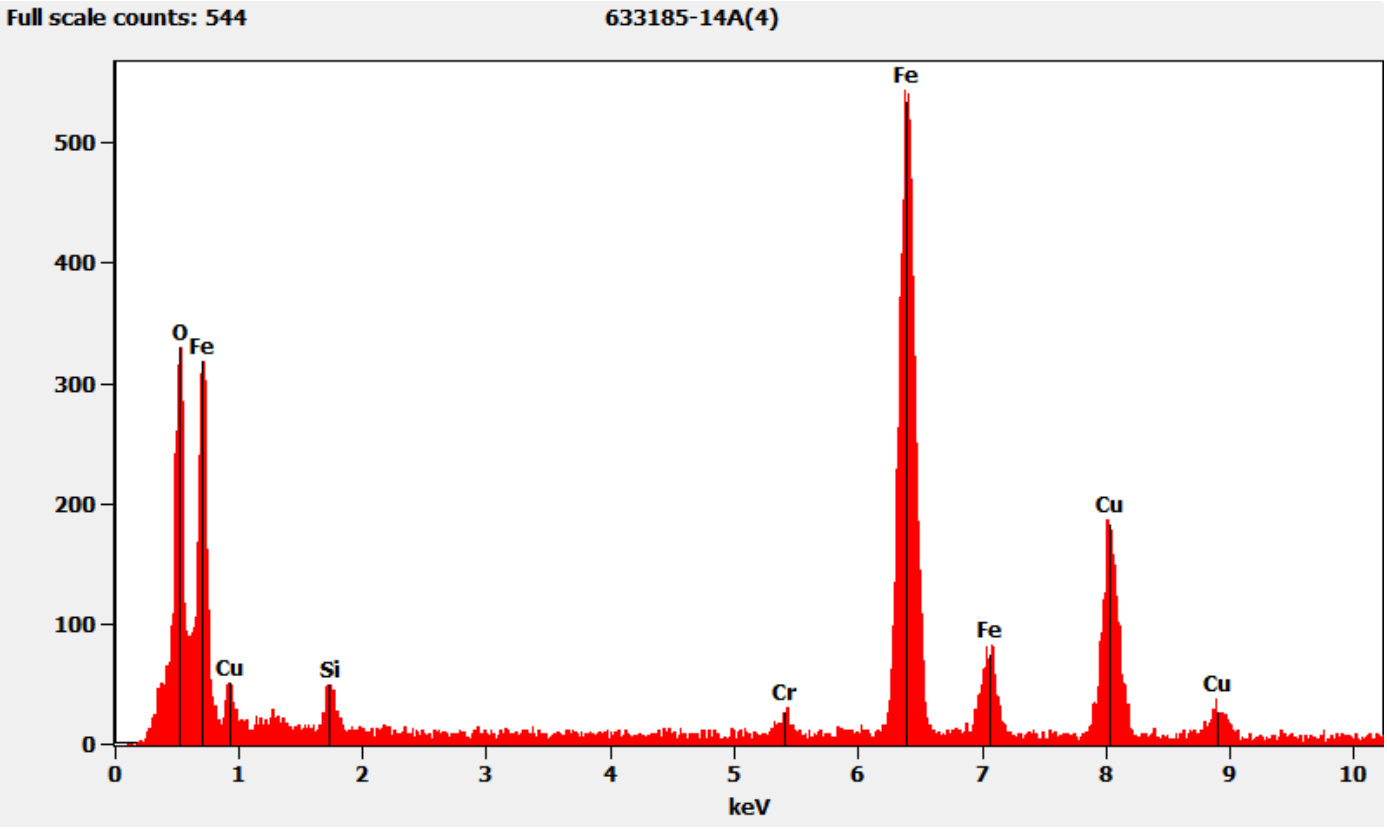


Diffraction Pattern from the Iron Particle Pictured Above

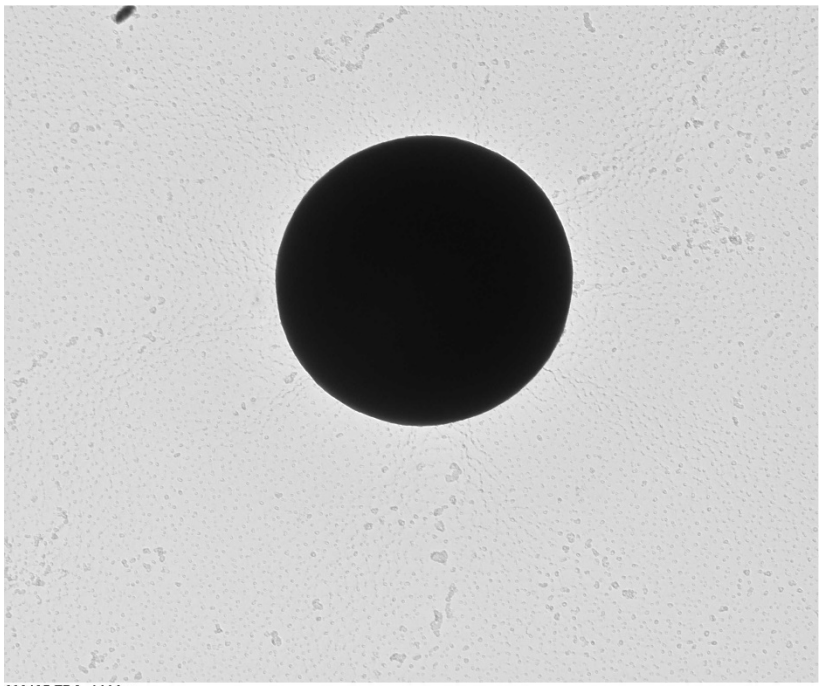
633185 FDA_145.jpg
633185-14A
Fe Particle Dif
13:27 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

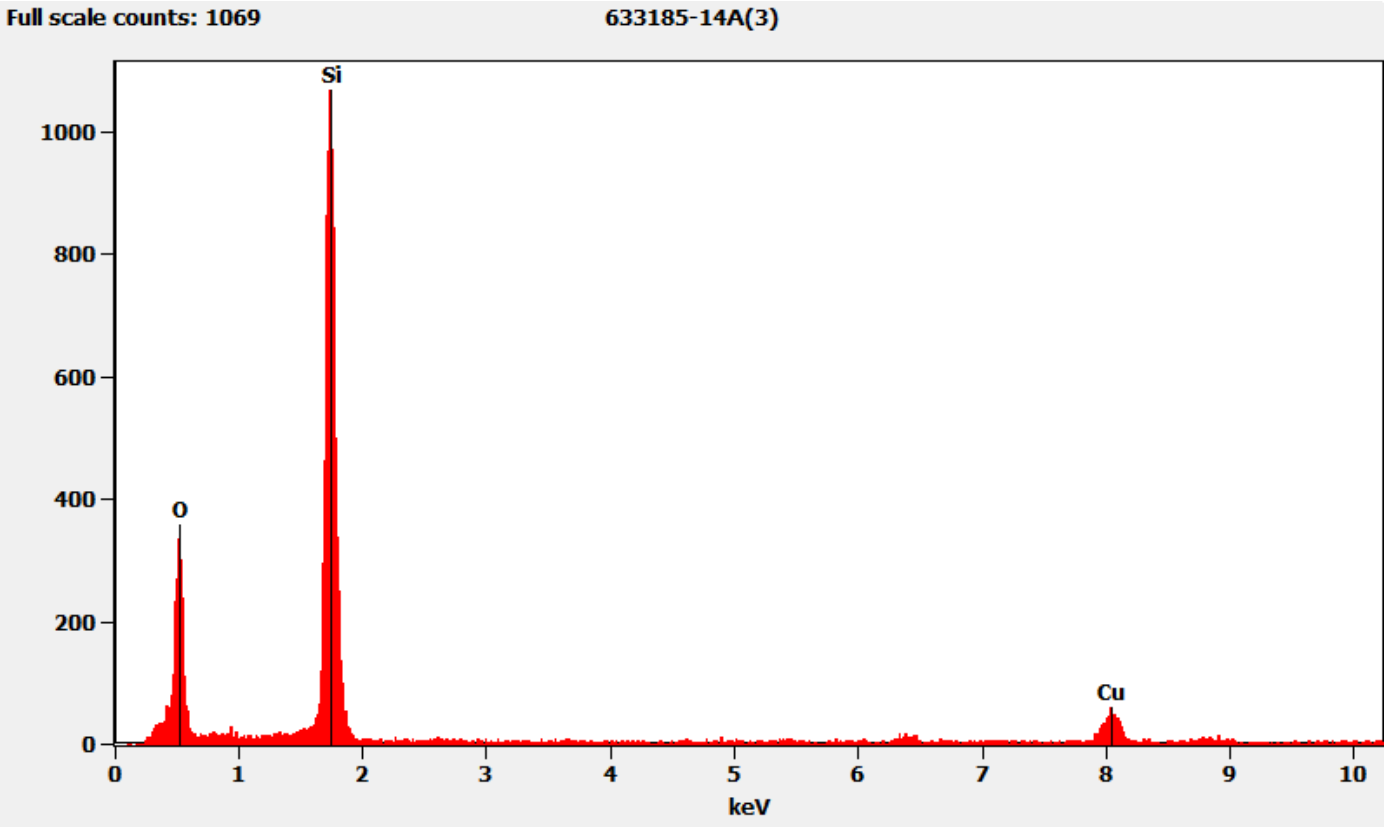
Chemistry from the Iron Particle Pictured Above



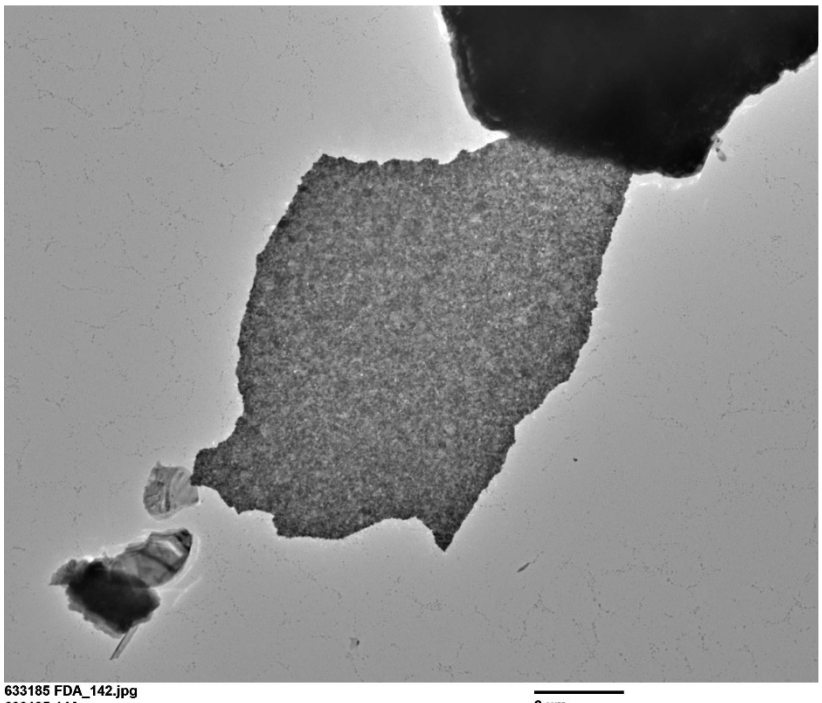
633185-14A, Silica Sphere



Chemistry from the Silica Sphere Pictured Above



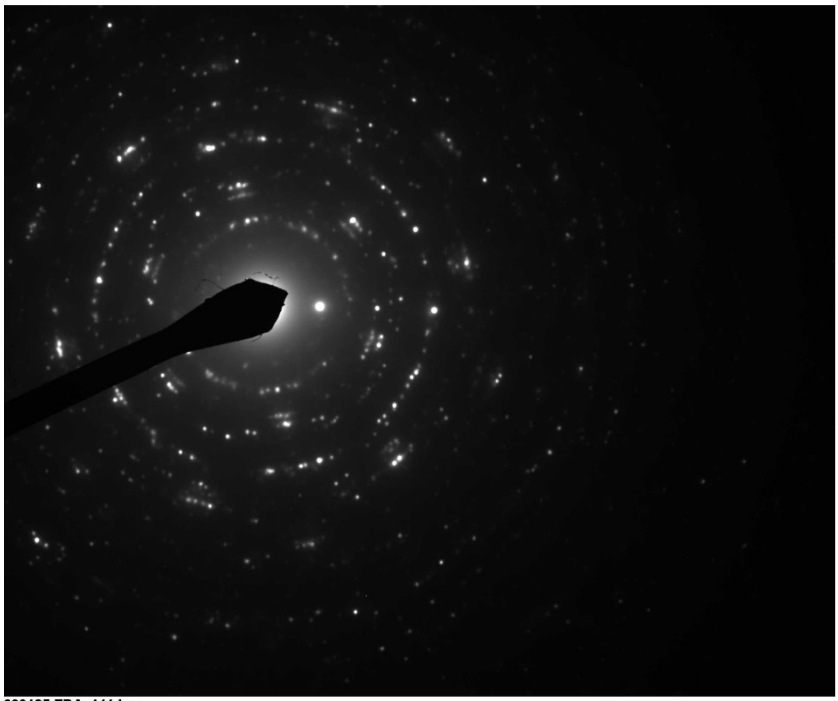
633185-14A, Particle Containing Titanium, Silicon, and Iron



633185 FDA_142.jpg
633185-14A
TiSiFe Particle
Cal: 0.007355 µm/pix
13:19 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

2 µm
HV=100kV
Direct Mag: 1400 x
AMA Analytical Services, Inc

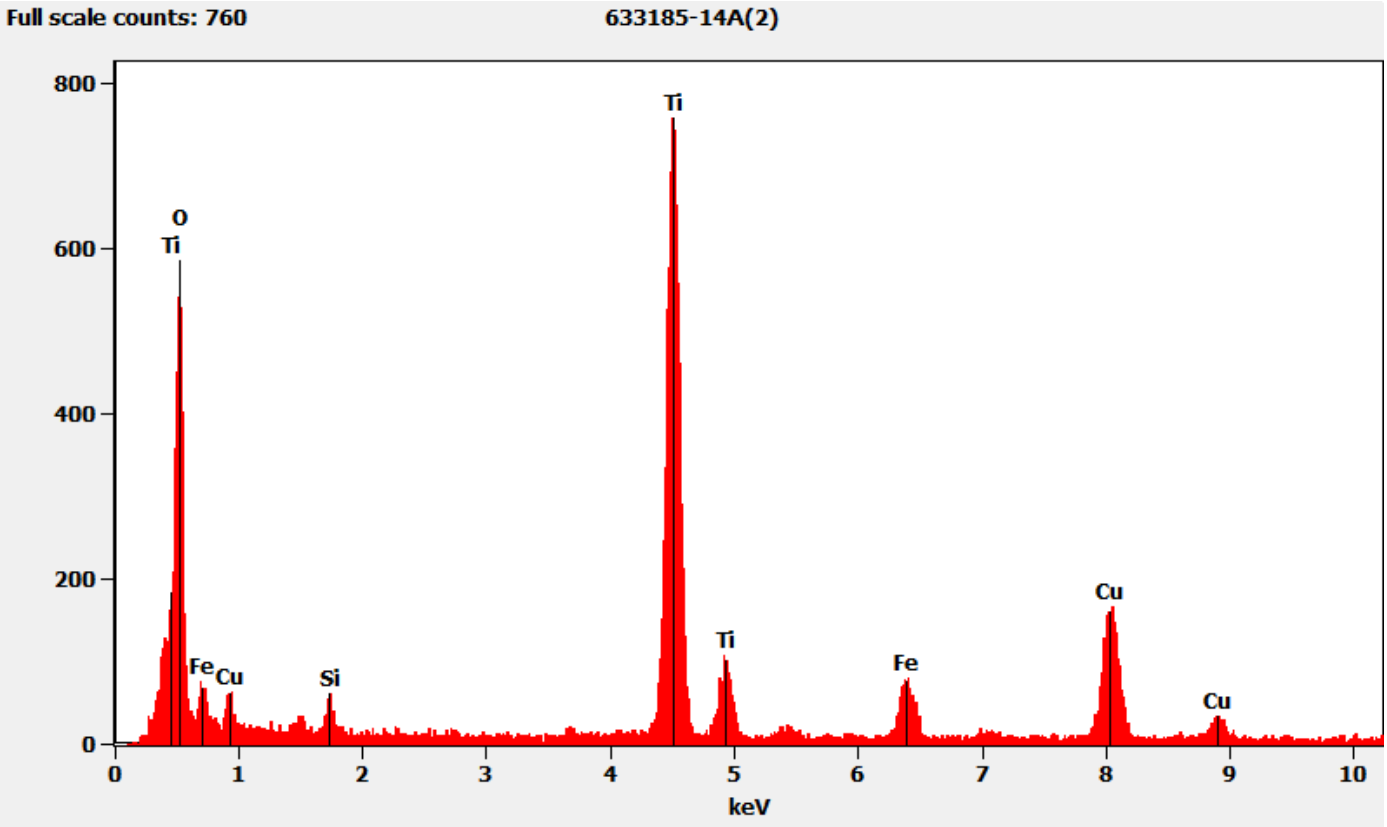
Diffraction Pattern from the Particle Containing Titanium, Silicon, and Iron Pictured Above



633185 FDA_141.jpg
633185-14A
TiSiFe Particle Dif
13:18 3/29/2022
Microscopist: (b) (6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

100 (1/Å)
HV=100kV
Cam Len: 0.2200 m
AMA Analytical Services, Inc

Chemistry from the Particle Containing Titanium, Silicon, and Iron Pictured Above



QC Discussion

Microscope alignment and calibration for both the PLM and TEM scopes, and EDXA unit calibration were performed on each day of analysis as specified by method requirements and standard laboratory operating procedures. The analytical balance used for gravimetric reduction is verified weekly at three (3) tare levels using three NIST-traceable weights – 10.0-g, 0.1-g, 0.5-g – and on each day of operation using the 0.1-g and 0.5-g weights tared with an 8-mL glass vial. The muffle furnace is verified monthly at a temperature of 480°C. All equipment was functioning within normal operating parameters

Matrix blank samples were prepared at rate of 10% or greater alongside the client samples with each series of samples that were put into the muffle furnace together. The matrix blank samples were prepared using Sigma-Aldrich Talc Powder 18654 (Cas No. 14807-96-6; EC No. 238-877-9, Lot 82330). Analysis of the matrix blank samples was only required if asbestos, or the non-asbestos versions of the regulated minerals, was found on the associated client samples unless otherwise noted. The matrix blank samples associated with the PLM preparations, numbers NB22-170, NB22-176, NB22-196, and NB22-210 were not analyzed since no asbestos was observed on the associated client samples. Although it was not required, (b) (6) analyzed the matrix blank samples associated with the TEM preparations, numbers NB22-169, NB22-175, NB22-194, and NB22-209 on March 31, 2022; no asbestos was observed on the matrix blank samples.

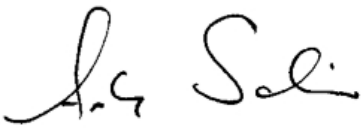
Filtration blank samples were prepared alongside the client samples with each use of the filtration apparatus. Analysis of these samples was only required on those blanks associated with a client sample on which asbestos, or the non-asbestos versions of the regulated minerals, was found unless otherwise noted. Filtration blank sample numbers DI-Blank-01 through DI-Blank-14 were not analyzed since no asbestos was observed on the associated client samples.

TEM grid preparation (EB) blank samples were prepared with each batch of carbon coated filters. AMA policy is to analyze these blank samples whenever asbestos, or the non-asbestos versions of the regulated minerals, is detected on an associated client sample or when the laboratory blank identification number ends in a "0" or "5." Since no asbestos was observed on any of the client samples, only EB Blank IDs 58075, 58090, 58130 and 58170 were analyzed. (b) (6) analyzed samples 58075, 58130, and 58170 on March 31, 2022. (b) (6) analyzed sample 58090 on May 20, 2022. No asbestos was detected on the TEM grid preparation blank samples.

Our laboratory information management system (LIMS) randomly selected sample 633185-1A/01212022-1 for additional duplicate QC analysis. Independent preparations were made for the PLM and TEM portions of analysis. The duplicate QC analysis was performed by (b) (6) on March 31, 2022, for PLM and by (b) (6) on March 31, 2022, for TEM. The QC results were consistent with the original findings.

Our laboratory information management system (LIMS) randomly selected samples 633185-2A/04272021-2 and 633185-10A/01212022-10 for additional replicate QC analysis. Independent preparations were made for the PLM and TEM portions of analysis. The replicate QC analysis was performed by (b) (6) on March 31, 2022, for PLM and by (b) (6) on April 26, 2022, for TEM. The QC results were consistent with the original findings.

I certify that all information contained in this report pertaining to laboratory events, procedures, and protocols is true to the best of my knowledge and accurately describes the handling of this project by AMA Analytical Services, Inc., and its personnel.



6/30/2022

Andreas Saldivar — Date
President