CERTIFICATE OF ANALYSIS

Chain of Custody: 627500
Client: US Food & Drug Administration
Address: Office of Cosmetics & Colors
4300 River Road
College Park, MD 20740
Attention: John Gasper

Job Name: Assignment DFPG #21-18
Job Location: Batch No. 04272021 (Batch #4)
Job Number: CLIN 0001
PO Number: 75F40119P10689

Date Submitted: 6/4/2021
Date Analyzed: 6/30/2021-7/28/2021
Report Date: 8/20/2021
Date Sampled: Not Provided
Person Submitting: Martha Schwartz
Revised: 9/14/2021 (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
627500-1A	04272021-1	0.00000142%	0.00000570%	ND	ND	< 0.00001%	ND	16.83%	5.74%	77.43%	
627500-1B	04272021-1	0.00000155%	0.00000620%	ND	ND	< 0.00001%	ND	16.86%	6.73%	76.42%	
627500-1C	04272021-1	0.00000131%	0.00000523%	ND	ND	< 0.00001%	ND	16.88%	5.65%	77.46%	
627500-2A	04272021-2	0.00000231%	0.00000926%	ND	ND	< 0.00001%	ND	14.93%	11.18%	73.90%	
627500-2B	04272021-2	0.00000268%	0.00001073%	ND	ND	< 0.00001%	ND	14.93%	8.25%	76.82%	
627500-2C	04272021-2	0.00000216%	0.00000862%	ND	ND	< 0.00001%	ND	14.91%	6.83%	78.26%	
627500-3A	04272021-3	0.00000210%	0.00000840%	ND	ND	< 0.00001%	ND	5.75%	7.03%	87.22%	
627500-3B	04272021-3	0.00000225%	0.00000900%	ND	ND	< 0.00001%	ND	5.77%	8.01%	86.22%	
627500-3C	04272021-3	0.00000205%	0.00000818%	ND	ND	< 0.00001%	ND	5.72%	8.09%	86.19%	
627500-4A	04272021-4	0.00000215%	0.00000860%	ND	ND	< 0.00001%	ND	6.92%	6.61%	86.47%	
627500-4B	04272021-4	0.00000162%	0.00000647%	ND	ND	< 0.00001%	ND	6.90%	6.06%	87.04%	
627500-4C	04272021-4	0.00000160%	0.00000639%	ND	ND	< 0.00001%	ND	6.89%	6.29%	86.81%	
627500-5A	04272021-5	0.00000257%	0.00001028%	ND	ND	< 0.00001%	ND	20.79%	5.17%	74.04%	
627500-5B	04272021-5	0.00000246%	0.00000983%	ND	ND	< 0.00001%	ND	20.82%	5.04%	74.15%	
627500-5C	04272021-5	0.00000183%	0.00000731%	ND	ND	< 0.00001%	ND	20.81%	4.12%	75.07%	
627500-6A	04272021-6	0.00000216%	0.00000863%	ND	ND	< 0.00001%	ND	49.98%	7.68%	42.34%	
627500-6B	04272021-6	0.00000218%	0.00000872%	ND	ND	< 0.00001%	ND	49.80%	6.56%	43.64%	
627500-6C	04272021-6	0.00000185%	0.00000741%	ND	ND	< 0.00001%	ND	49.71%	7.32%	42.97%	
627500-7A	04272021-7	0.00000147%	0.00000589%	ND	ND	< 0.00001%	ND	9.34%	5.63%	85.03%	
627500-7B	04272021-7	0.00000174%	0.00000698%	ND	ND	< 0.00001%	ND	9.37%	5.34%	85.29%	
627500-7C	04272021-7	0.00000143%	0.00000573%	ND	ND	< 0.00001%	ND	9.34%	5.08%	85.57%	
627500-8A	04272021-8	0.00000199%	0.00000795%	ND	ND	< 0.00001%	ND	19.63%	5.51%	74.86%	
627500-8B	04272021-8	0.00000199%	0.00000795%	ND	ND	< 0.00001%	ND	19.60%	5.59%	74.81%	
627500-8C	04272021-8	0.00000187%	0.00000748%	ND	ND	< 0.00001%	ND	19.60%	8.72%	71.68%	
627500-9A	04272021-9	0.00000252%	0.00001008%	ND	ND	< 0.00001%	ND	3.21%	4.03%	92.76%	
627500-9B	04272021-9	0.00000307%	0.00001229%	ND	ND	< 0.00001%	ND	3.27%	1.05%	95.68%	
627500-9C	04272021-9	0.00000200%	0.00000802%	ND	ND	< 0.00001%	ND	3.25%	4.28%	92.46%	
627500-10A	04272021-10	0.00000274%	0.00001097%	ND	ND	< 0.00001%	ND	15.14%	1.51%	83.35%	
627500-10B	04272021-10	0.00000252%	0.00001009%	ND	ND	< 0.00001%	ND	15.10%	12.63%	72.27%	
627500-10C	04272021-10	0.00000435%	0.00001739%	ND	ND	< 0.00002%	ND	15.11%	10.88%	74.01%	
627500-11A	04272021-11	0.00000356%	0.00001424%	ND	ND	< 0.00001%	ND	25.14%	3.90%	70.96%	
627500-11B	04272021-11	0.00000282%	0.00001128%	ND	ND	< 0.00001%	ND	25.30%	9.83%	64.87%	
627500-11C	04272021-11	0.00000203%	0.00000813%	ND	ND	< 0.00001%	ND	25.20%	6.00%	68.80%	
627500-12A	04272021-12	0.00000237%	0.00000946%	ND	ND	< 0.00001%	ND	14.19%	13.05%	72.76%	
627500-12B	04272021-12	0.00000315%	0.00001260%	ND	ND	< 0.00001%	ND	14.26%	9.30%	76.45%	
627500-12C	04272021-12	0.00000210%	0.00000840%	ND	ND	< 0.00001%	ND	14.30%	11.41%	74.29%	
627500-13A	04272021-13	0.00000327%	0.00001307%	ND	ND	< 0.00001%	ND	40.41%	0.73%	58.86%	
627500-13B	04272021-13	0.00000234%	0.00000938%	ND	ND	< 0.00001%	ND	40.47%	1.00%	58.52%	
627500-13C	04272021-13	0.00000208%	0.00000834%	ND	ND	< 0.00001%	ND	40.44%	1.14%	58.41%	
627500-14A	04272021-14	0.00000242%	0.00000967%	ND	ND	< 0.00001%	ND	0.53%	13.15%	86.32%	
627500-14B	04272021-14	0.00000192%	0.00000768%	ND	ND	< 0.00001%	ND	0.52%	10.83%	88.65%	

AMA Analytical Services, Inc.
Focused On Results.

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627500-14C	04272021-14	0.00000213%	0.00000851%	ND	ND	< 0.00001%	ND	0.53%	11.70%	87.77%	

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

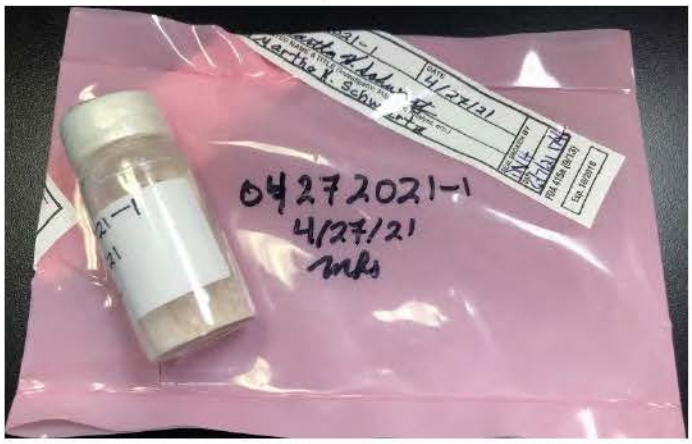
Analytical Method(s): PLM by Modified NY ELAP 198.6
TEM by Modified NY ELAP 198.4/ASTM D5756

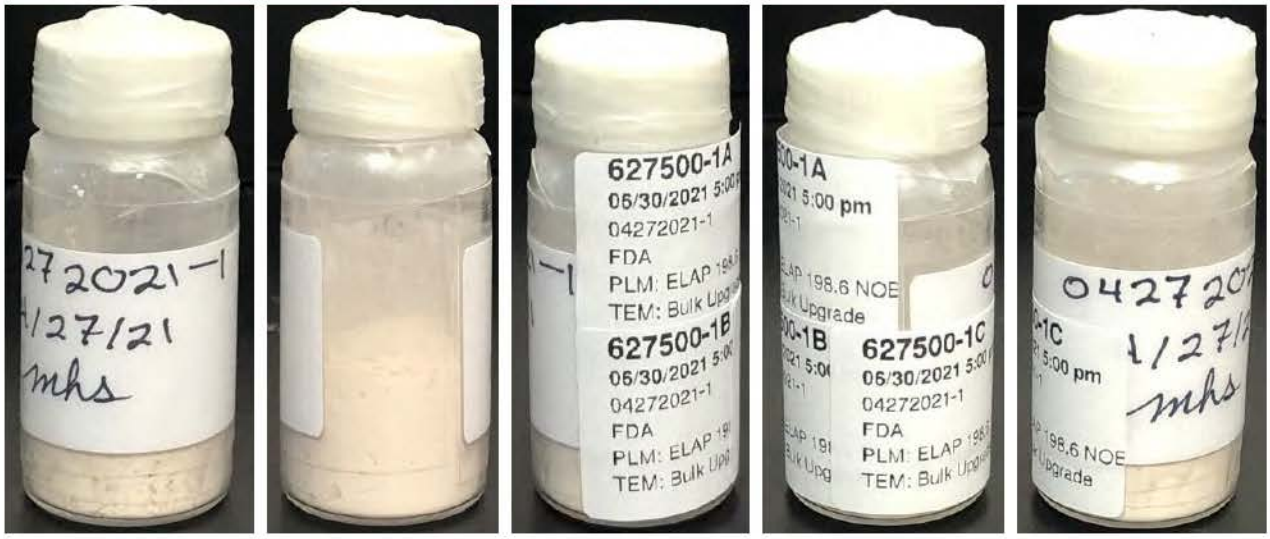
Analyst(s):
PLM (b)(6)
TEM (b)(6) Andreas Saldivar

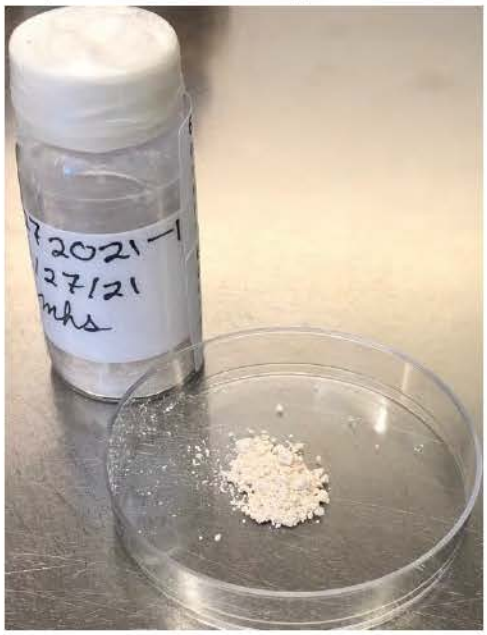
Technical Director: Andreas Saldivar

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

627500-1A, 1B, 1C/04272021-1







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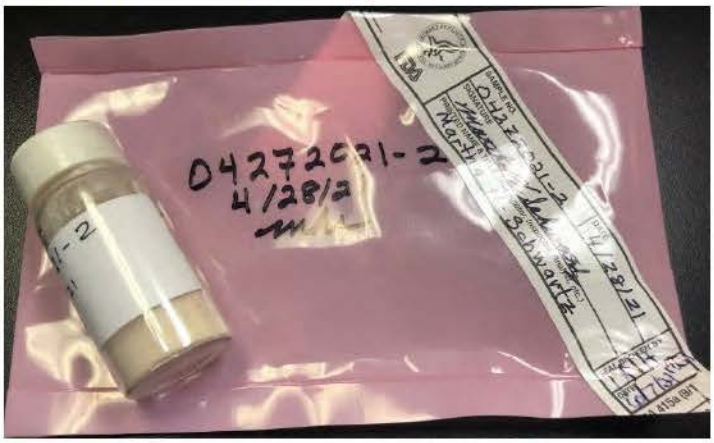

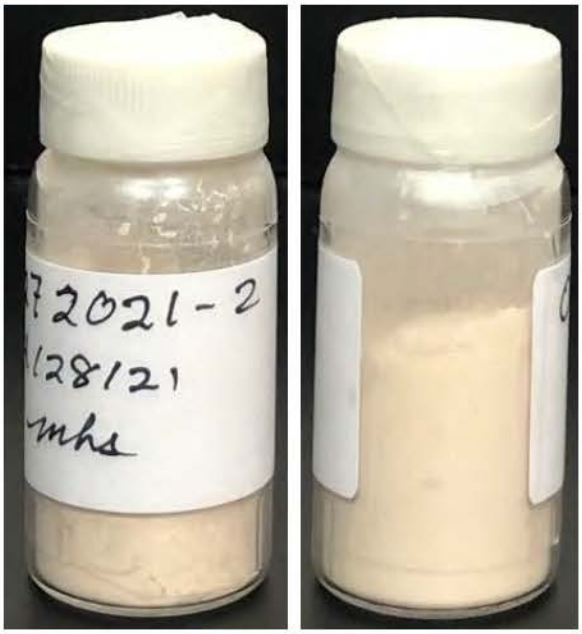

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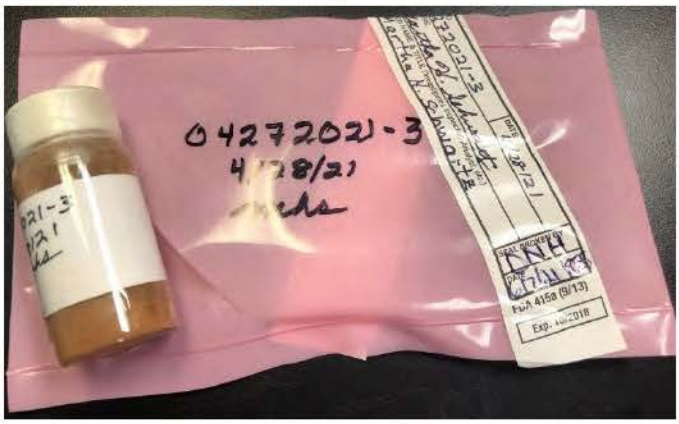

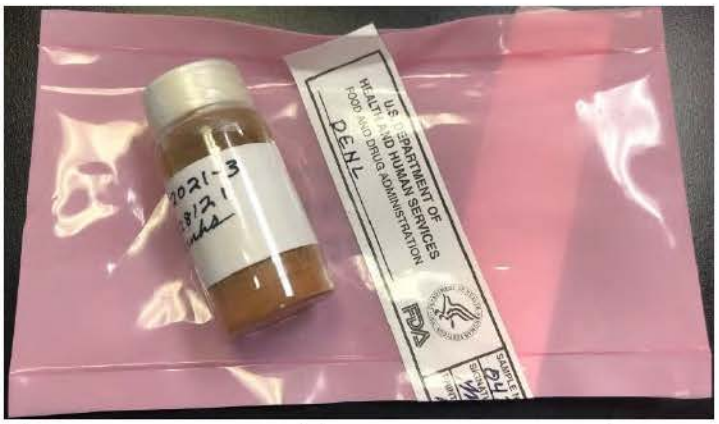

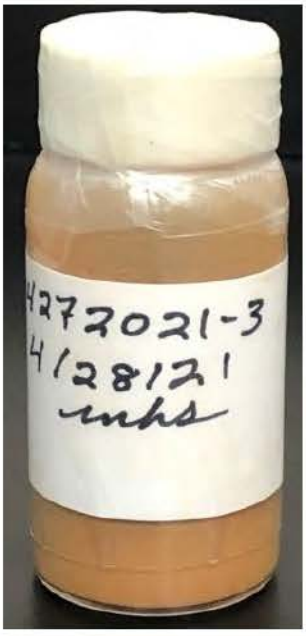

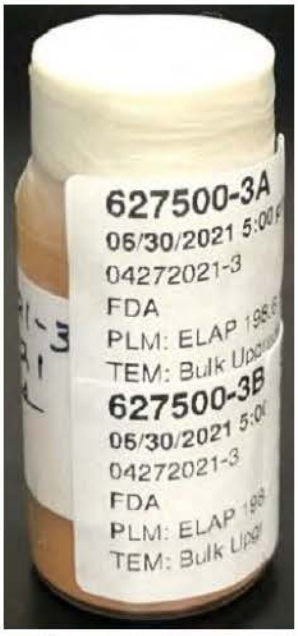

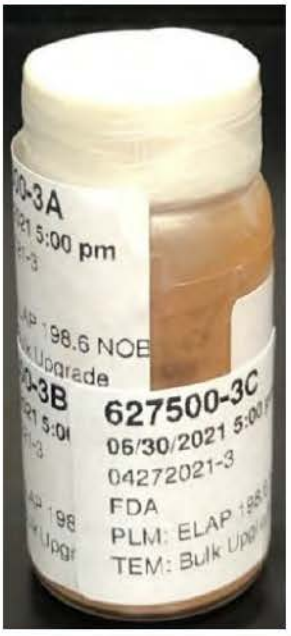

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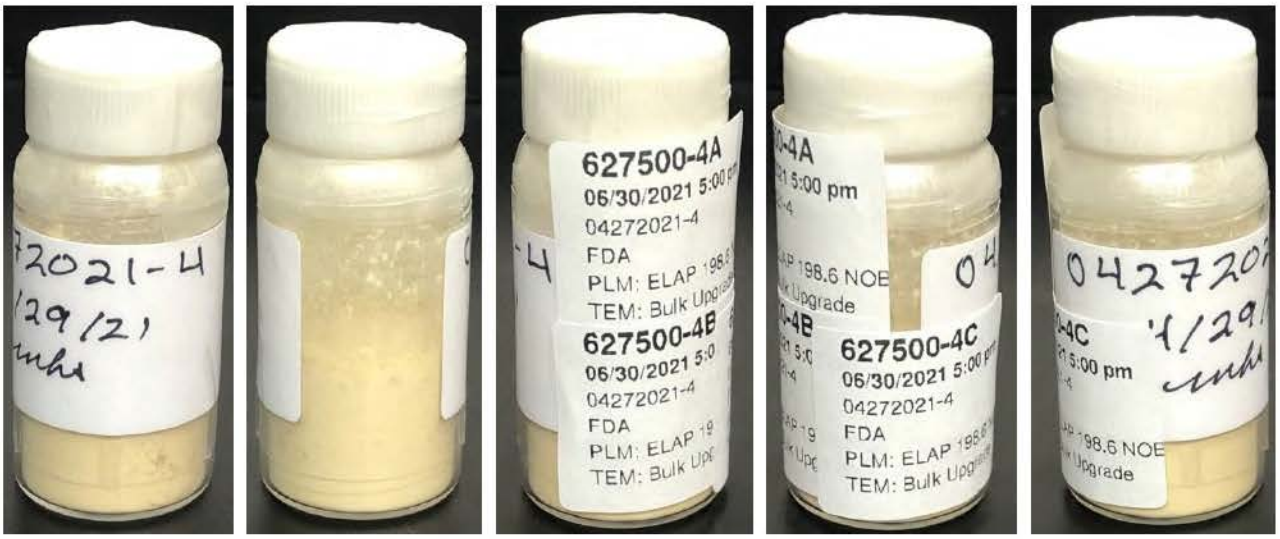

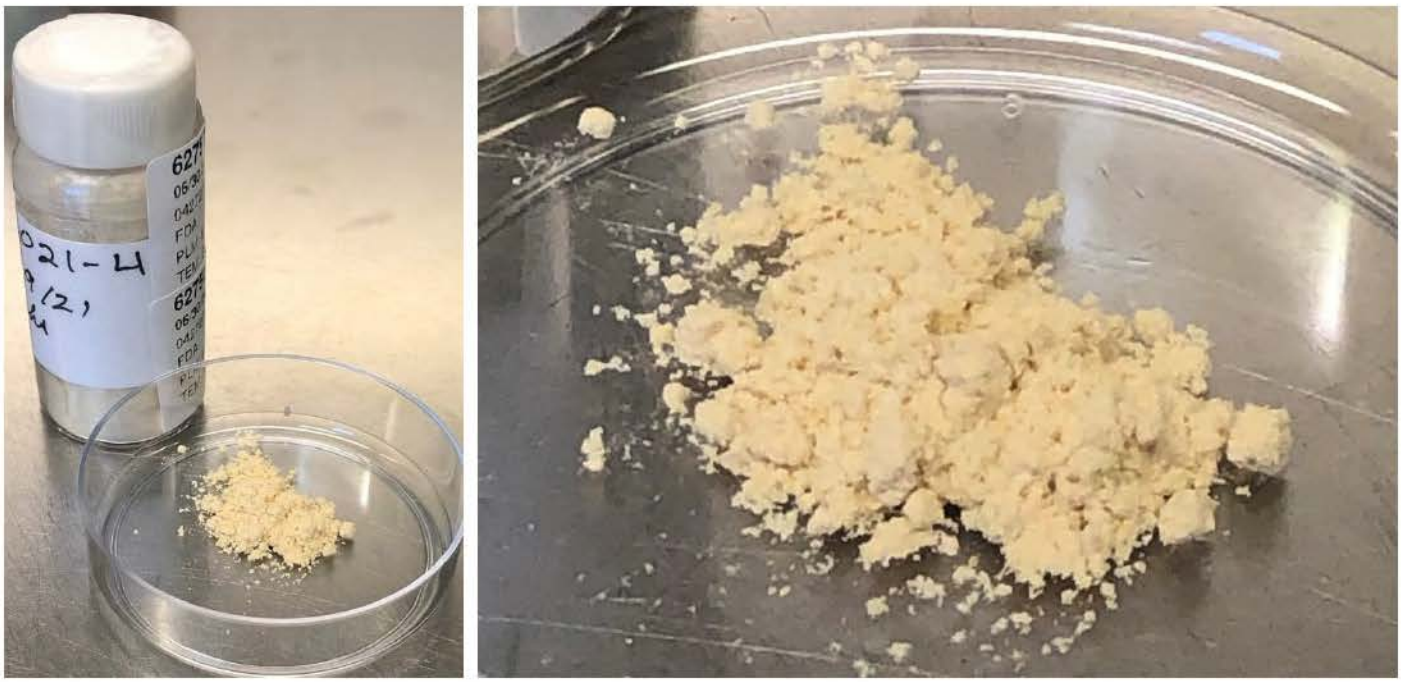

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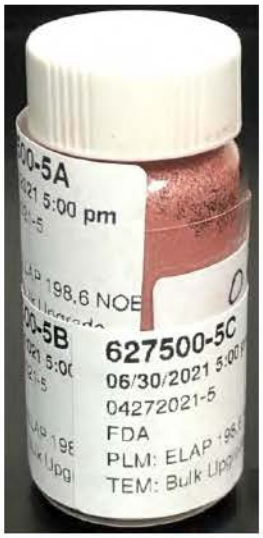

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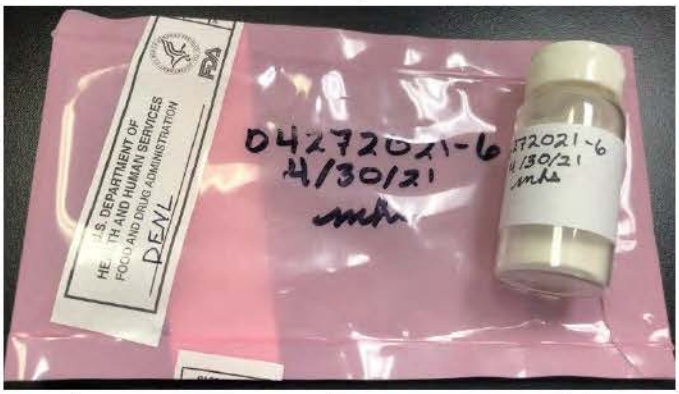

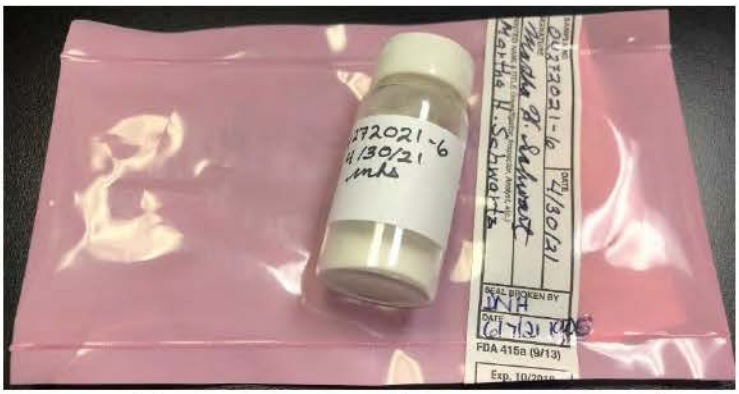

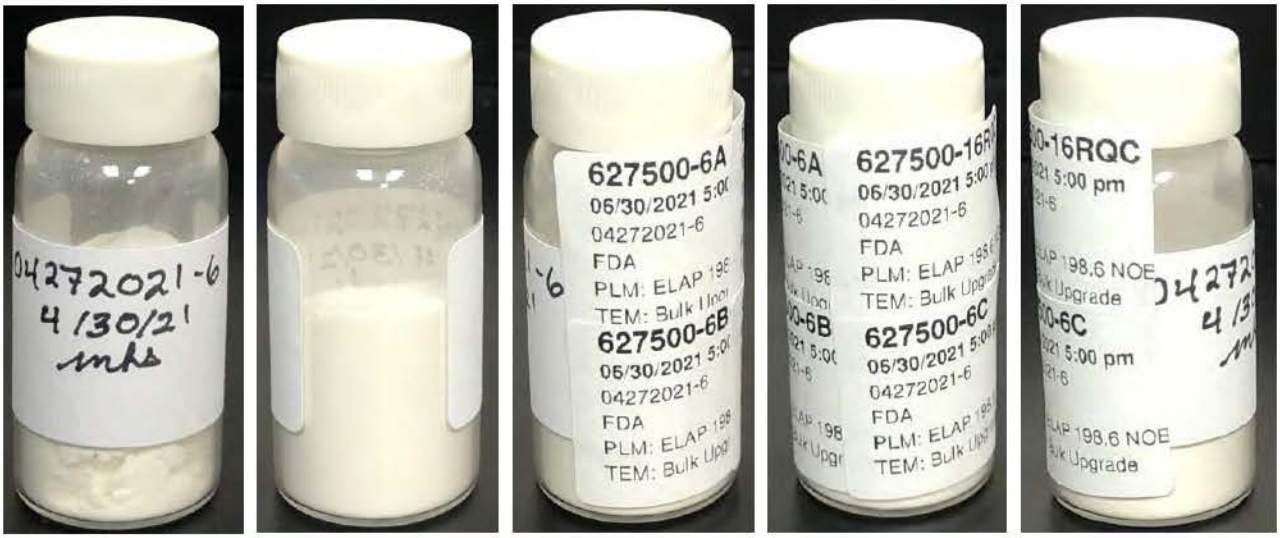

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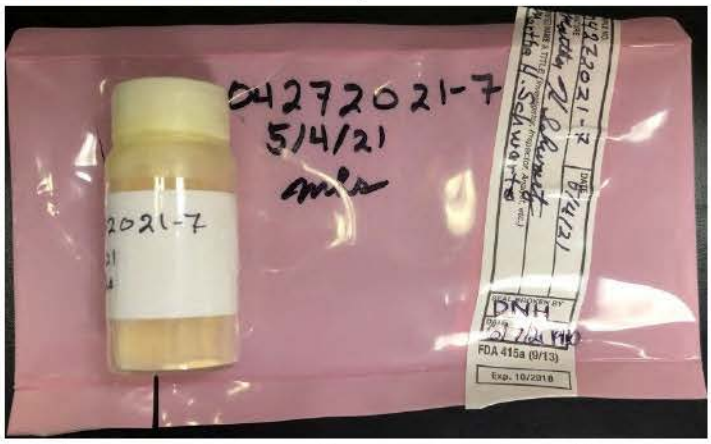
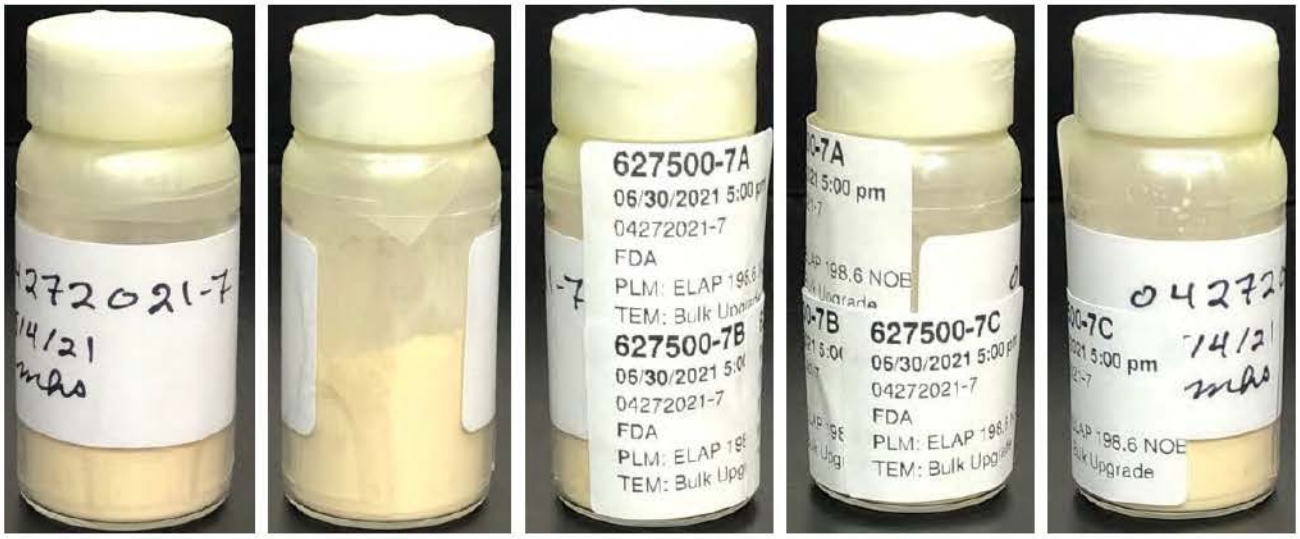
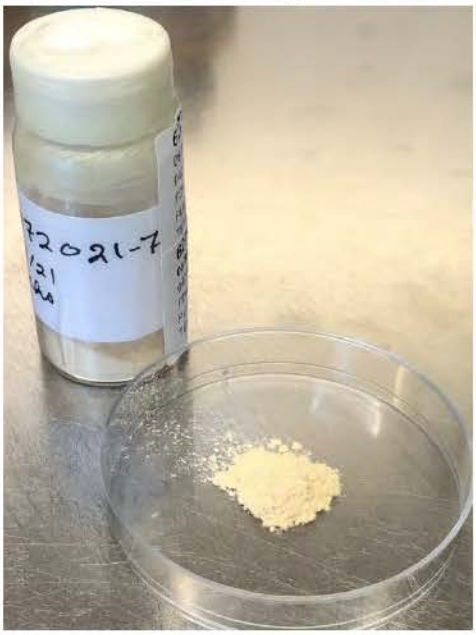
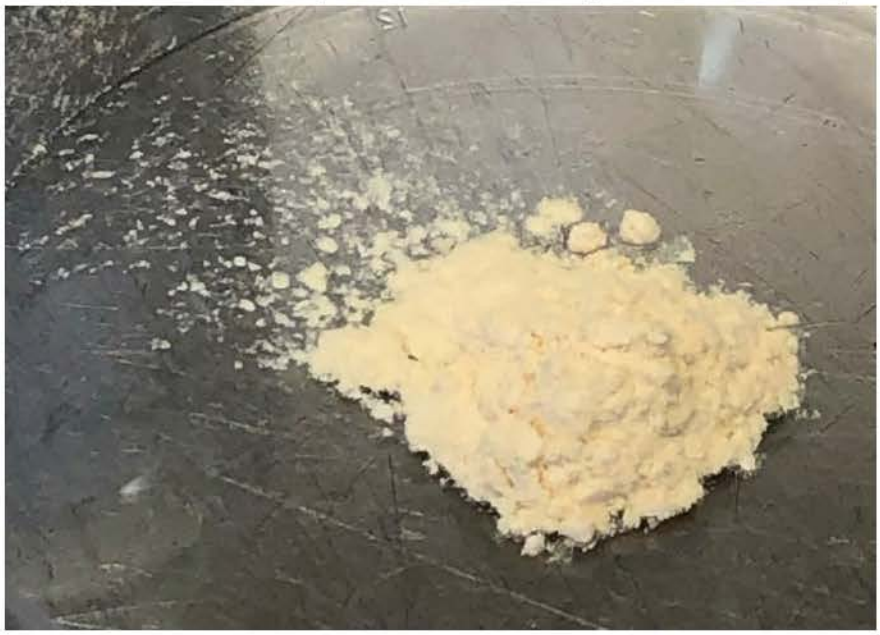
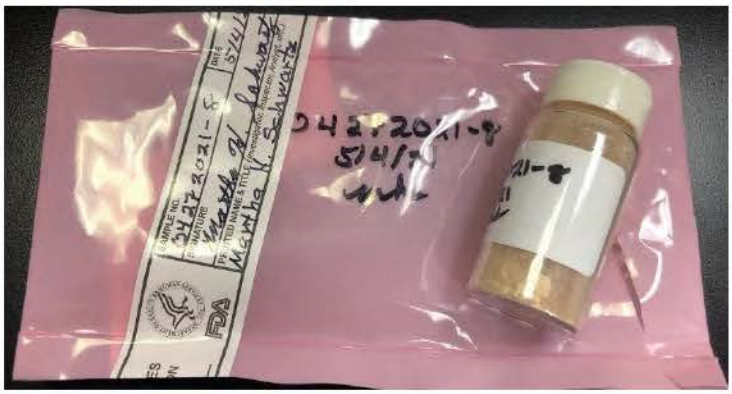


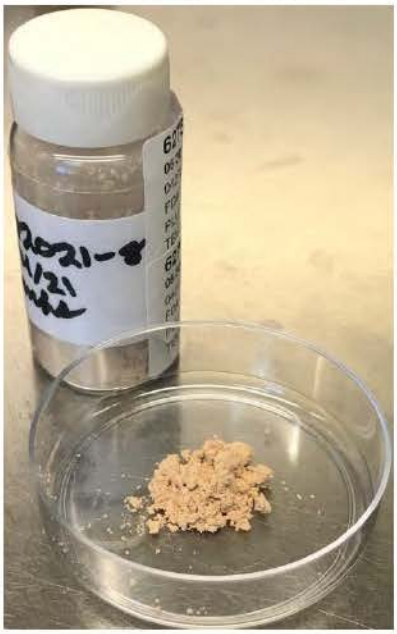






627500-8A, 8B, 8C/04272021-8





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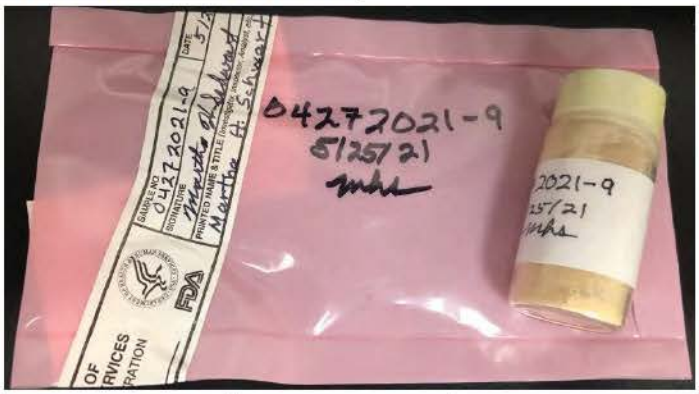

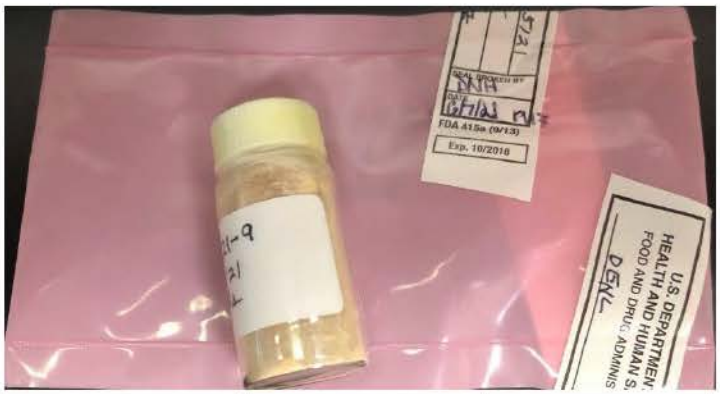

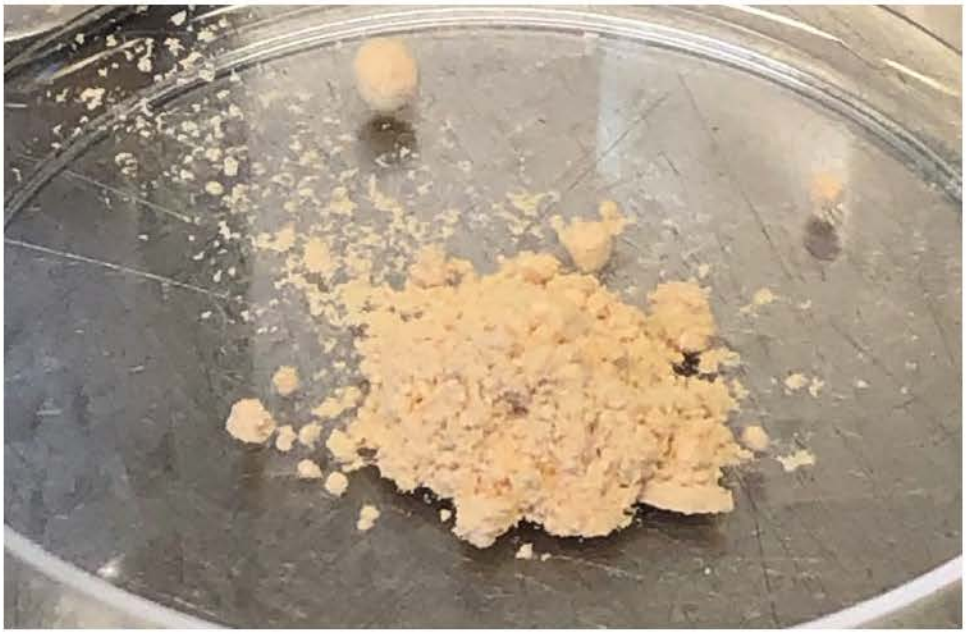

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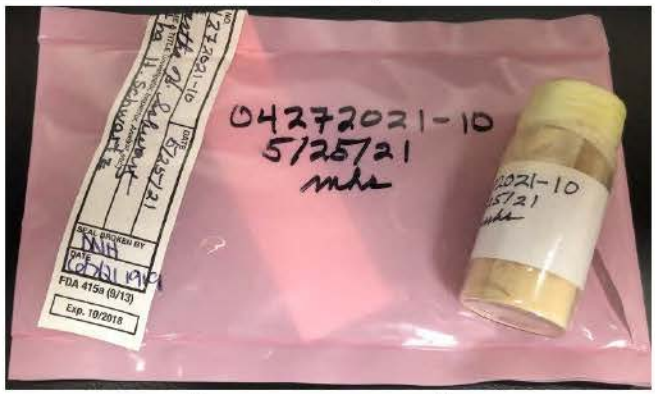

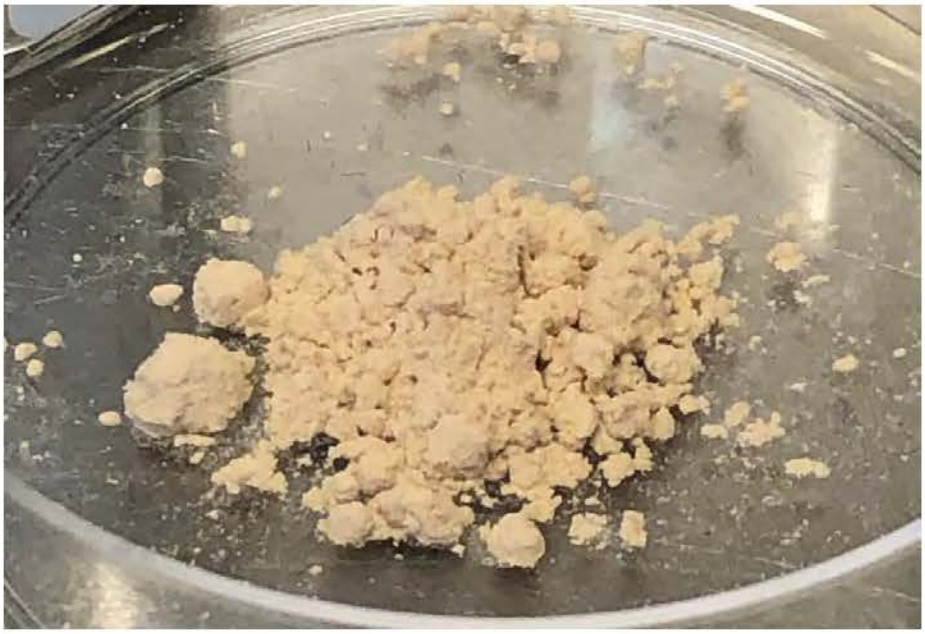

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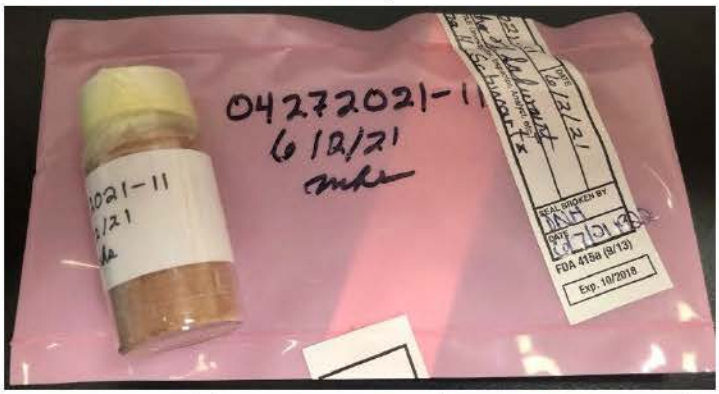

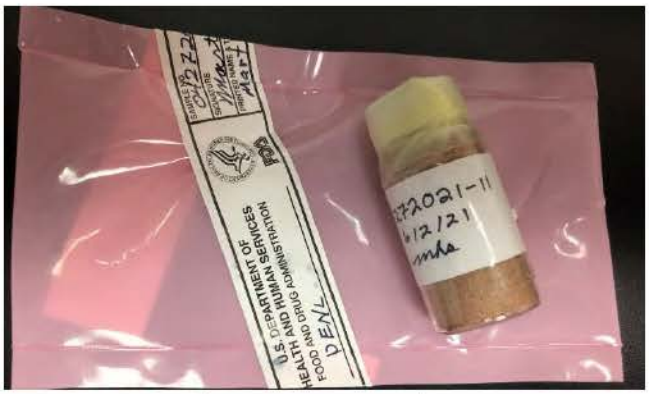

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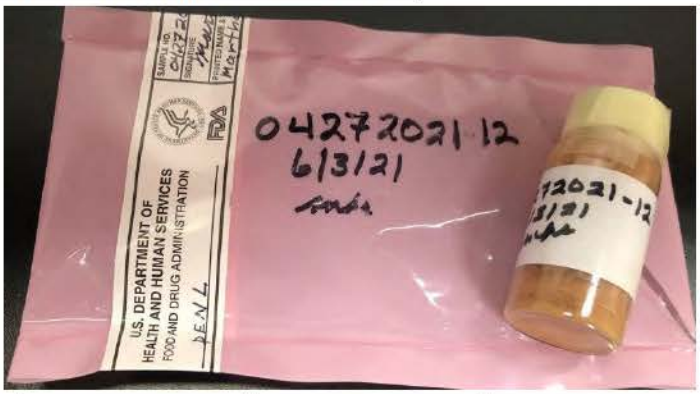

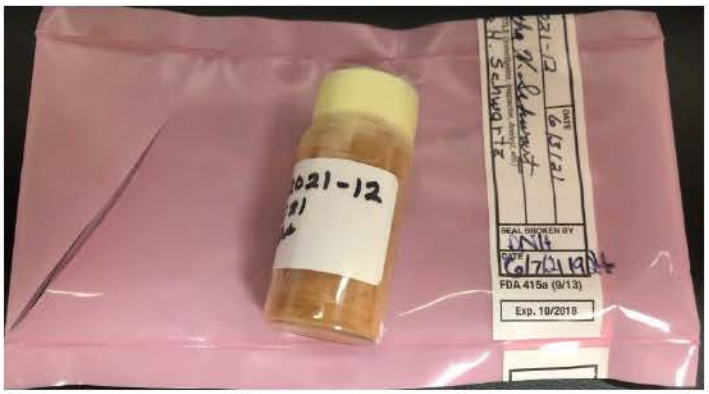

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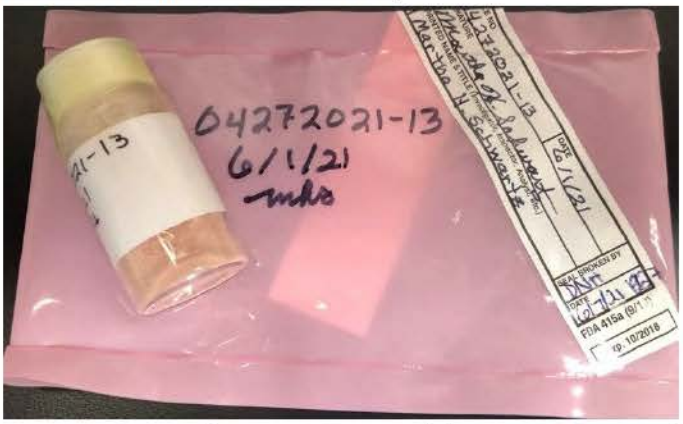

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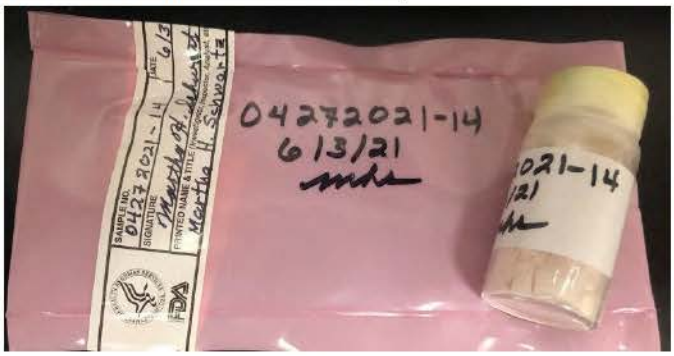
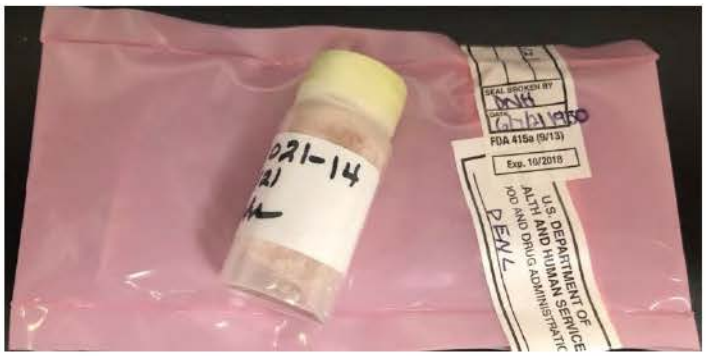
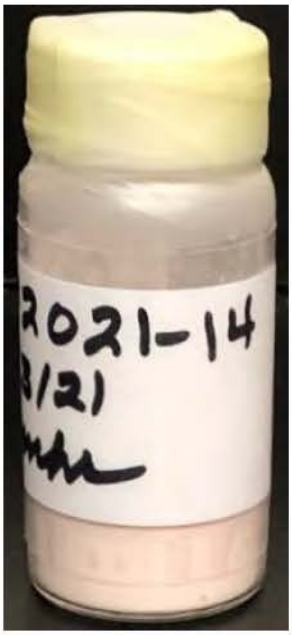
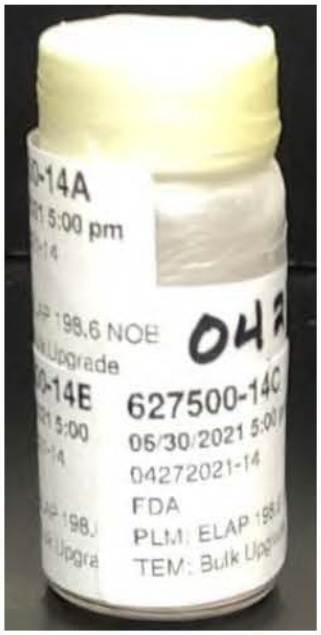
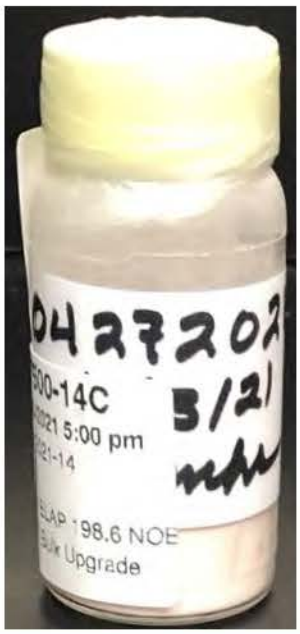
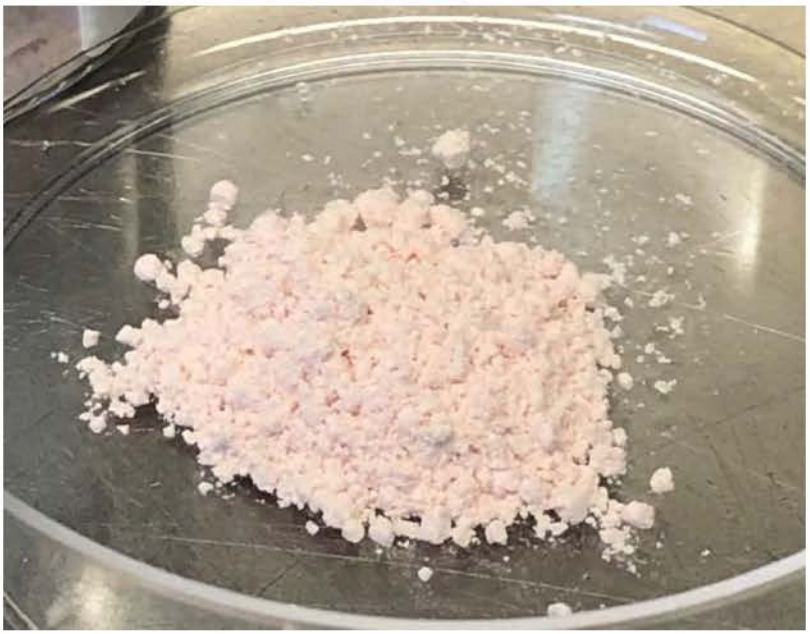












Sample Preparation

Samples were gravimetrically reduced and filtered by (b)(6) on: June 21, 2021 through June 30, 2021 for samples 627500-1A through 627500-4C and NB21-417/418; on July 8, 2021 through July 16, 2021 for samples 627500-5A through 627500-8C, 627500-16RQC, and NB21-447/448; on July 15, 2021 through July 19, 2021 for samples 627500-9A through 627500-11C, 627500-15DQC and NB21-463/464; and on July 20, 2021 through July 22, 2021 for samples 627500-12A through 627500-14C, 627500-17RQC and NB21-471/472. PLM slide preparations were made by Chon Simpha on: June 30, 2021 for samples 627500-1A through 627500-4C; July 16, 2021 for samples 627500-5A through 627500-8C and 627500-16RQC; July 20, 2021 for samples 627500-9A through 627500-11C and 627500-15DQC; and July 22, 2021 for samples 627500-12A through 627500-14C and 627500-17RQC. TEM grid preparations were made (b)(6) on: July 2, 2021 for samples 627500-1A through 627500-4C and NB21-417; July 19, 2021 for samples 627500-5A through 627500-8C, 627500-16RQC and NB21-448; July 22, 2021 for samples 627500-9A through 627500-11C, 627500-15DQC and NB21-464; and July 23, 2021 for samples 627500-12A through 627500-14C, 627500-17RQC and NB21-471. 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>

No problems were encountered during sample preparation. All gravimetric data was consistent among each group of aliquots and all 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)

PLM

(ASB * W3)/W1

Where: EFA:	Effective filter area	Where:	W1: Weight of sample prior to ashing/acid wash
MA:	Mass of asbestos		W3: Weight of sample after acid treatment
RW:	Weight of residue		ASB: Calculated Point Count Result
VF:	Volume filtered		
IW:	Initial weight of the sample		
AA:	Area analyzed		
RJ:	Weight of residue placed into the jar		

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:
627500-1A, 1B, 1C/Client Sample: 04272021-1

PLM
All three aliquots of sample 04272021-1 were analyzed by (b)(6) on June 30, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

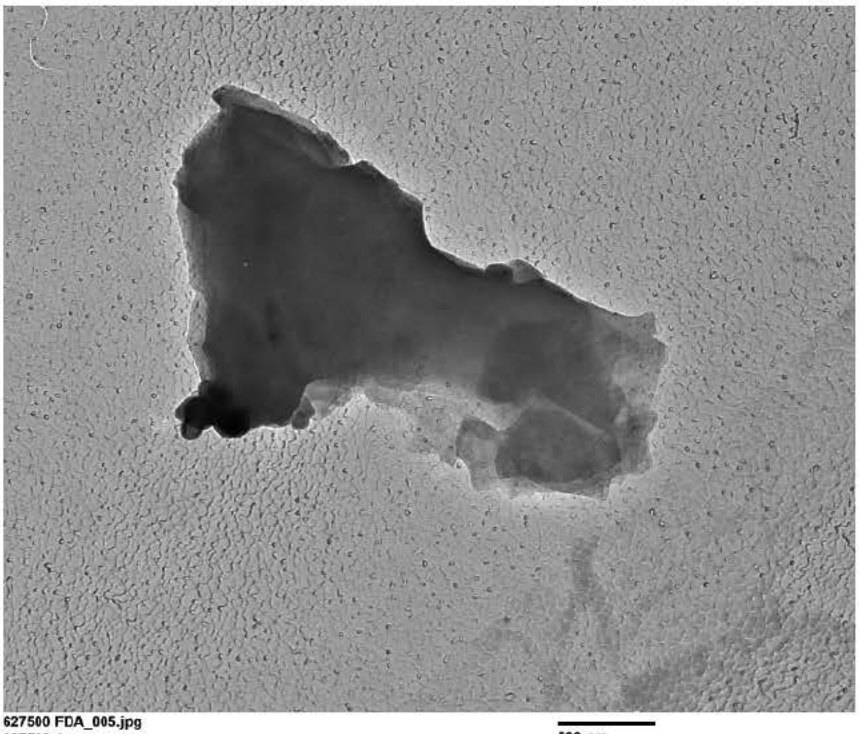
627500-1A	No Asbestos Detected
627500-1B	No Asbestos Detected
627500-1C	No Asbestos Detected

TEM
(b)(6) analyzed aliquot 1A on July 13, 2021. Andreas Saldivar analyzed aliquots 1B and 1C on July 15, 2021. The primary particle observed was talc; titanium particles were also observed along with some silica spheres and a few 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.

627500-1A	No Asbestos Detected
627500-1B	No Asbestos Detected
627500-1C	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.

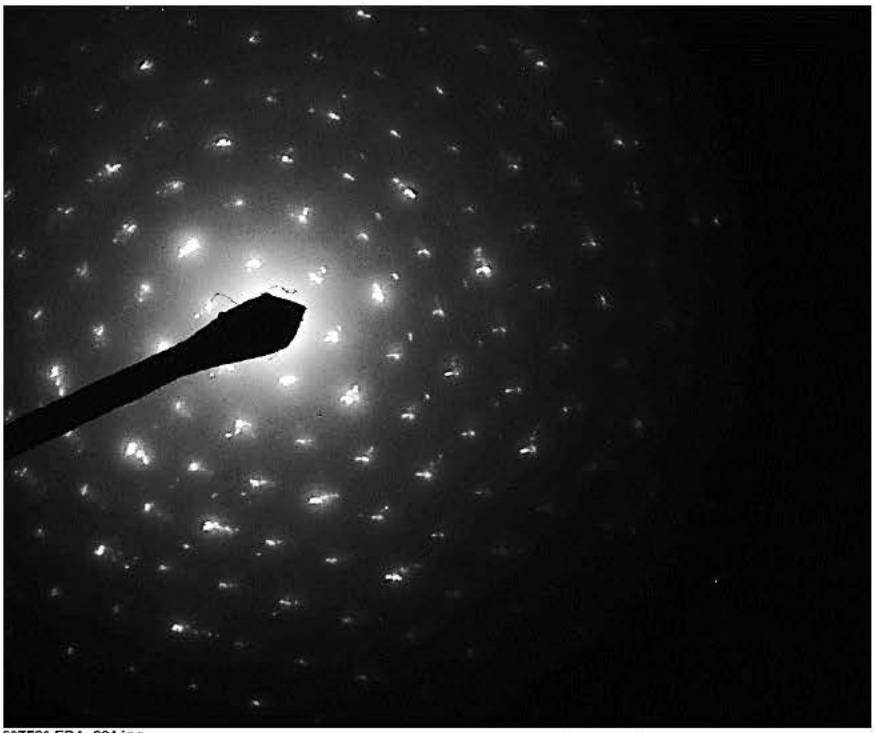
Sample 627500-1A, Talc Particle



627500 FDA_005.jpg
627500-1a
Talc Particle
Cal: 0.001774 µm/pix
14:49 7/13/2021
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

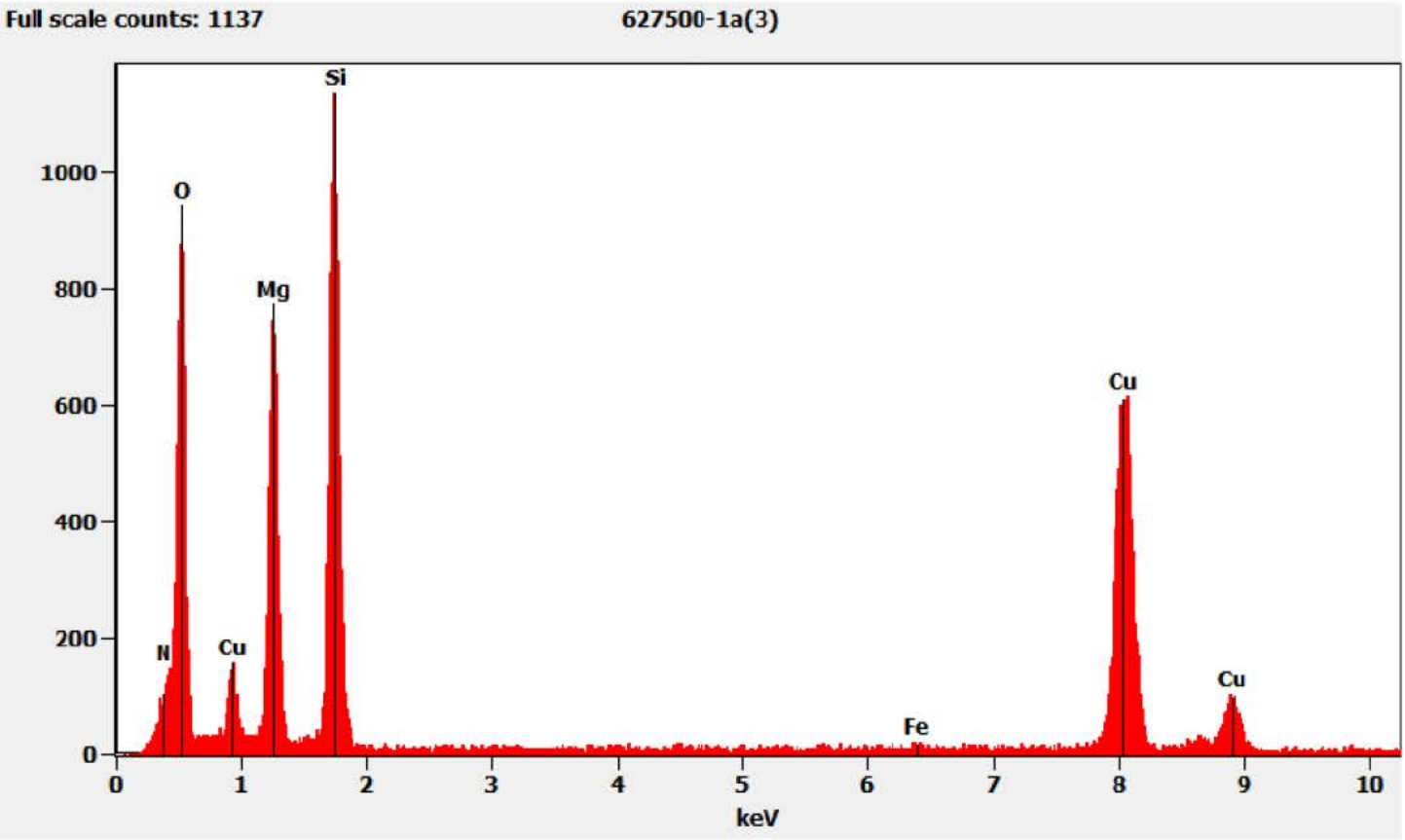
Hexagonal Diffraction Pattern from the Talc Particle pictured above



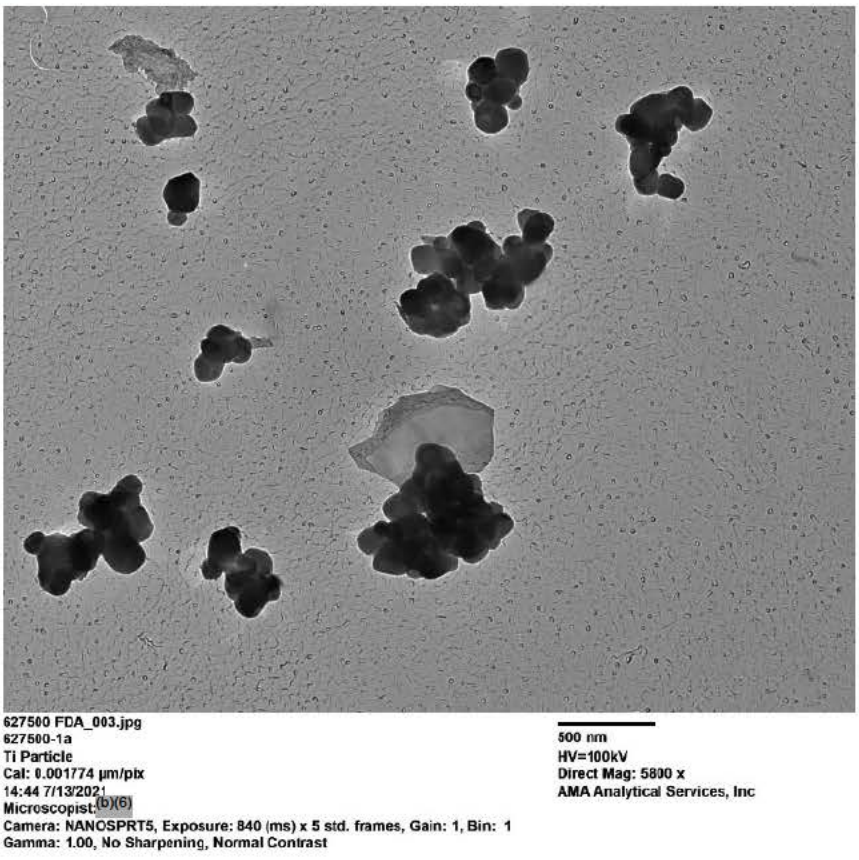
627500 FDA_004.jpg
627500-1a
Talc Particle Dif
14:48 7/13/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above

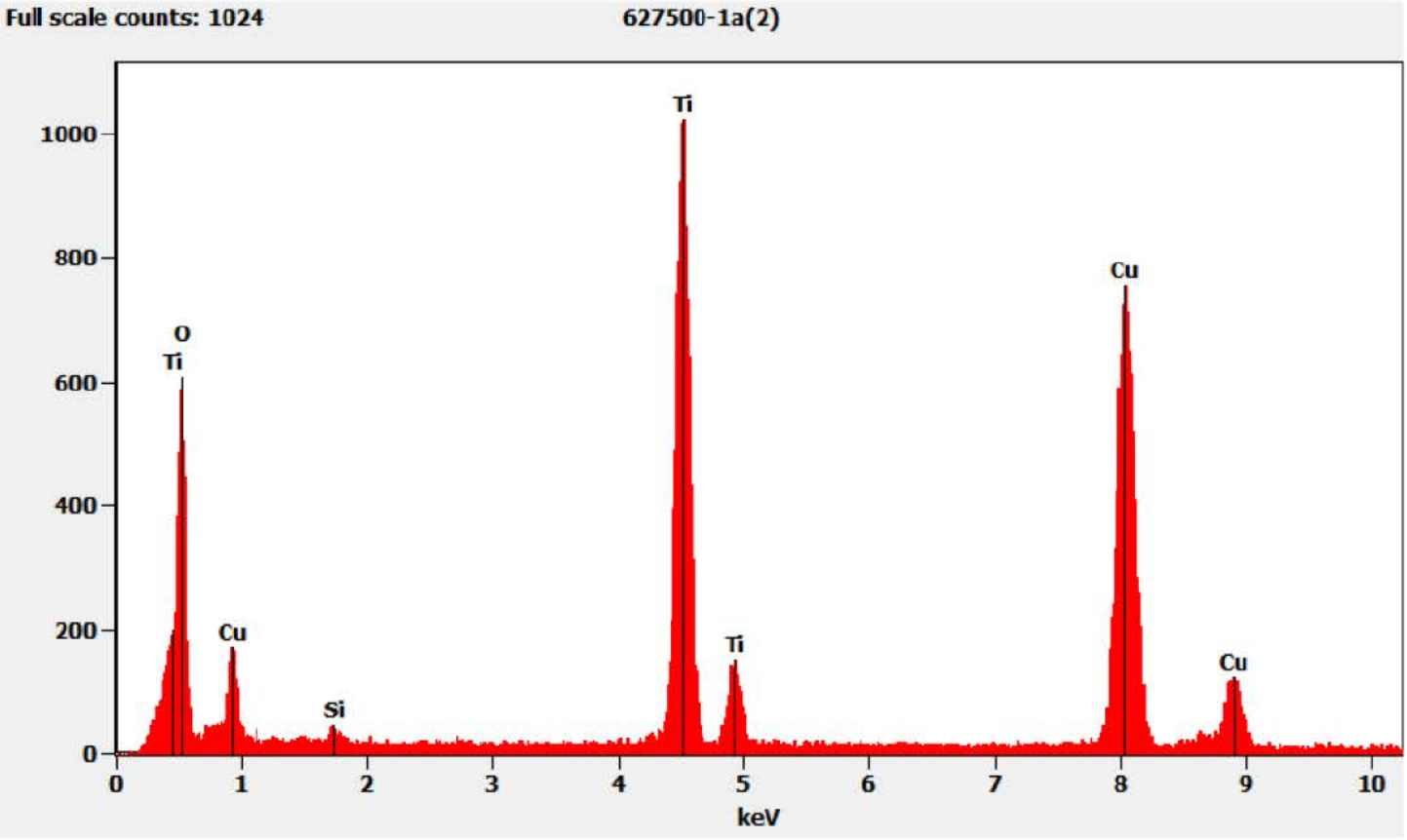


Sample 627500-1A, Titanium Particles

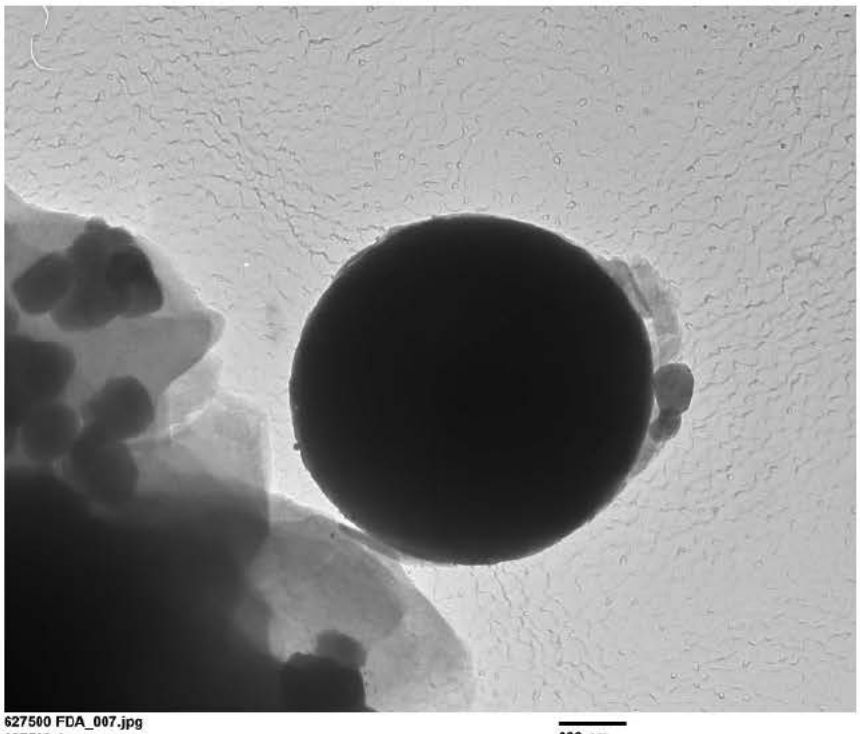


Diffraction Pattern from the Titanium Particles pictured above

Chemistry from Titanium Particles pictured above



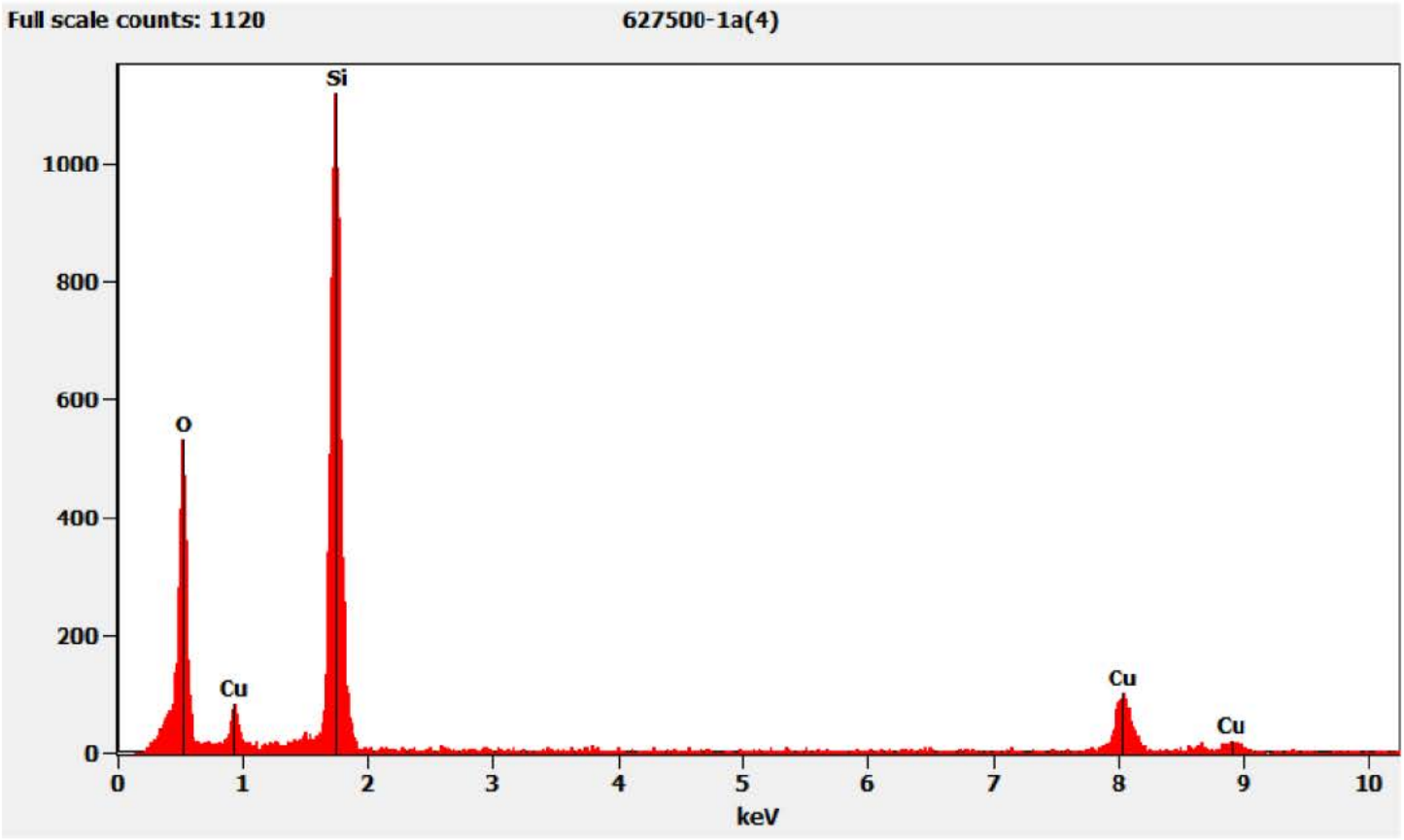
627500-1A, Silica Sphere



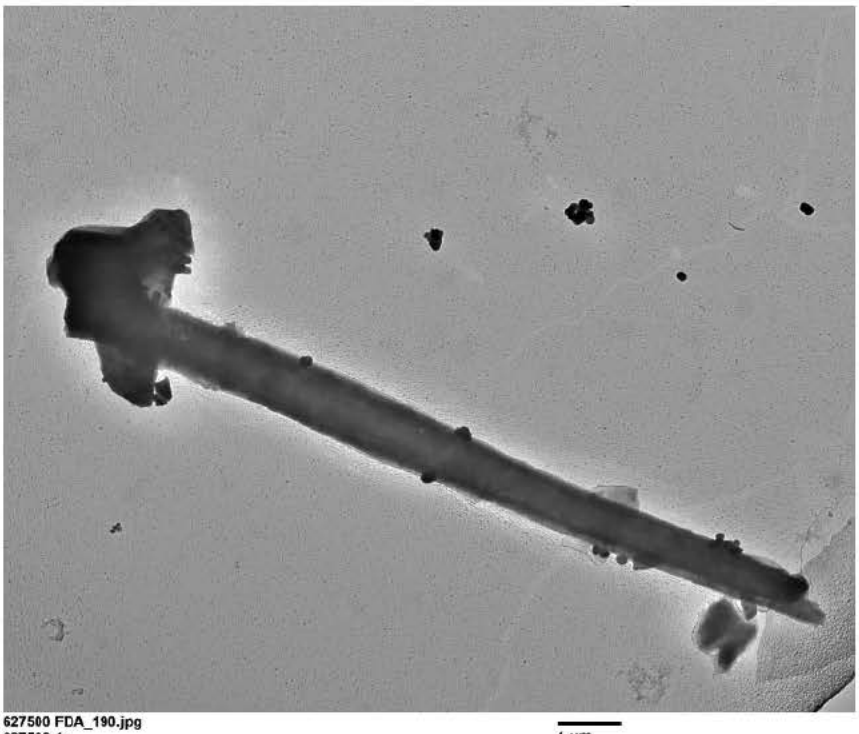
627500 FDA_007.jpg
627500-1a
Silica Sphere
Cal: 0.001029 µm/pix
14:54 7/13/202[illegible]
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Silica Sphere pictured above



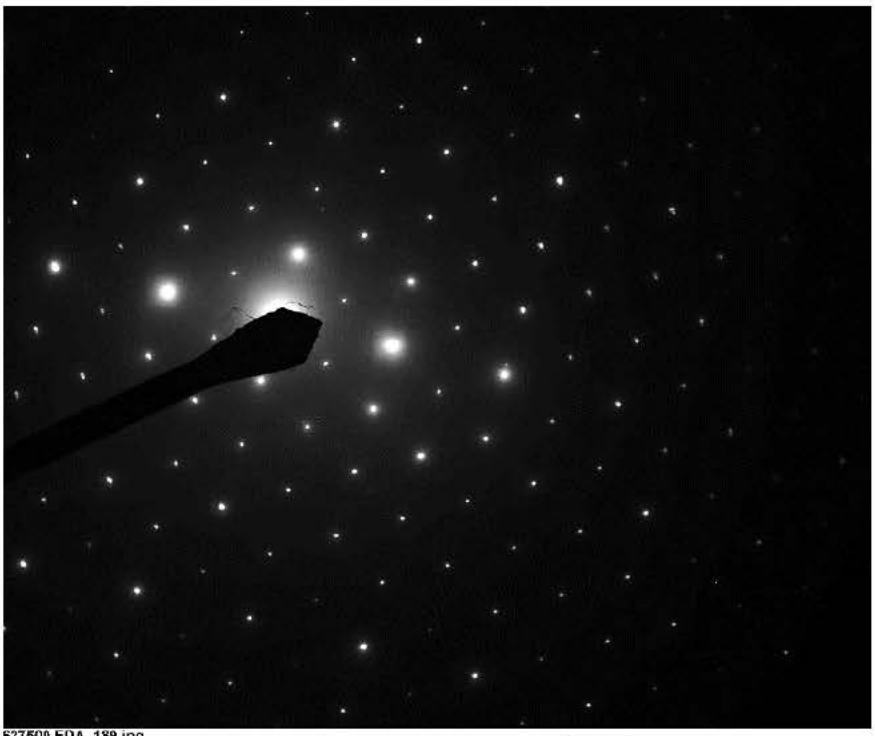
627500-1A, Talc Fiber



627500 FDA_190.jpg
627500-1a
Talc Fiber
Cal: 0.005419 µm/pix
16:11 7/29/2021
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

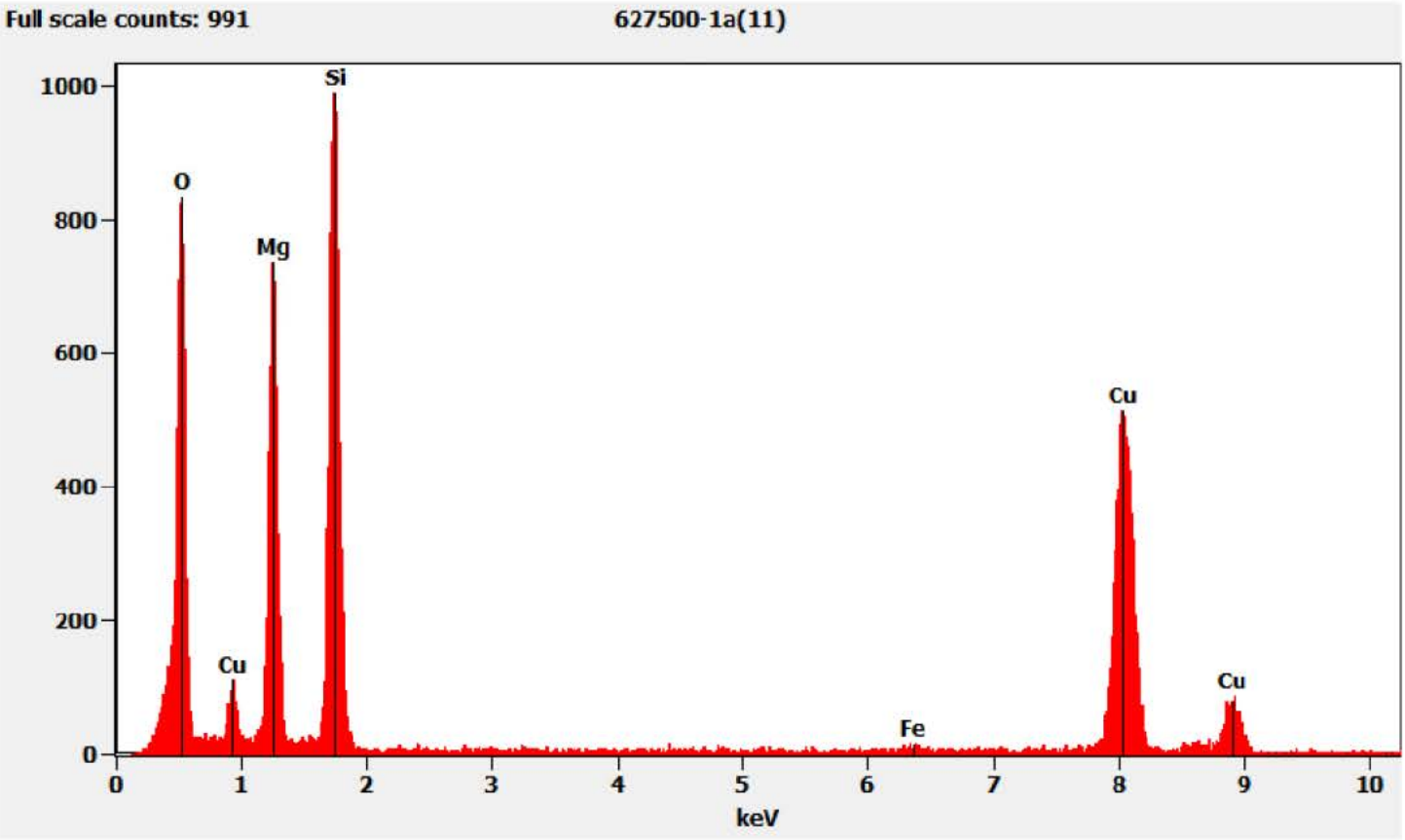
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



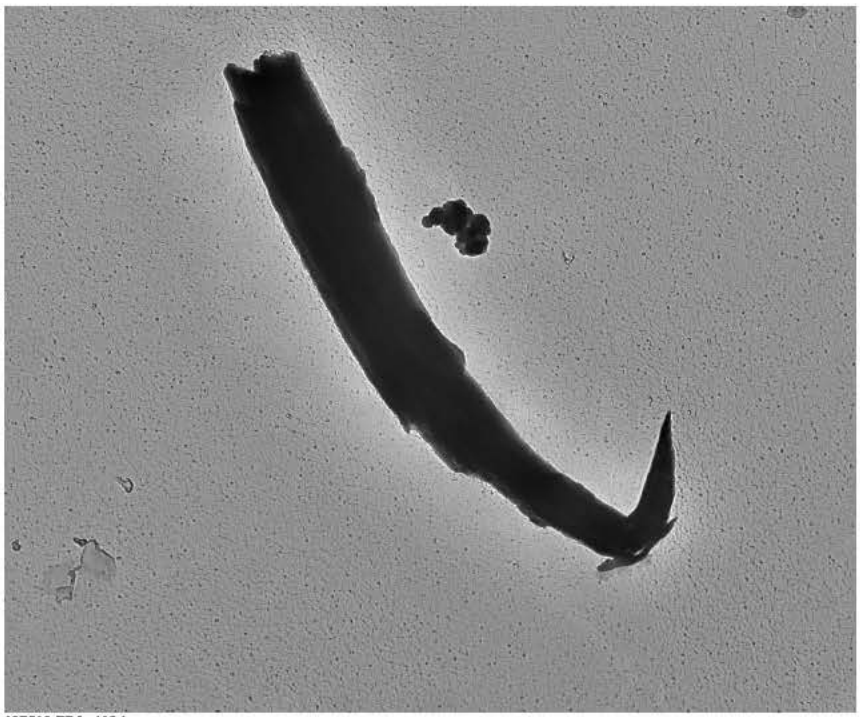
627500 FDA_189.jpg
627500-1a
Talc Fiber Dif
16:09 7/29/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



627500-1A, Talc Ribbon

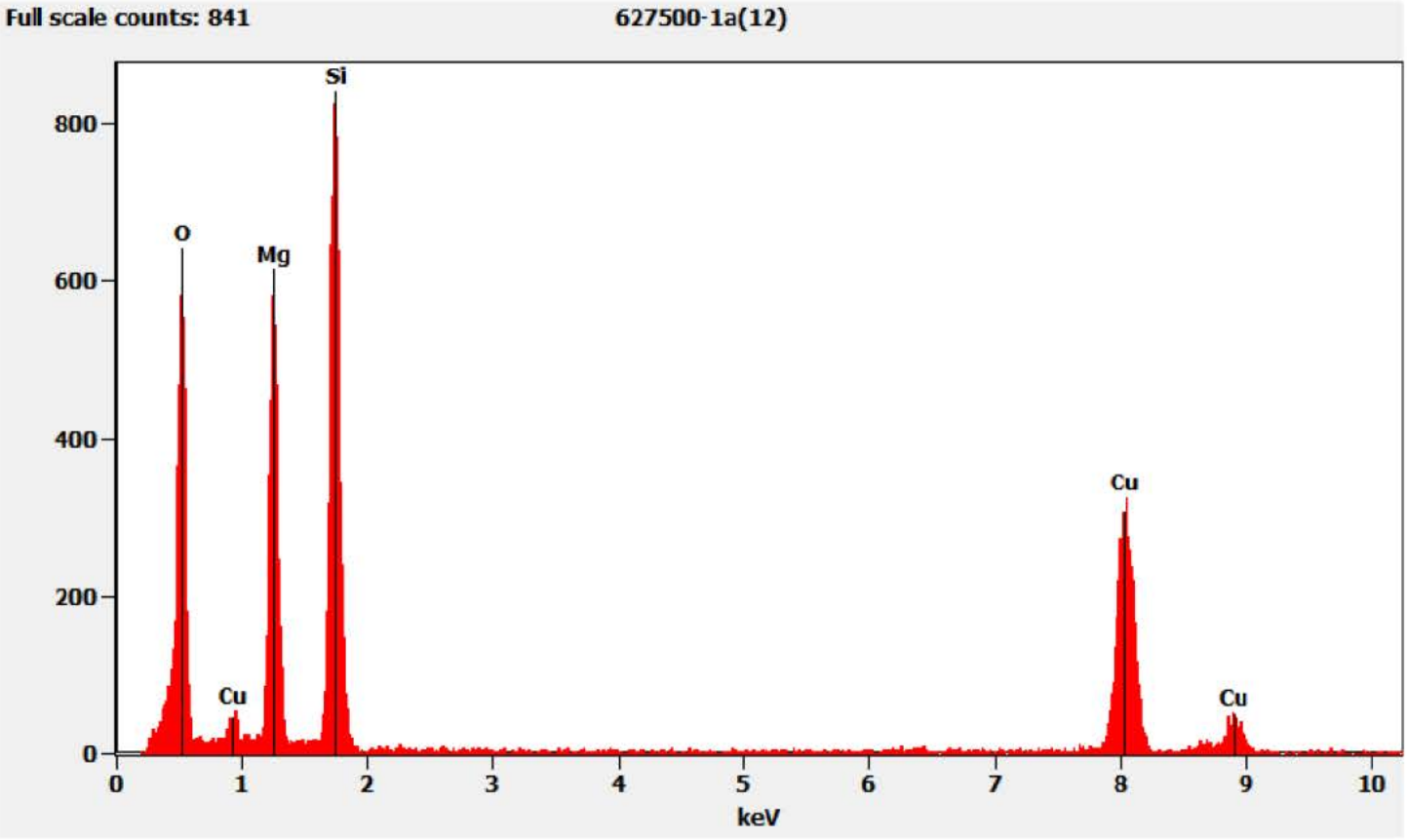


627500 FDA_192.jpg
627500-1a
Talc Ribbon
Cal: 0.002860 µm/pix
16:16 7/29/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Diffraction Pattern from the Talc Ribbon pictured above

Chemistry from the Talc Ribbon pictured above



627500-2A, 2B, 2C/Client Sample: 04272021-2

PLM

All three aliquots of sample 04272021-2 were analyzed by (b)(6) on June 30, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-2A	No Asbestos Detected
627500-2B	No Asbestos Detected
627500-2C	No Asbestos Detected

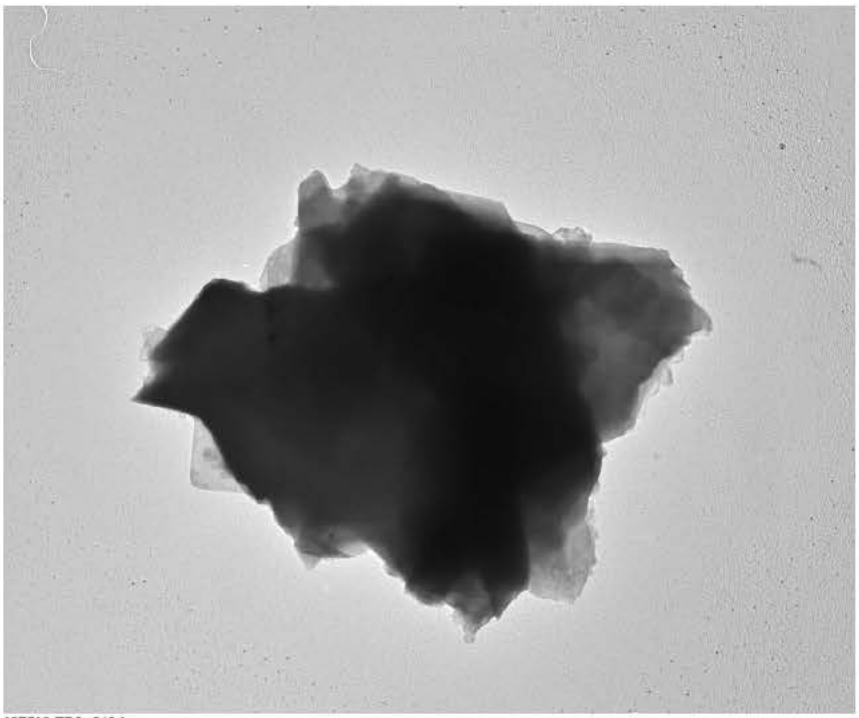
TEM

(b)(6) analyzed aliquot 2A on July 13, 2021. Andreas Saldivar analyzed aliquots 2B and 2C on July 15, 2021. The primary particle observed was mica; talc particles were also observed along with a few particles containing magnesium, aluminum, and silicon. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

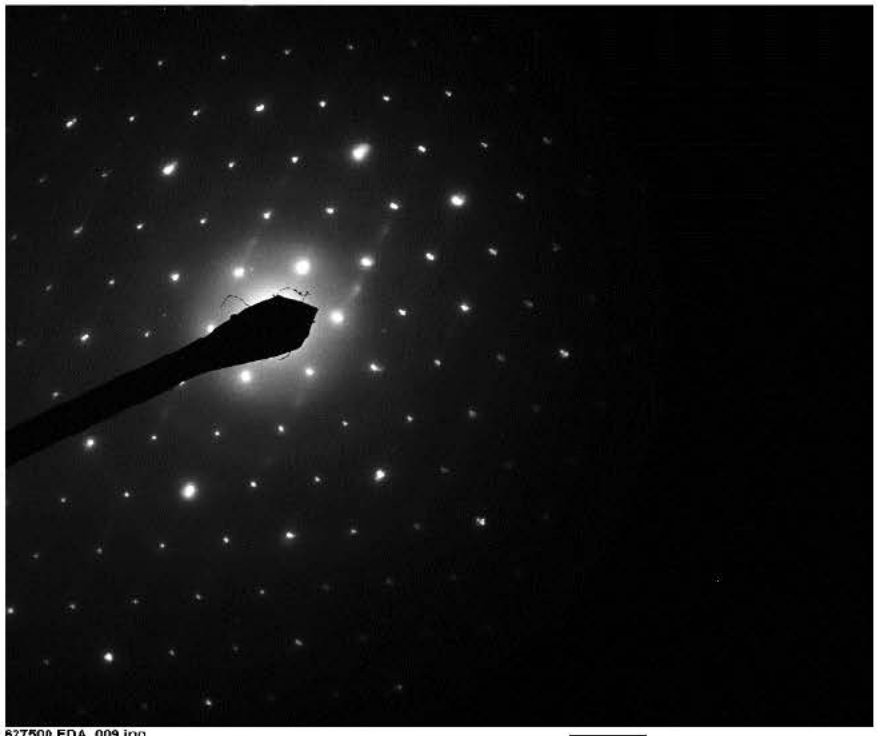
627500-2A	No Asbestos Detected
627500-2B	No Asbestos Detected
627500-2C	No Asbestos Detected

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.

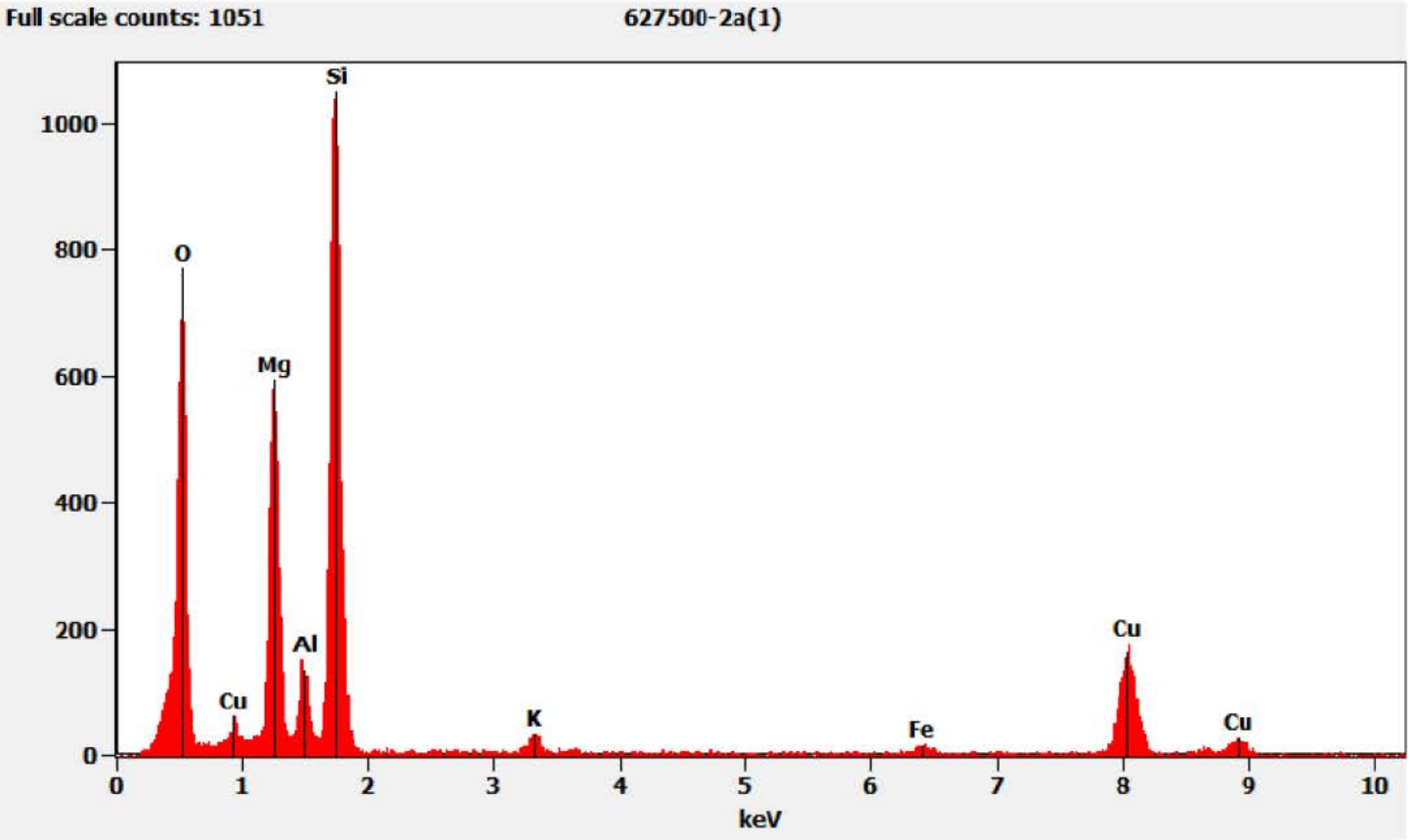
627500-2A, Mica Particle



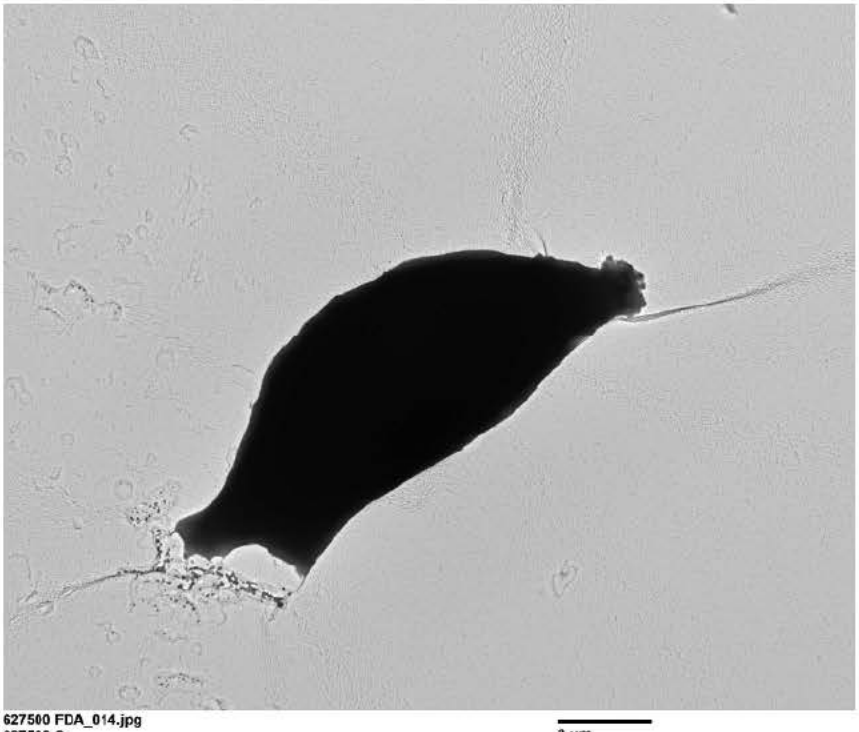
Hexagonal Diffraction Pattern from the Mica Particle pictured above



Chemistry from the Mica Particle pictured above



627500-2A. Talc Particle



627500 FDA_014.jpg
627500-2a
Talc Particle
Cal: 0.007349 µm/pix
17:16 7/13/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.30, No Sharpening, Normal Contrast

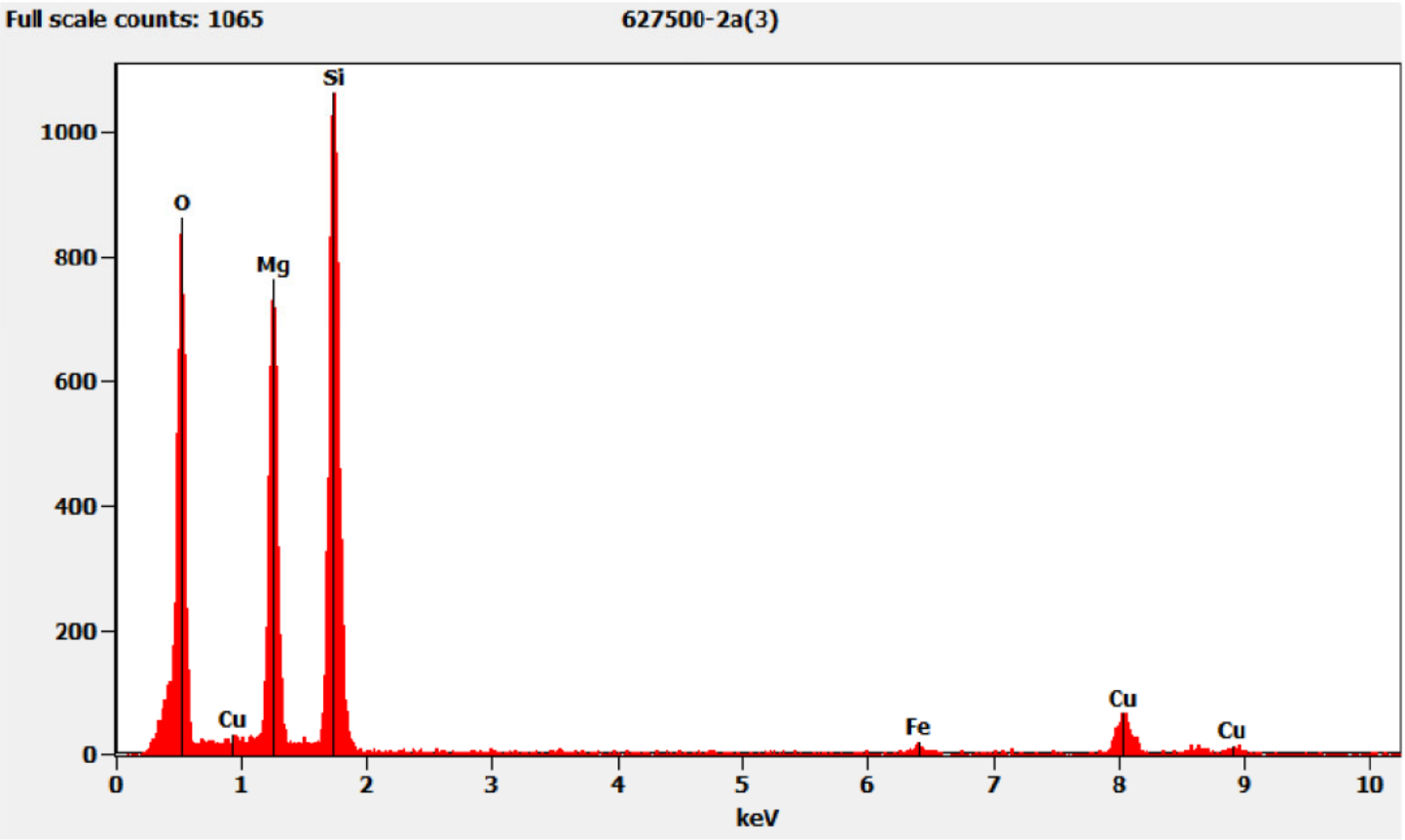
2 µm
HV=100kV
Direct Mag: 1400 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Particle pictured above

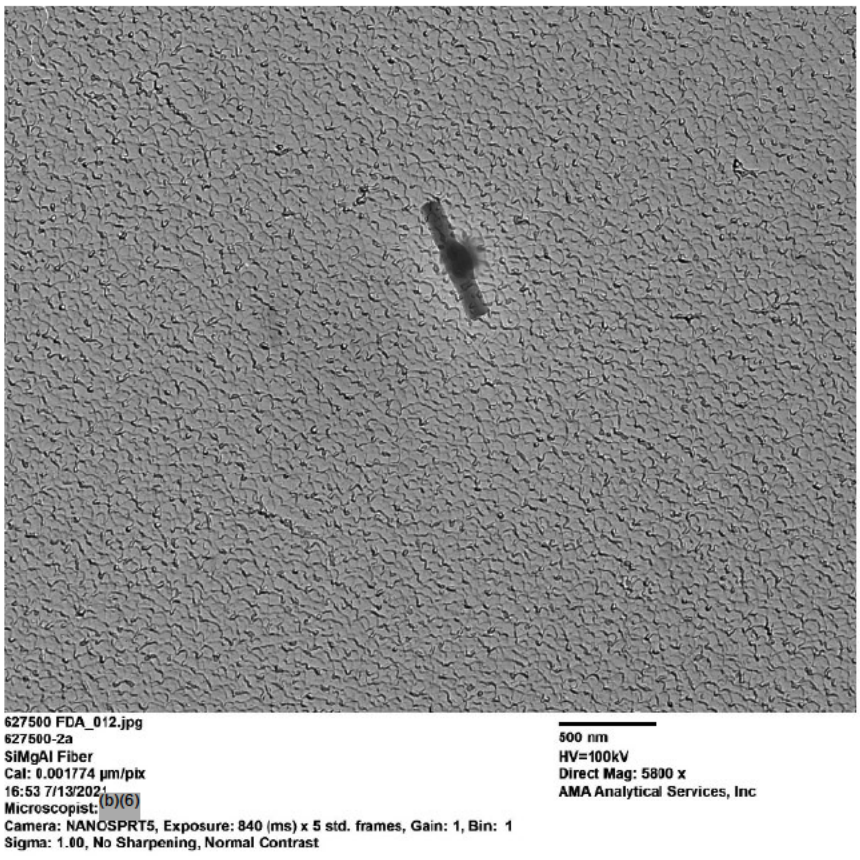
627500 FDA_013.jpg
627500-2a
Talc Particle Dif
17:14 7/13/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.30, No Sharpening, Normal Contrast

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

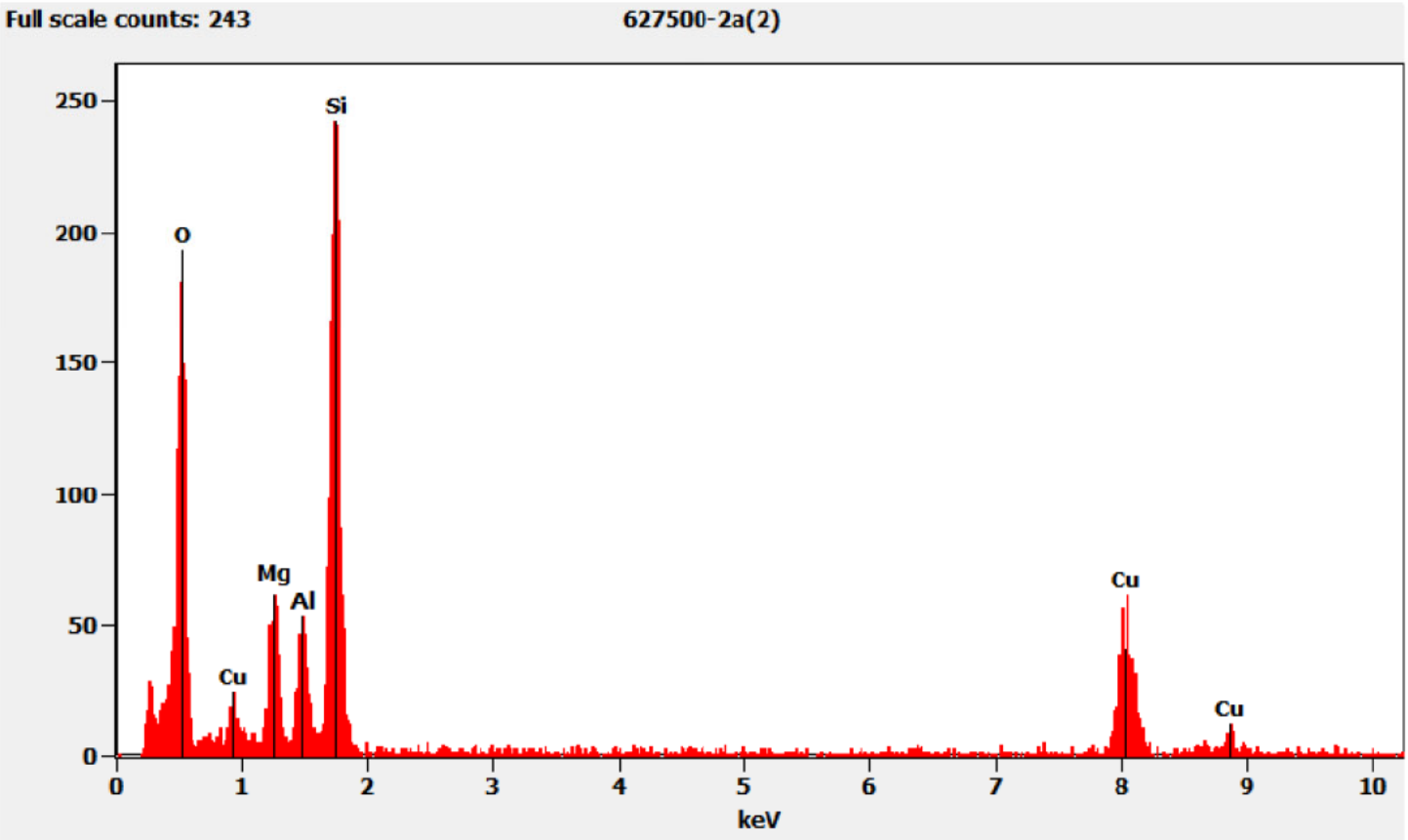
Chemistry from the Talc Particle pictured above



627500-2A, Fiber containing Magnesium, Aluminum and Silicon



Chemistry from the Fiber containing Magnesium, Aluminum and Silicon pictured above



627500-3A, 3B, 3C/Client Sample: 04272021-3

PLM

All three aliquots of sample 04272021-3 were analyzed by (b)(6) on June 30, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-3A	No Asbestos Detected
627500-3B	No Asbestos Detected
627500-3C	No Asbestos Detected

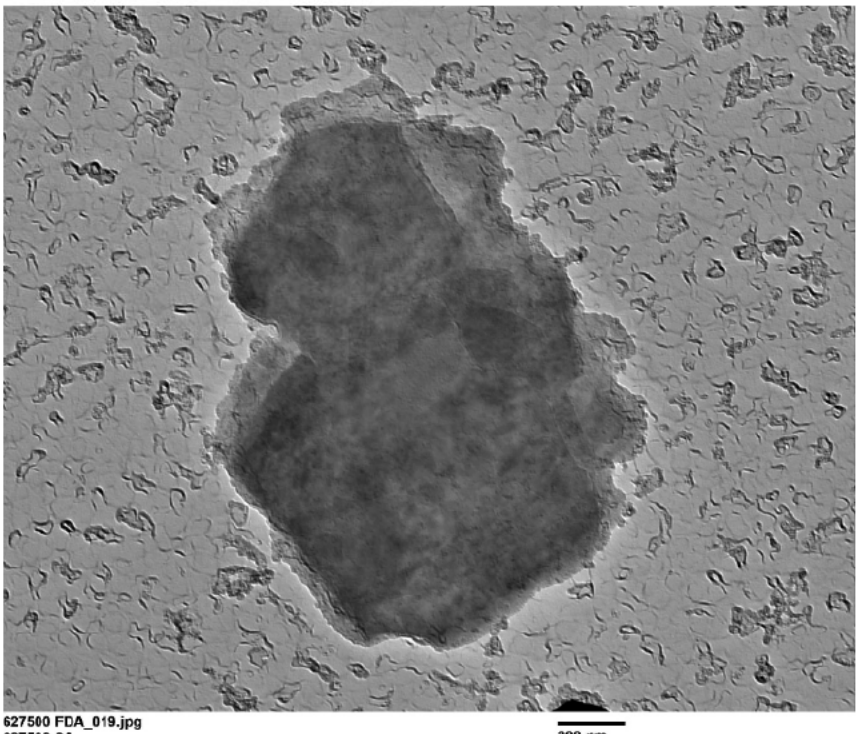
TEM

(b)(6) analyzed aliquot 3A on July 16, 2021. Andreas Saldivar analyzed aliquot 3B on July 16, 2021 and (b)(6) analyzed 3C on July 19, 2021. The primary particle observed was talc; abundant iron particles were also observed along with some titanium particles and a few 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.

627500-3A	No Asbestos Detected
627500-3B	No Asbestos Detected
627500-3C	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.

627500-3A, Talc Particle



627500 FDA_019.jpg
627500-3A
Talc Particle
Cal: 0.001030 µm/pix
15:05 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

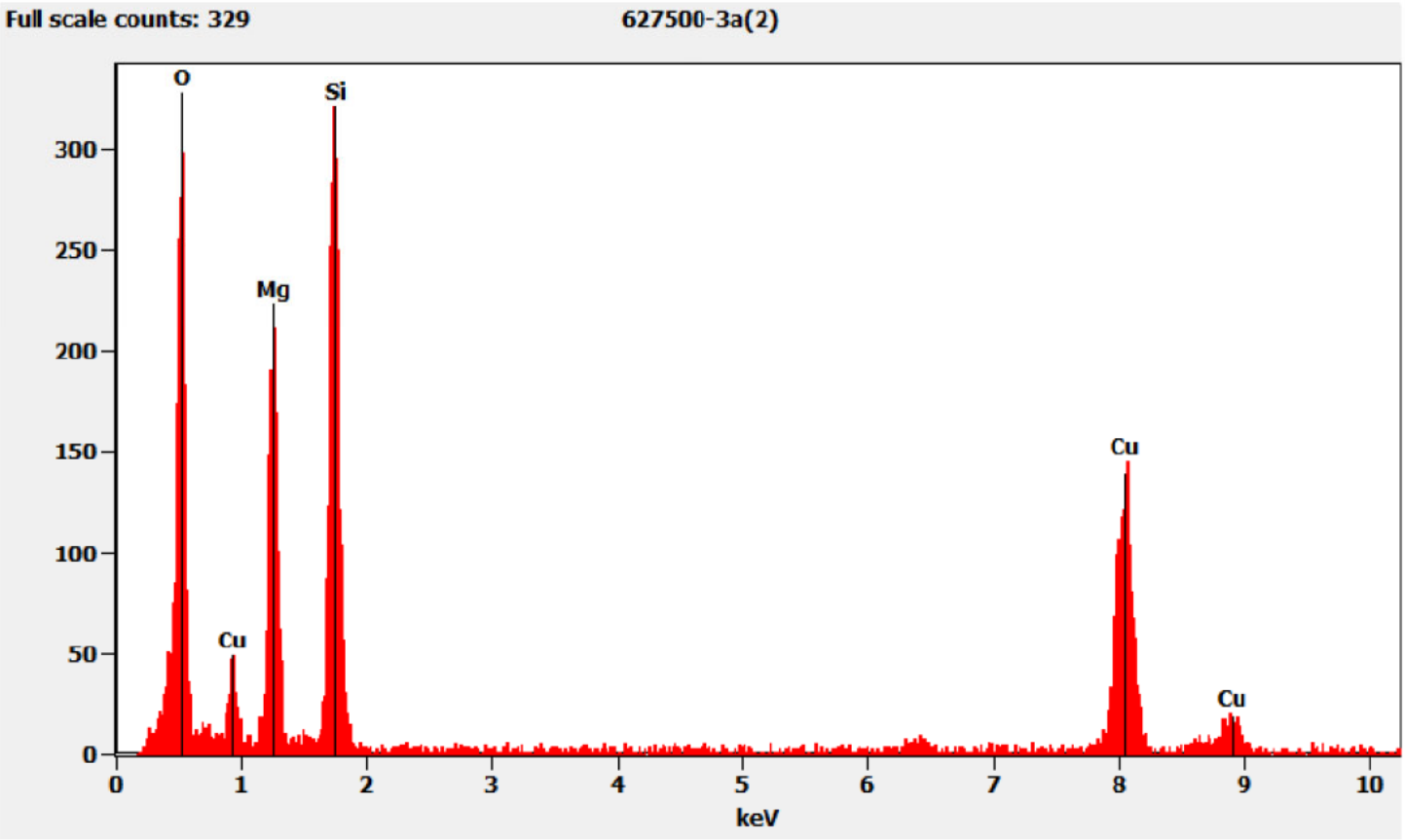
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Particle pictured above

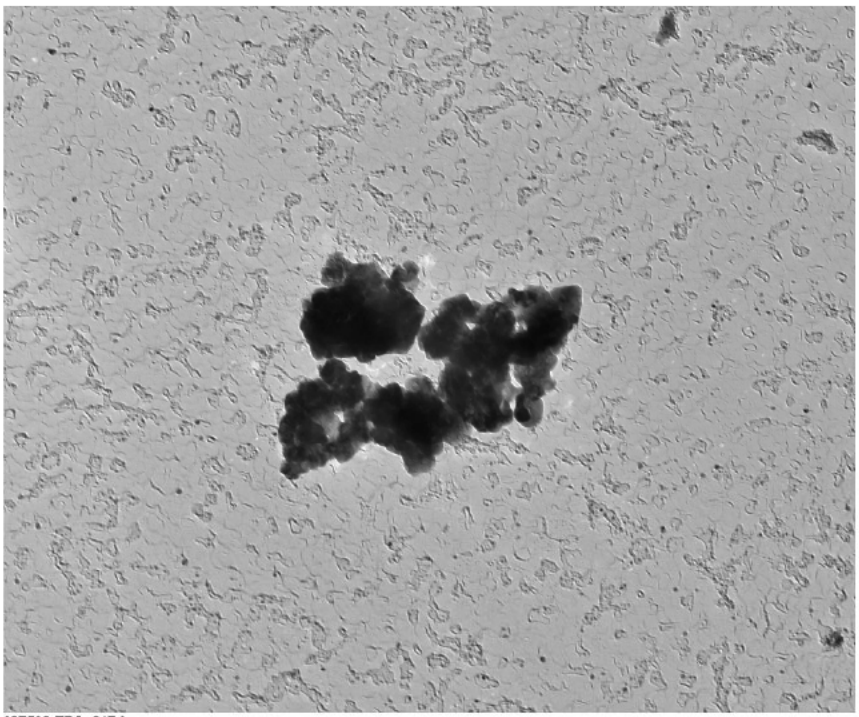
627500 FDA_020.jpg
627500-3A
Talc Particle
15:06 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

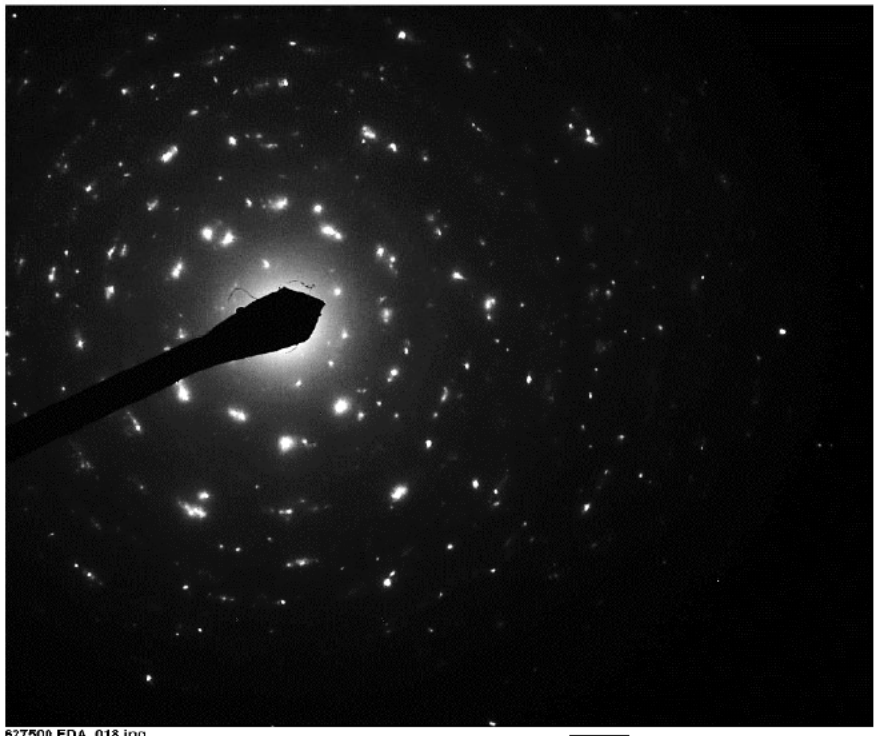
Chemistry from the Talc Particle pictured above



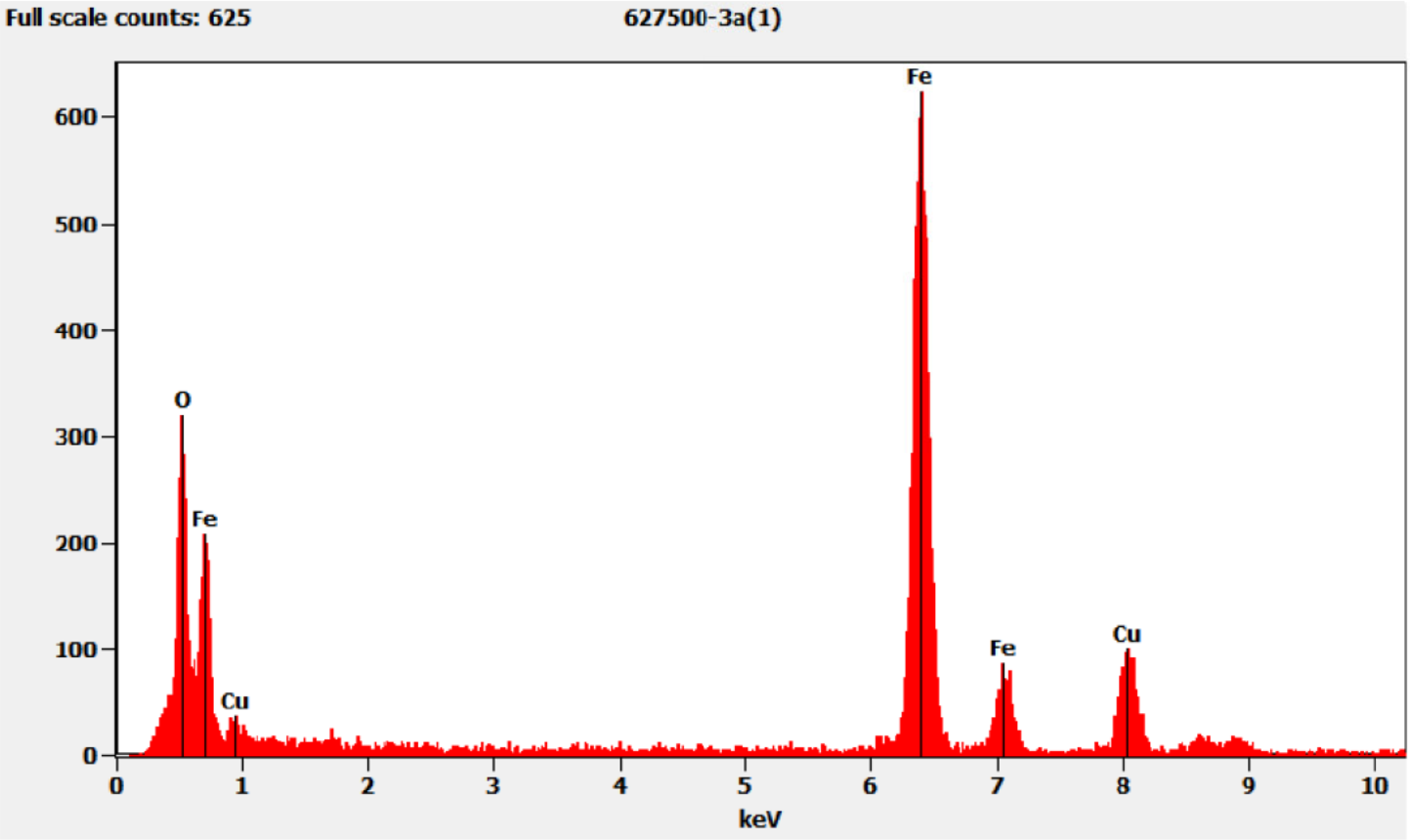
627500-3A, Iron Particles



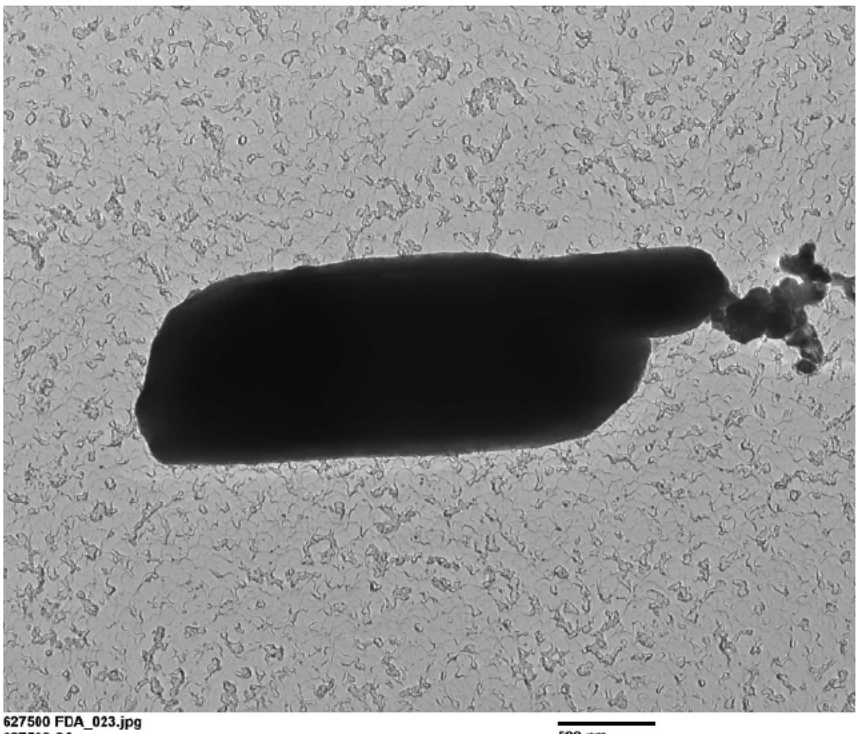
Diffraction Pattern from the Iron Particles pictured above



Chemistry from the Iron Particles pictured above



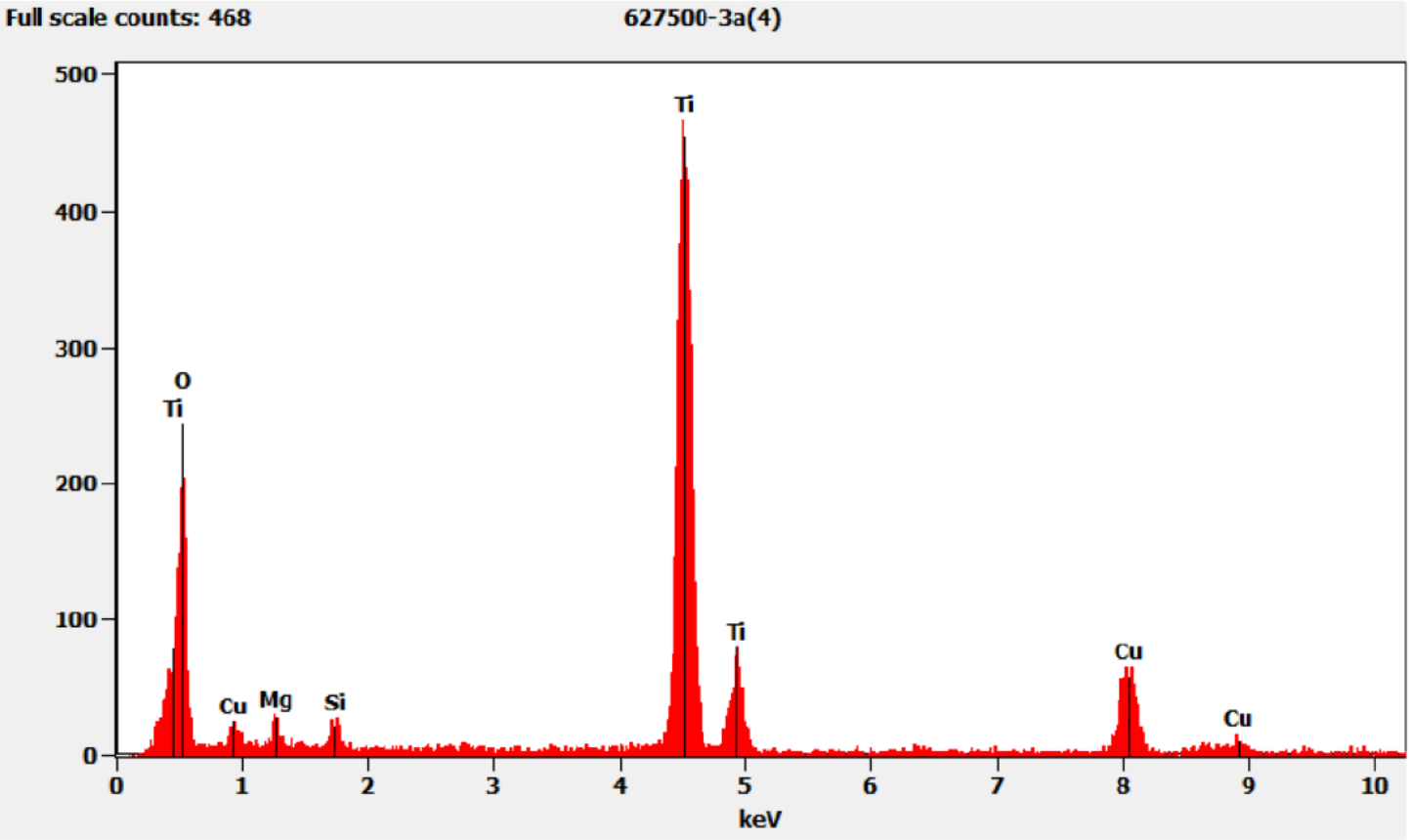
627500-3A, Titanium Particle



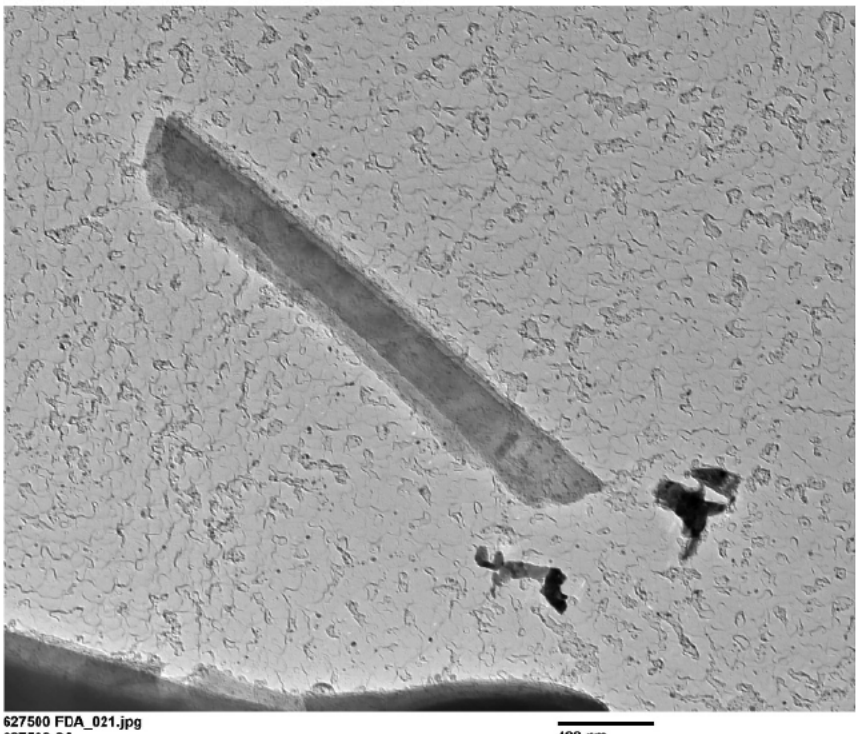
627500 FDA_023.jpg
627500-3A
Ti Particle
Cal: 0.001775 µm/pix
15:18 7/16/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Titanium Particle pictured above



627500-3A, Talc Fiber



627500 FDA_021.jpg
627500-3A
Talc Fiber
Cal: 0.001430 µm/pix
15:12 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

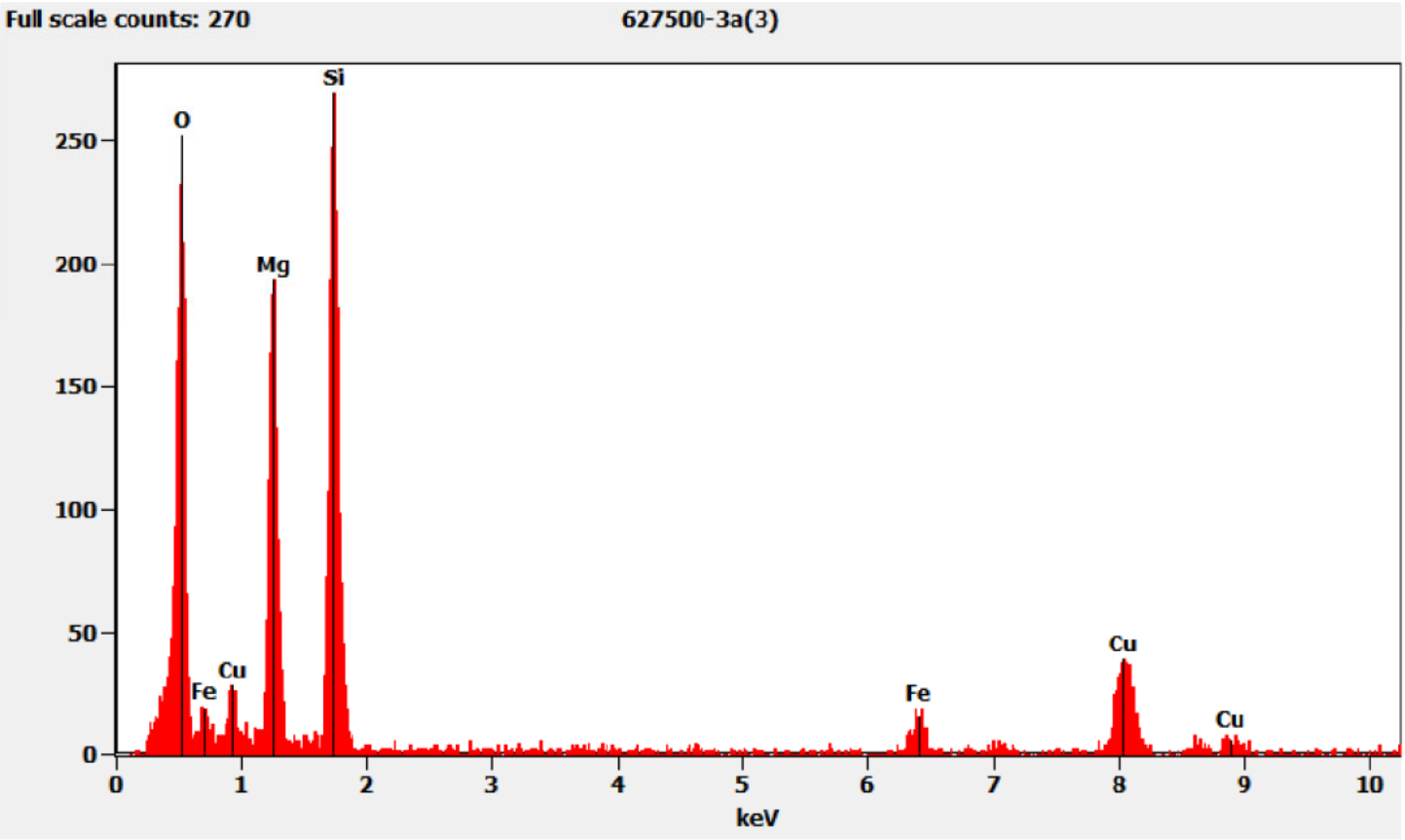
400 nm
HV=100kV
Direct Mag: 7200 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Talc Fiber pictured above

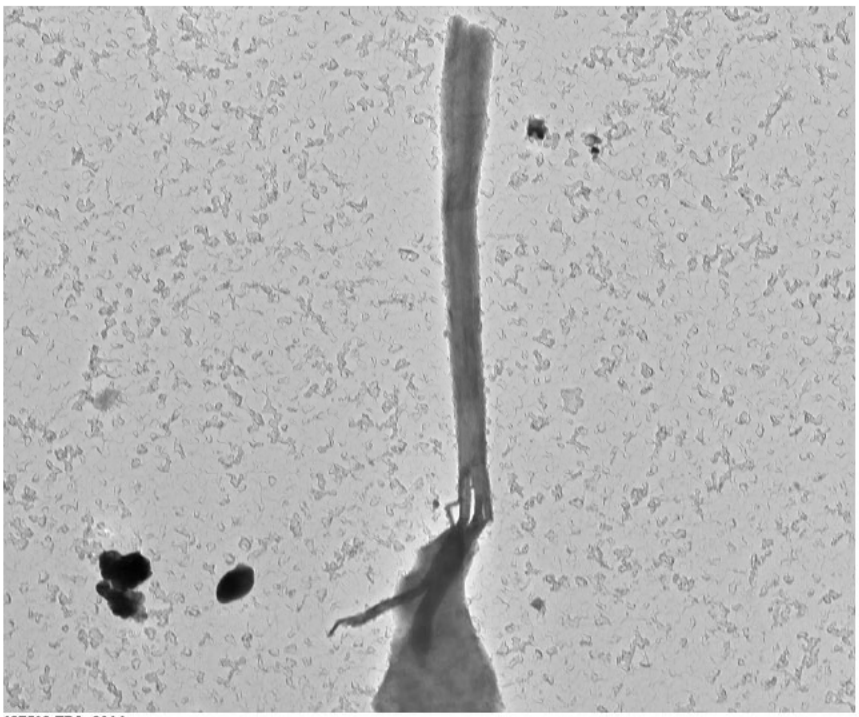
627500 FDA_022.jpg
627500-3A
Talc Fiber
15:13 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



627500-3B, Talc Ribbon

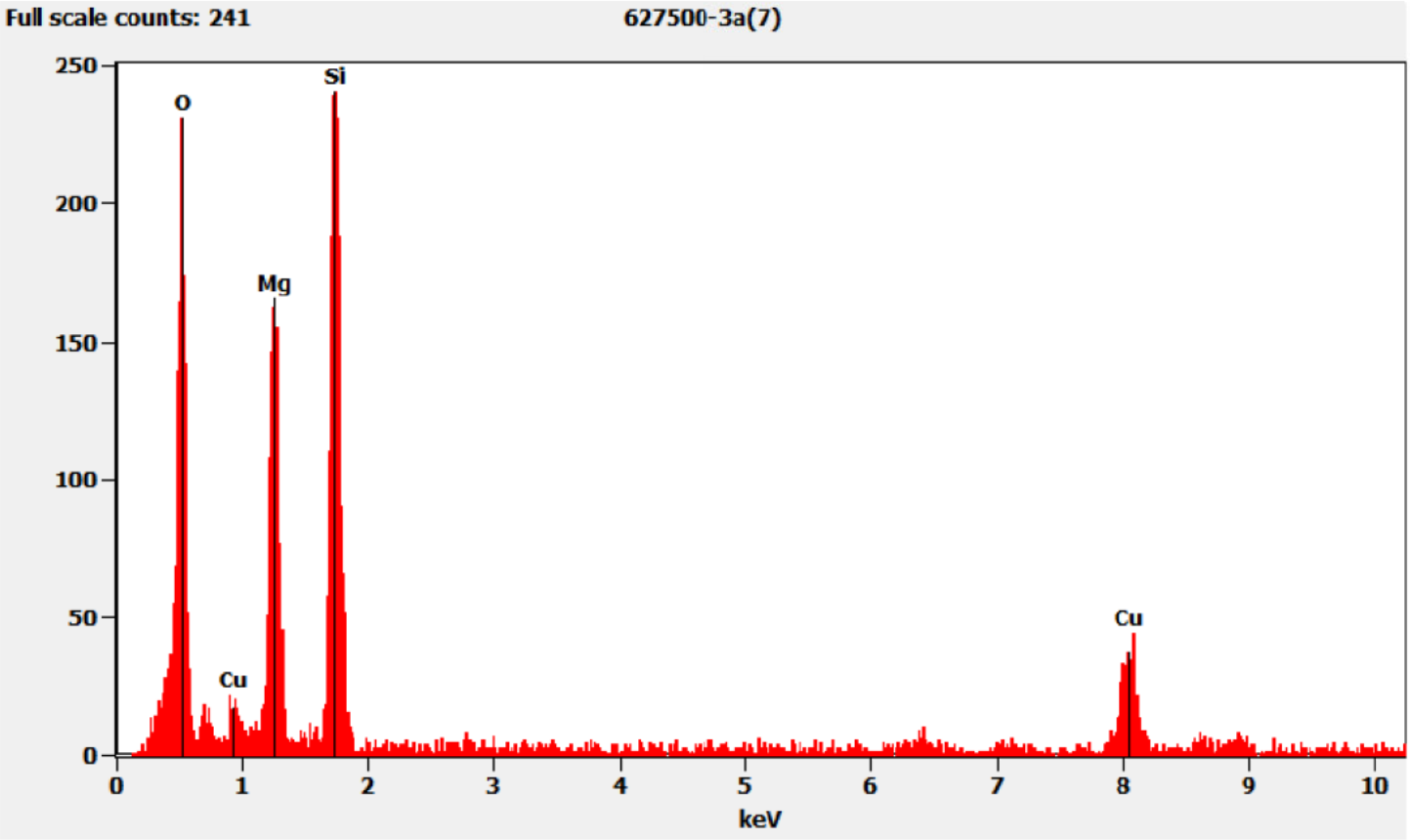


627500 FDA_024.jpg
627500-3A
Talc Ribbon
Cal: 0.002145 µm/pix
15:32 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Diffraction Pattern from the Talc Ribbon pictured above

Chemistry from the Talc Ribbon pictured above



627500-4A, 4B, 4C/Client Sample: 04272021-4

PLM

All three aliquots of sample 04272021-4 were analyzed by (b)(6) on June 30, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-4A	No Asbestos Detected
627500-4B	No Asbestos Detected
627500-4C	No Asbestos Detected

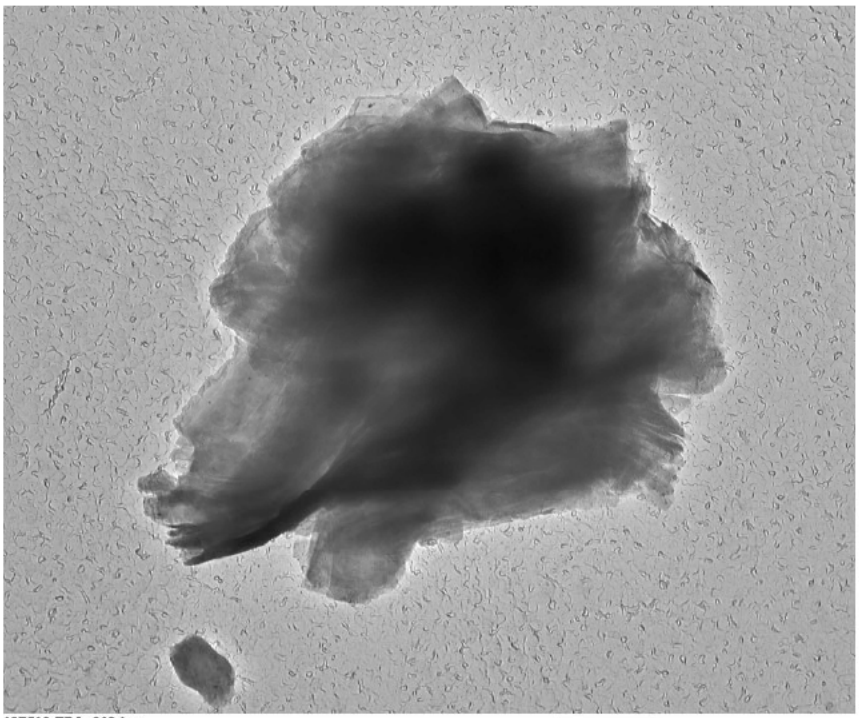
TEM

(b)(6) analyzed aliquot 4A on July 16, 2021. (b)(6) analyzed aliquot 4B on July 19, 2021 and aliquot 4C on July 20, 2021. The primary particle observed was talc; aluminum particles were also observed along with particles containing magnesium, aluminum, and silicon and a few 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.

627500-4A	No Asbestos Detected
627500-4B	No Asbestos Detected
627500-4C	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.

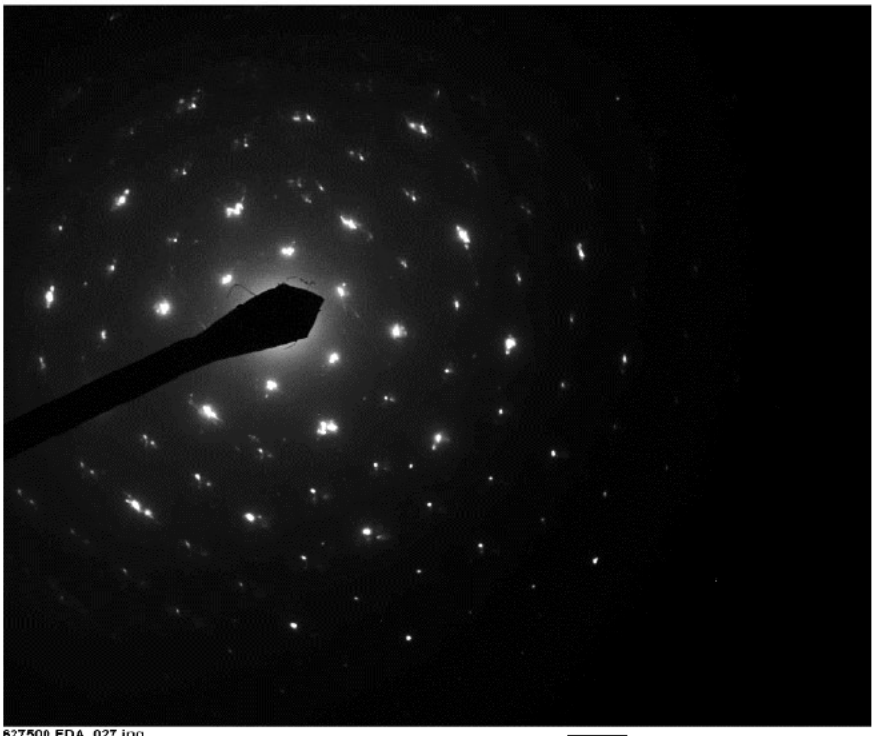
627500-4A, Talc Particle



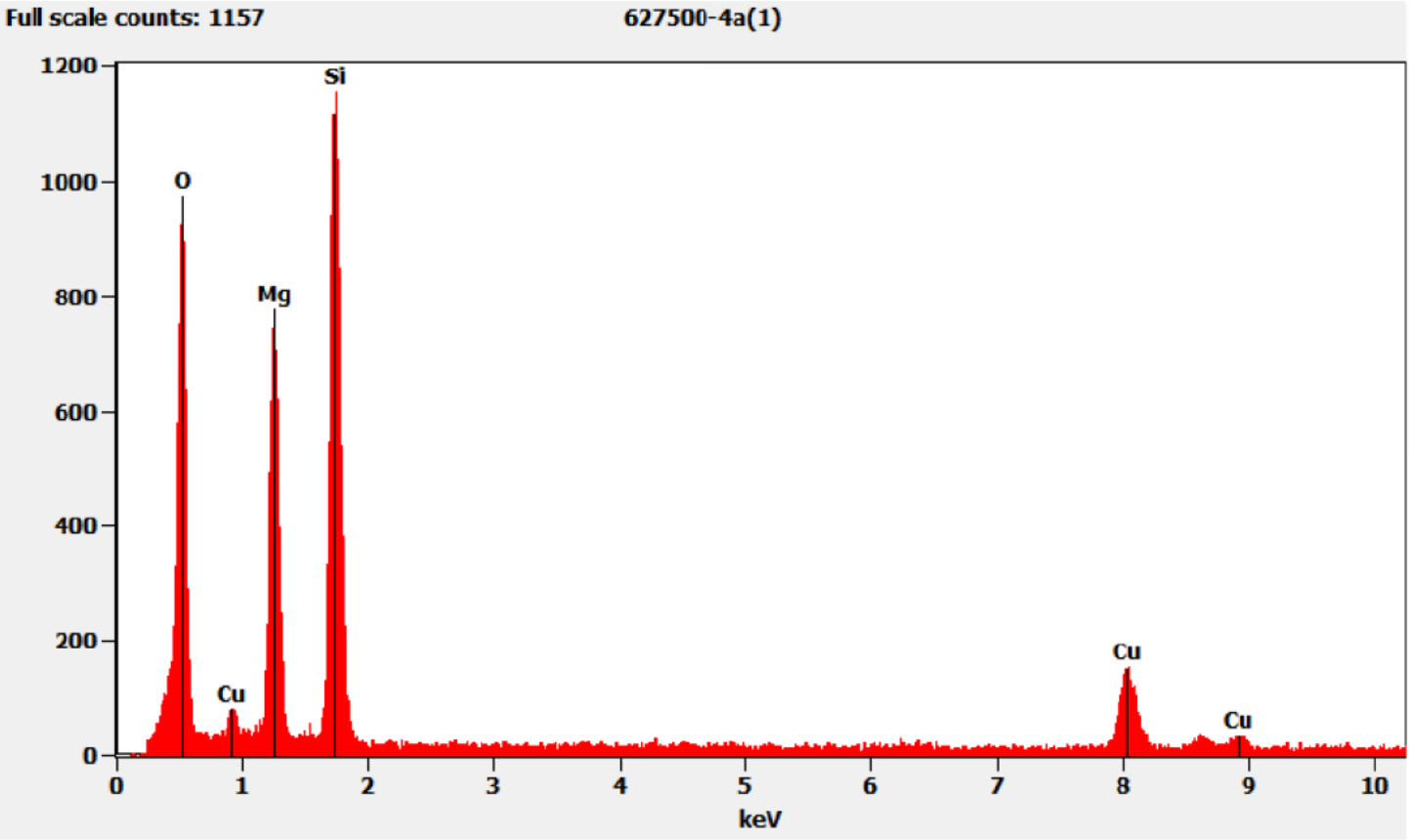
627500 FDA_028.jpg
627500-4a
Talc Particle
Cal: 0.002145 µm/pix
16:50 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

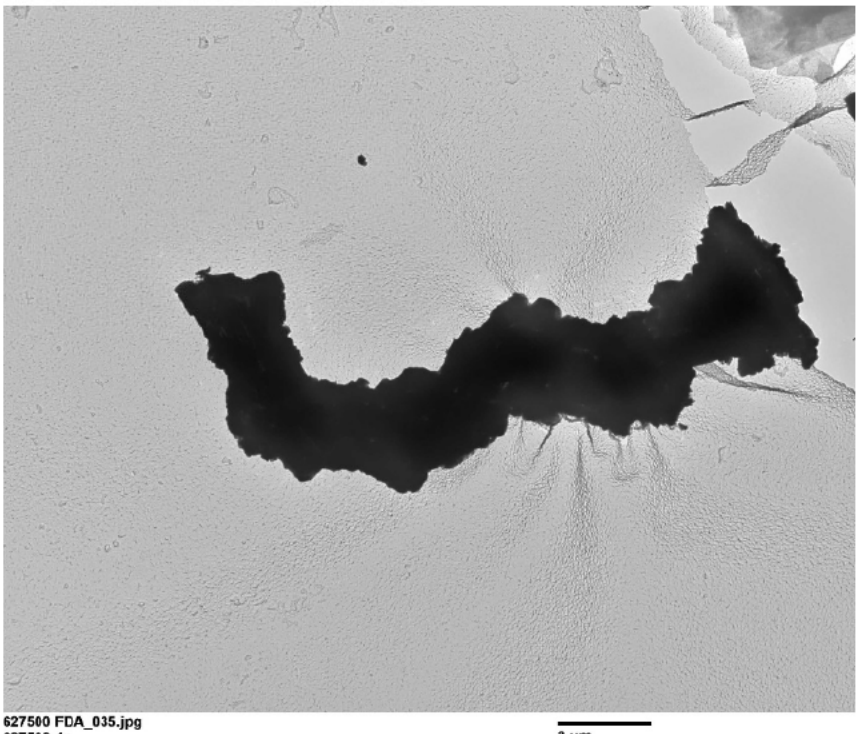
Hexagonal Diffraction Pattern from the Talc Particle pictured above



Chemistry from the Talc Particle pictured above



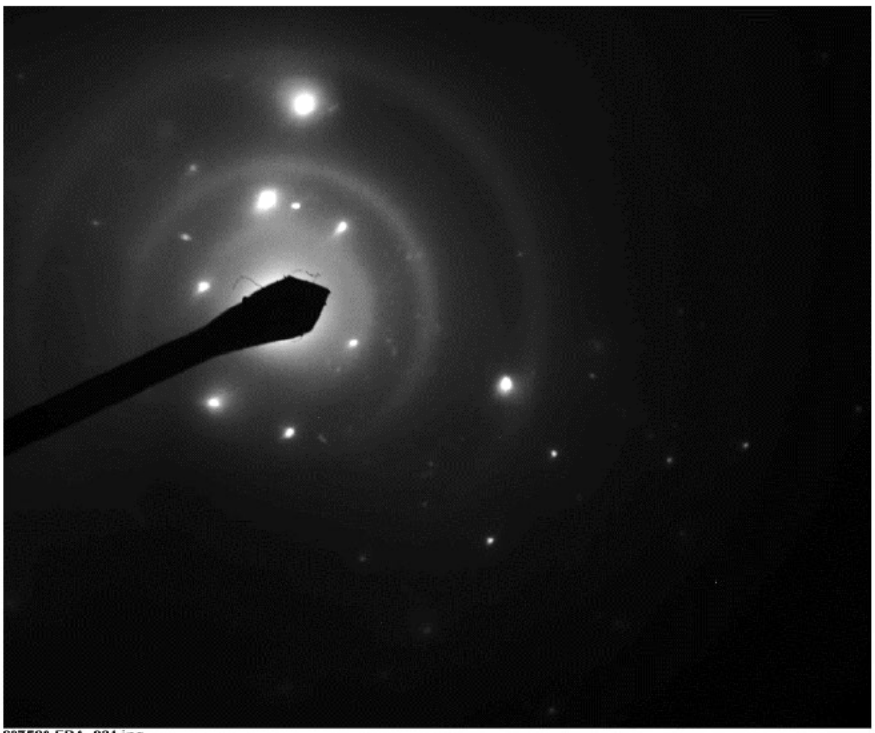
627500-4A, Aluminum Particle



627500 FDA_035.jpg
627500-4a
Al Particle
Cal: 0.007355 µm/pix
17:45 7/16/2021
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

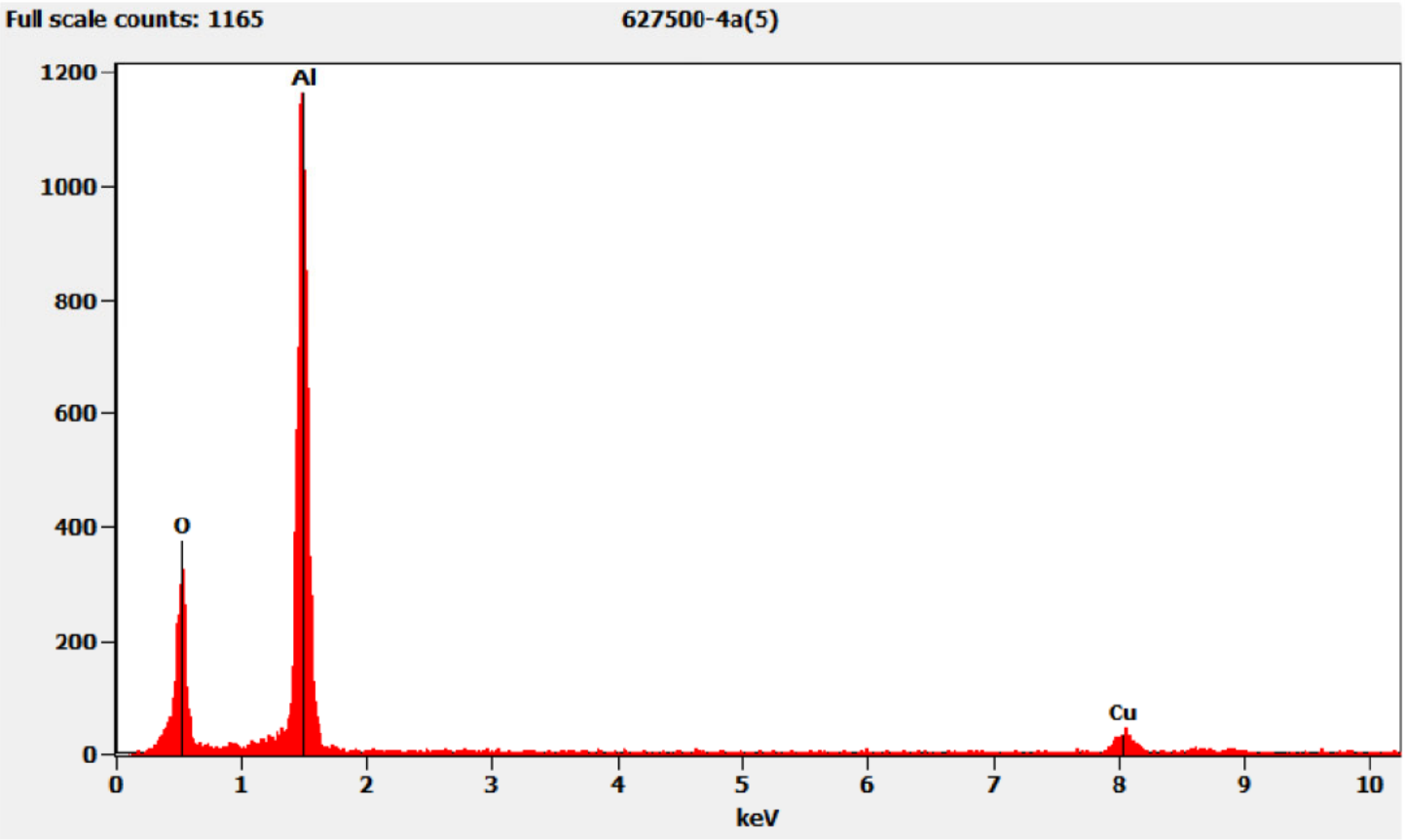
Diffraction Pattern from the Aluminum Particle pictured above



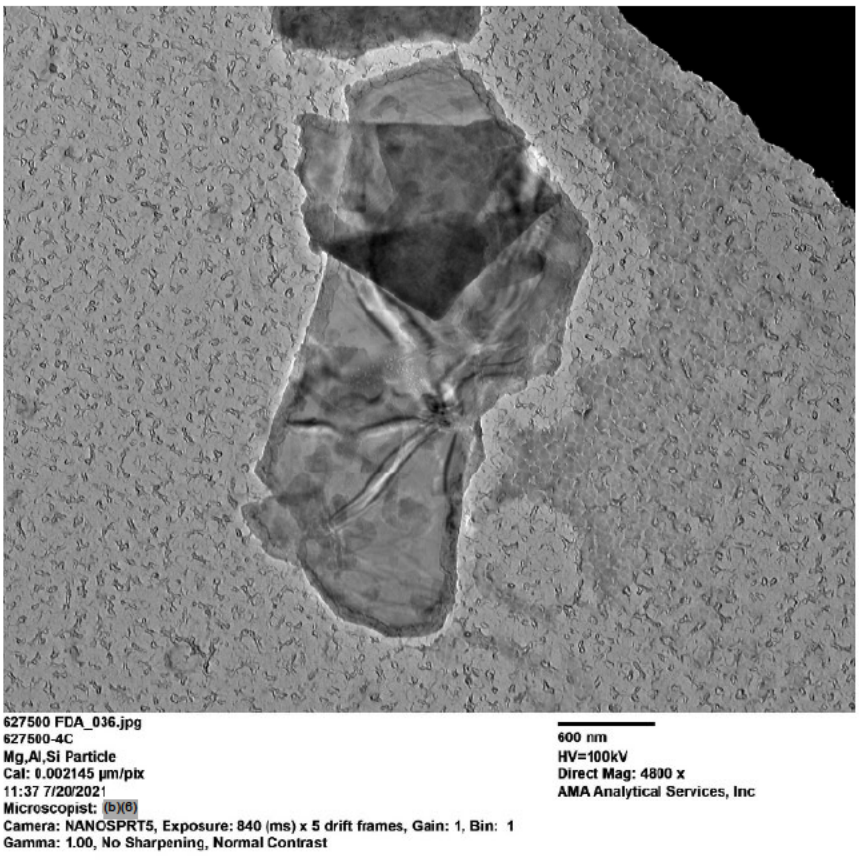
627500 FDA_034.jpg
627500-4a
Al Particle Dif
17:44 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

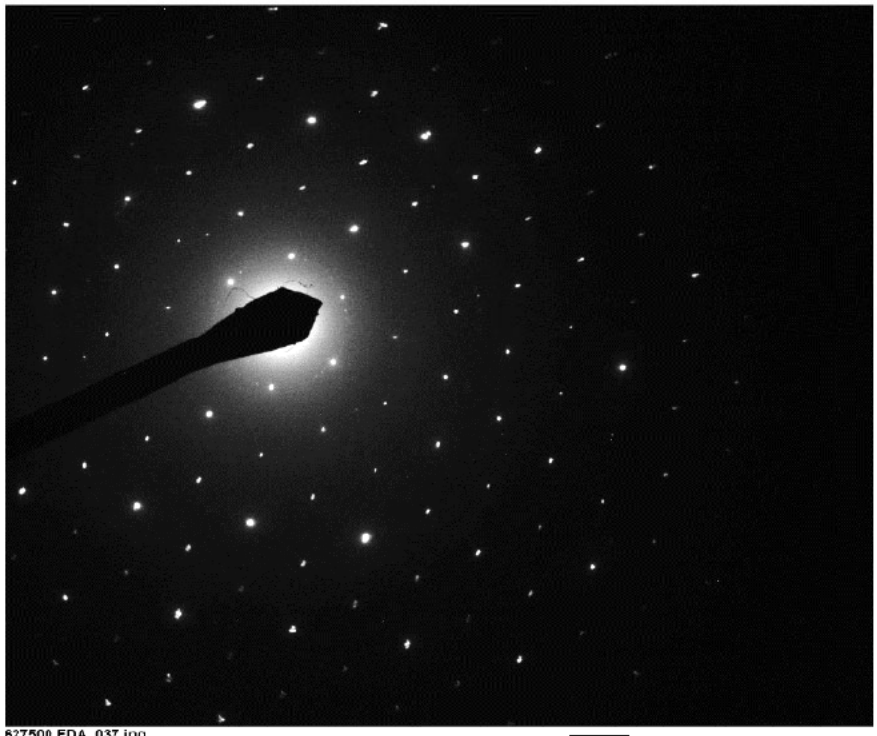
Chemistry from the Aluminum Particle pictured above



627500-4C, Particle containing Magnesium, Aluminum, and Silicon



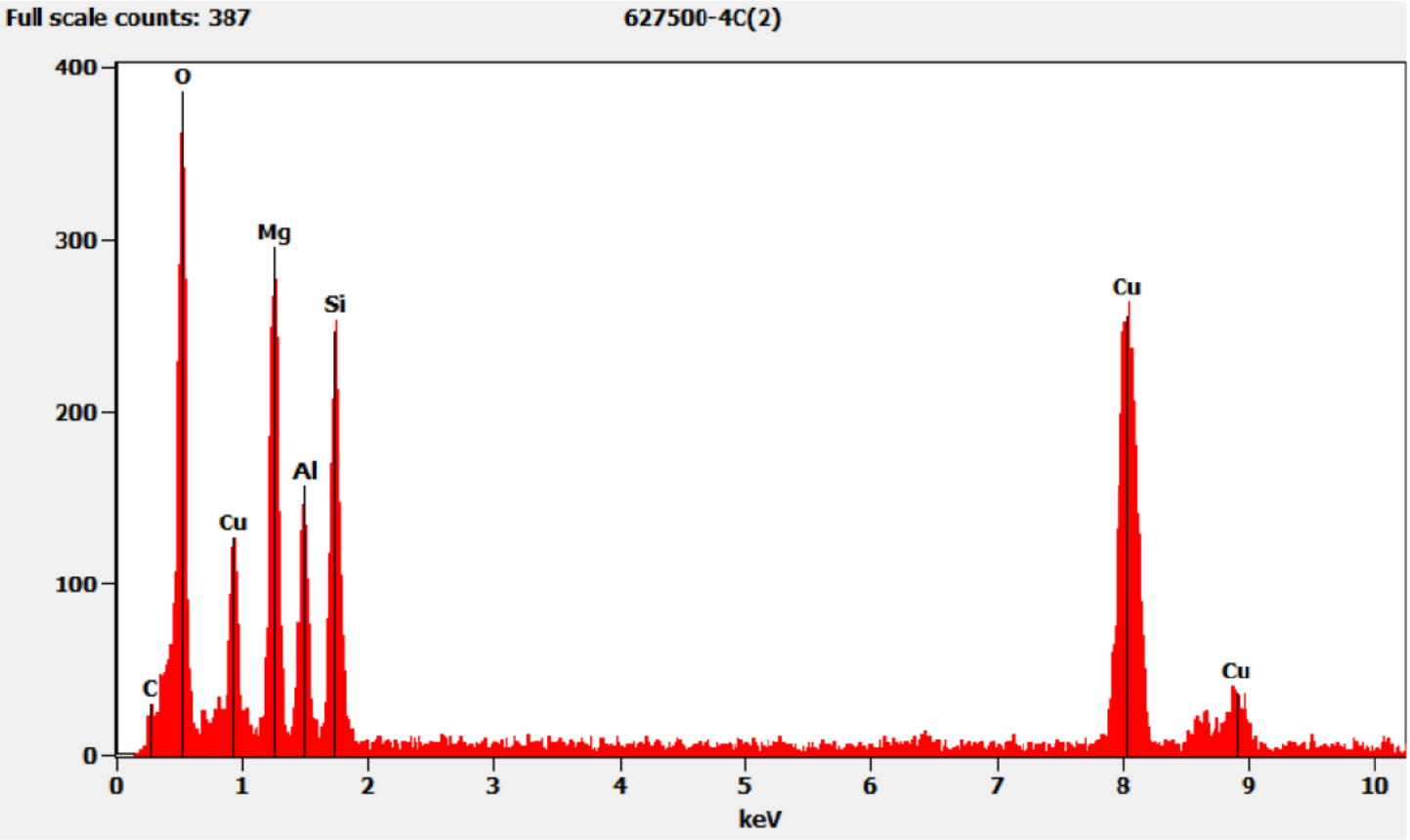
Hexagonal Diffraction Pattern from the Particle containing Magnesium, Aluminum, and Silicon pictured above



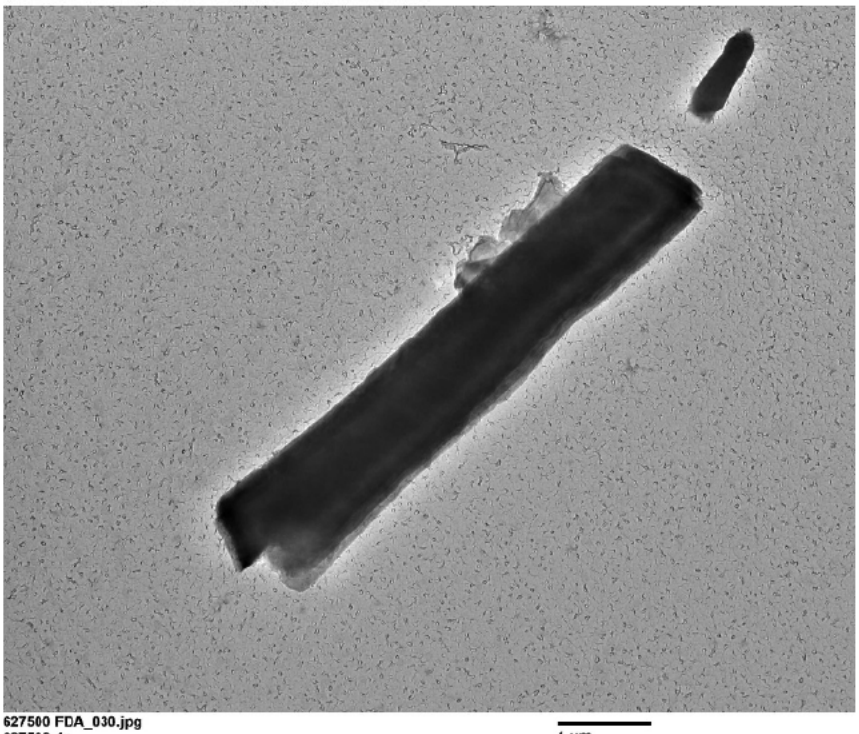
627500 FDA_037.jpg
627500-4C
Mg,Al,Si Particle
11:39 7/20/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Particle containing Magnesium, Aluminum, and Silicon pictured above



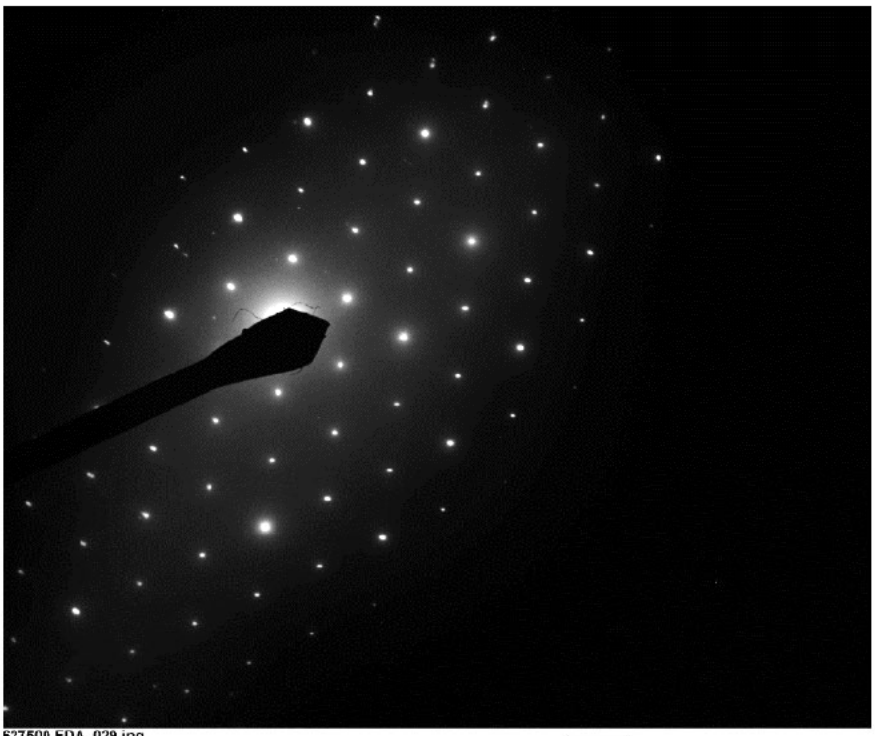
627500-4A, Talc Fiber



627500 FDA_030.jpg
627500-4a
Talc Fiber
Cal: 0.003702 µm/pix
16:54 7/16/2021
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

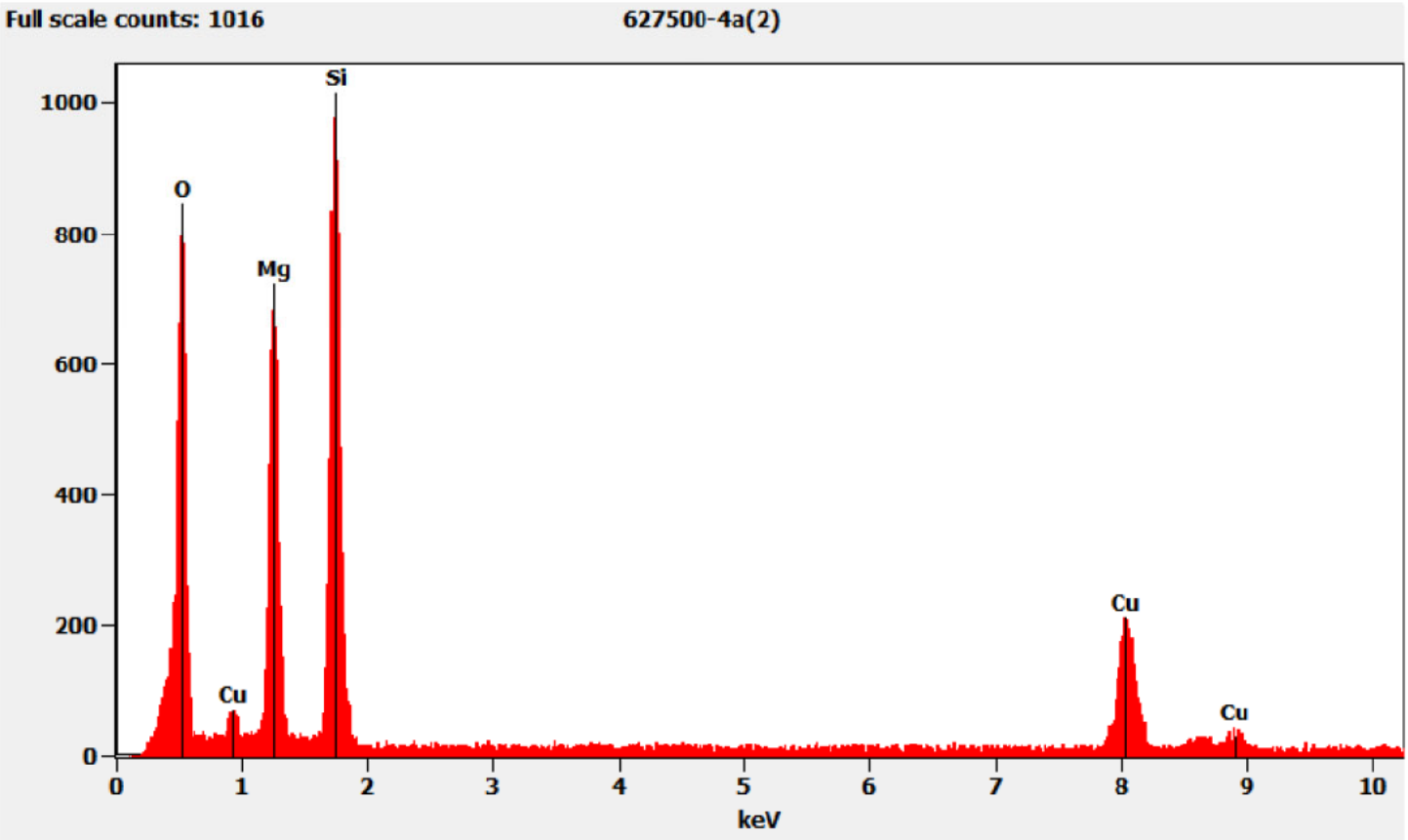
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



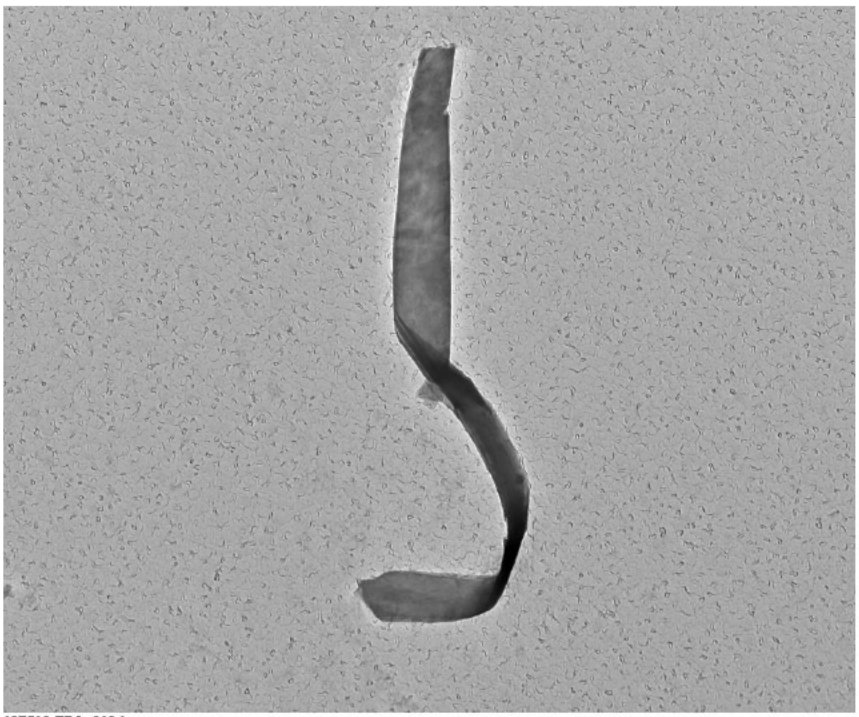
627500 FDA_029.jpg
627500-4a
Talc Fiber Dif
16:53 7/16/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



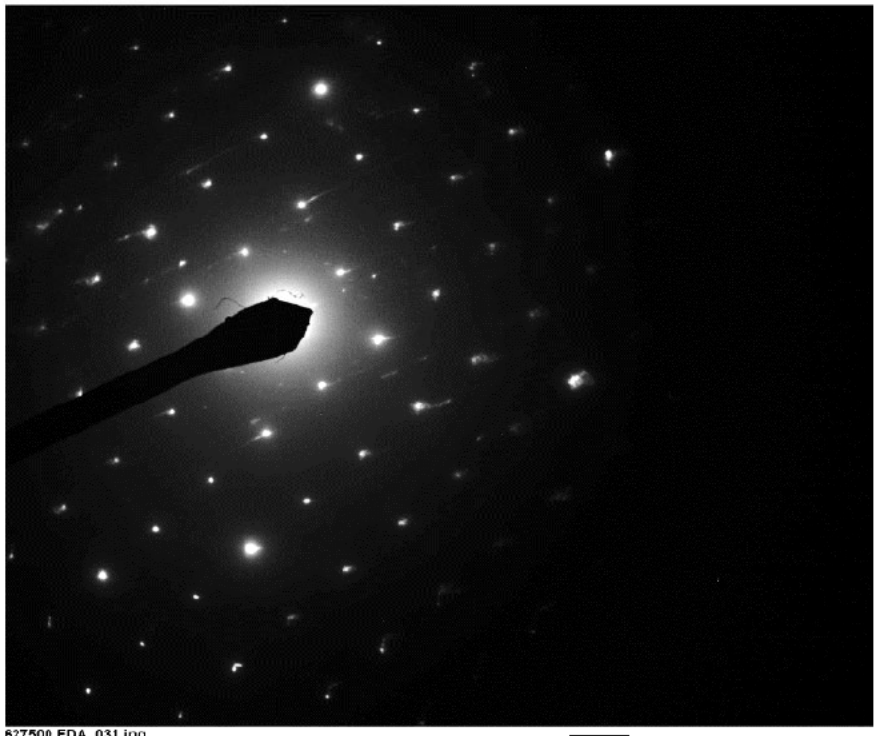
627500-4A, Talc Ribbon



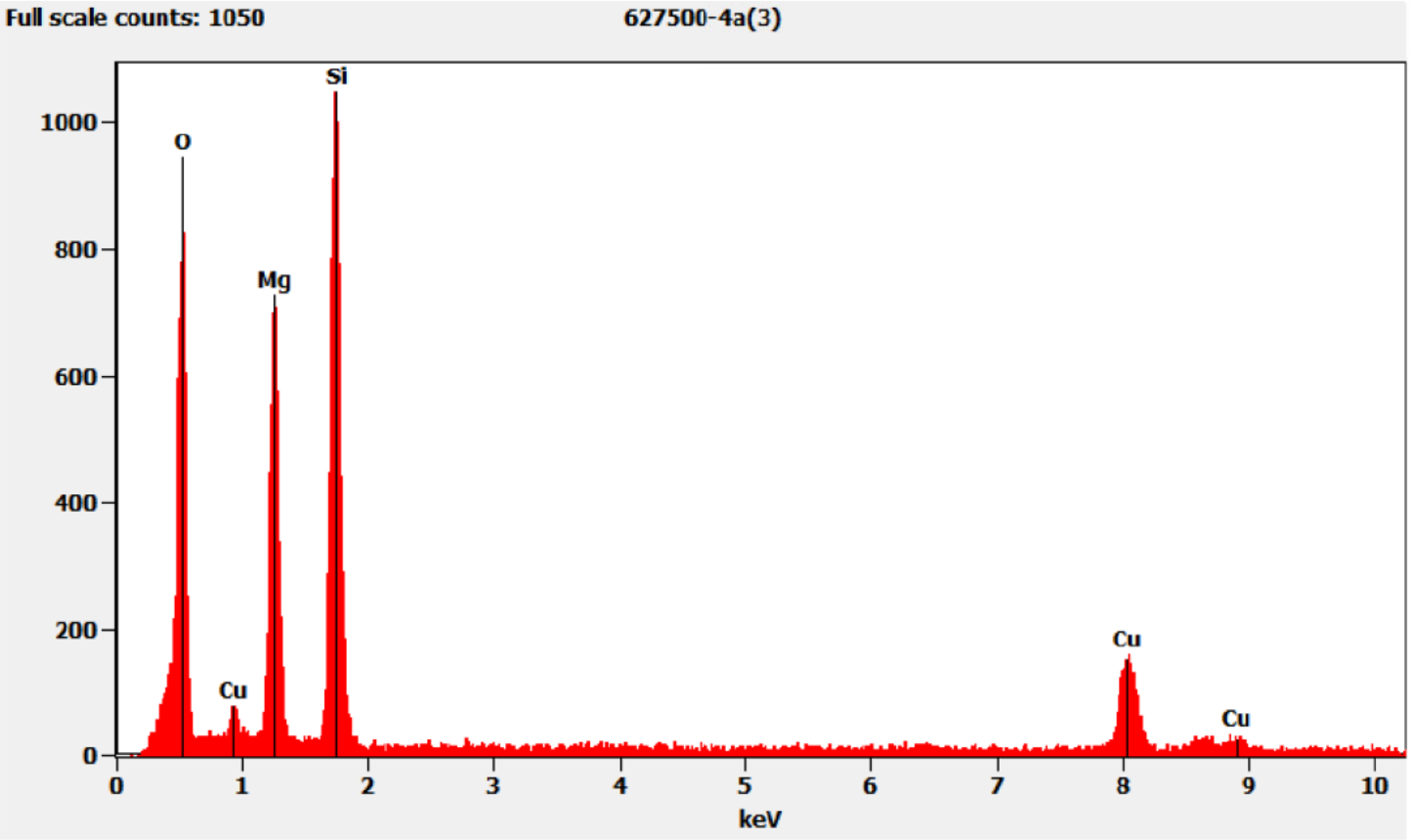
627500 FDA_033.jpg
627500-4a
Talc Ribbon
Cal: 0.002860 µm/pix
16:59 7/16/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Diffraction Pattern from the Talc Ribbon pictured above



Chemistry from the Talc Ribbon pictured above



627500-5A, 5B, 5C/Client Sample: 04272021-5

PLM

All three aliquots of sample 04272021-5 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-5A	No Asbestos Detected
627500-5B	No Asbestos Detected
627500-5C	No Asbestos Detected

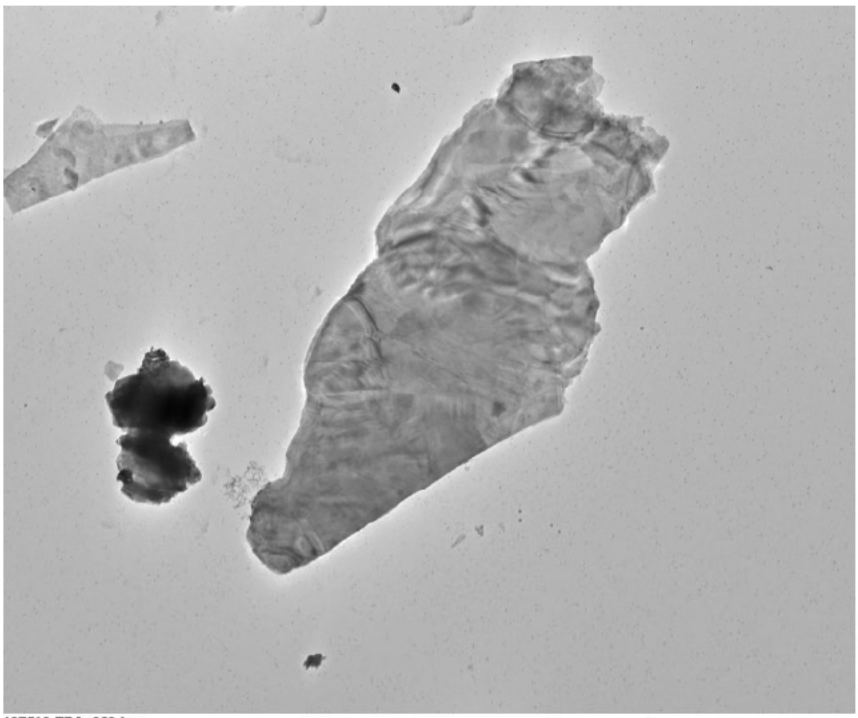
TEM

(b)(6) analyzed aliquot 5A on July 22, 2021. Andreas Saldivar analyzed aliquots 5B and 5C on July 22, 2021. The primary particle observed was mica; abundant talc and iron particles were also observed along with titanium particles, particles containing aluminum and silicon, and a few 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.

627500-5A	No Asbestos Detected
627500-5B	No Asbestos Detected
627500-5C	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.

627500-5A, Mica Particle with Iron



627500 FDA_050.jpg
627500-5a
Mica Particle w/Fe
Cal: 0.003702 µm/pix
11:19 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

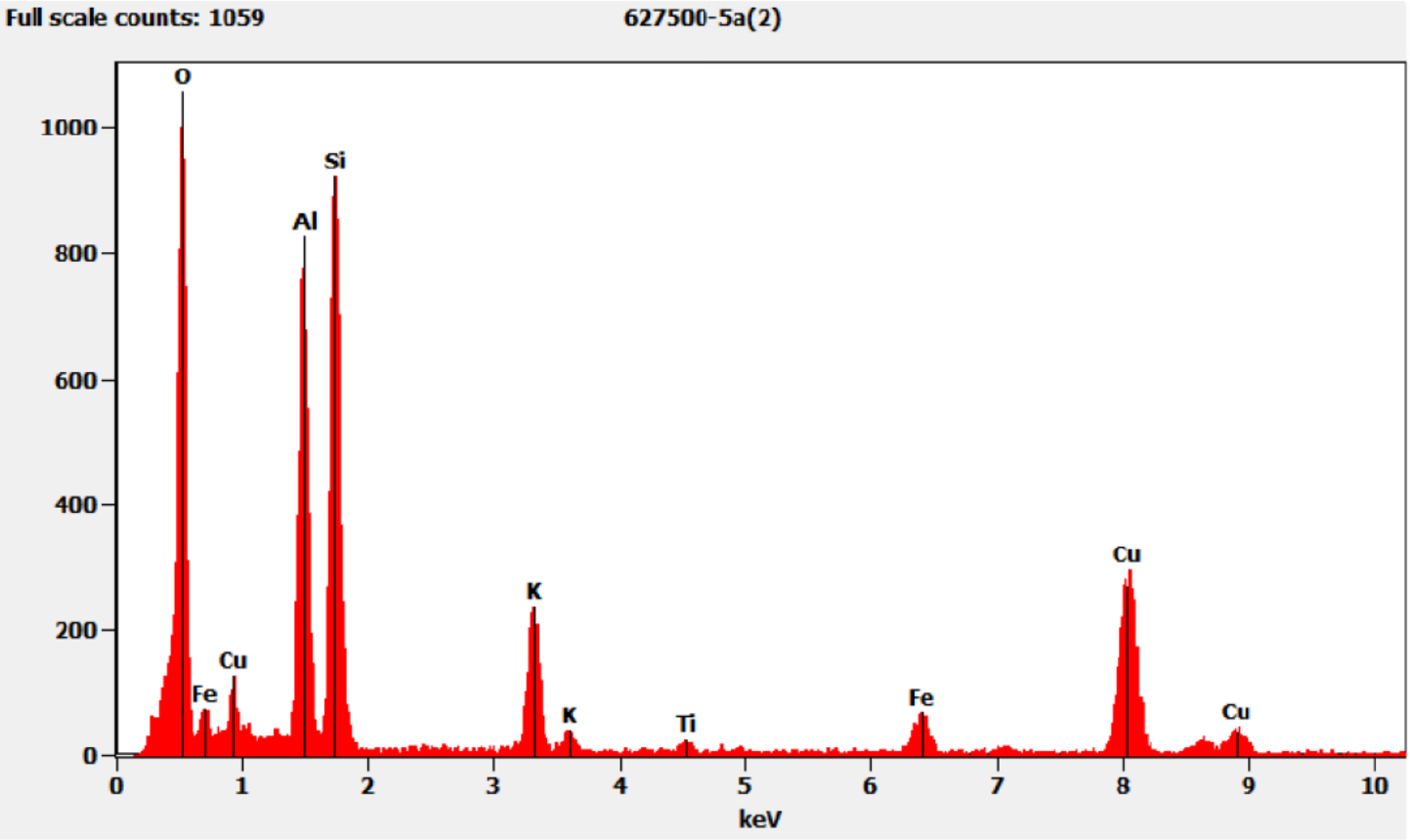
1 µm
HV=100kV
Direct Mag: 2900 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Mica Particle with Iron pictured above

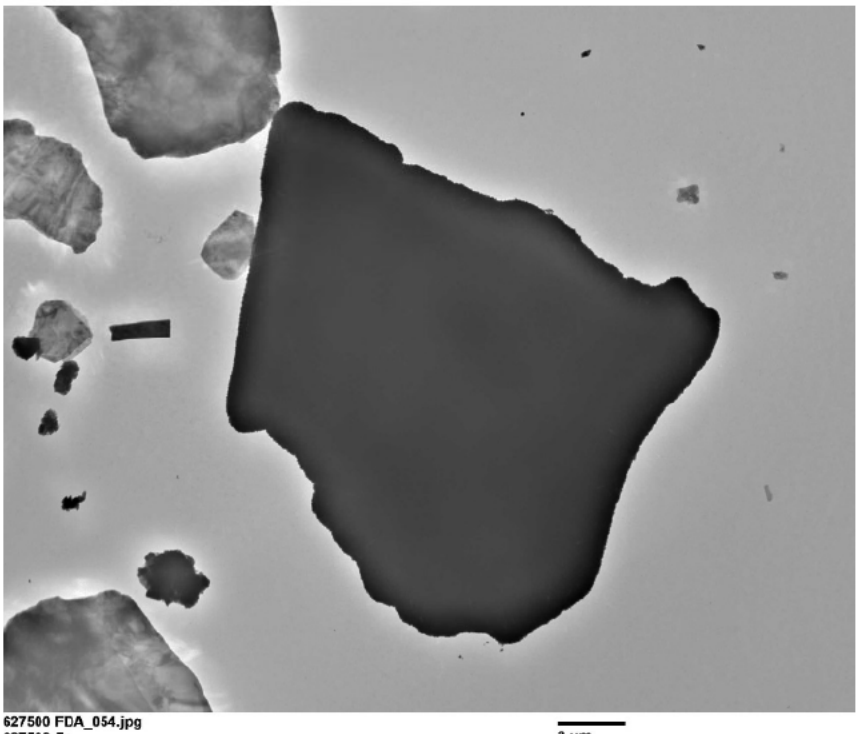
627500 FDA_049.jpg
627500-5a
Mica Particle w/Fe Dif
11:18 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Mica Particle with Iron pictured above



627500-5A, Mica Particle with Titanium



627500 FDA_054.jpg
627500-5a
Mica w/Ti
Cal: 0.010296 µm/pix
11:28 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

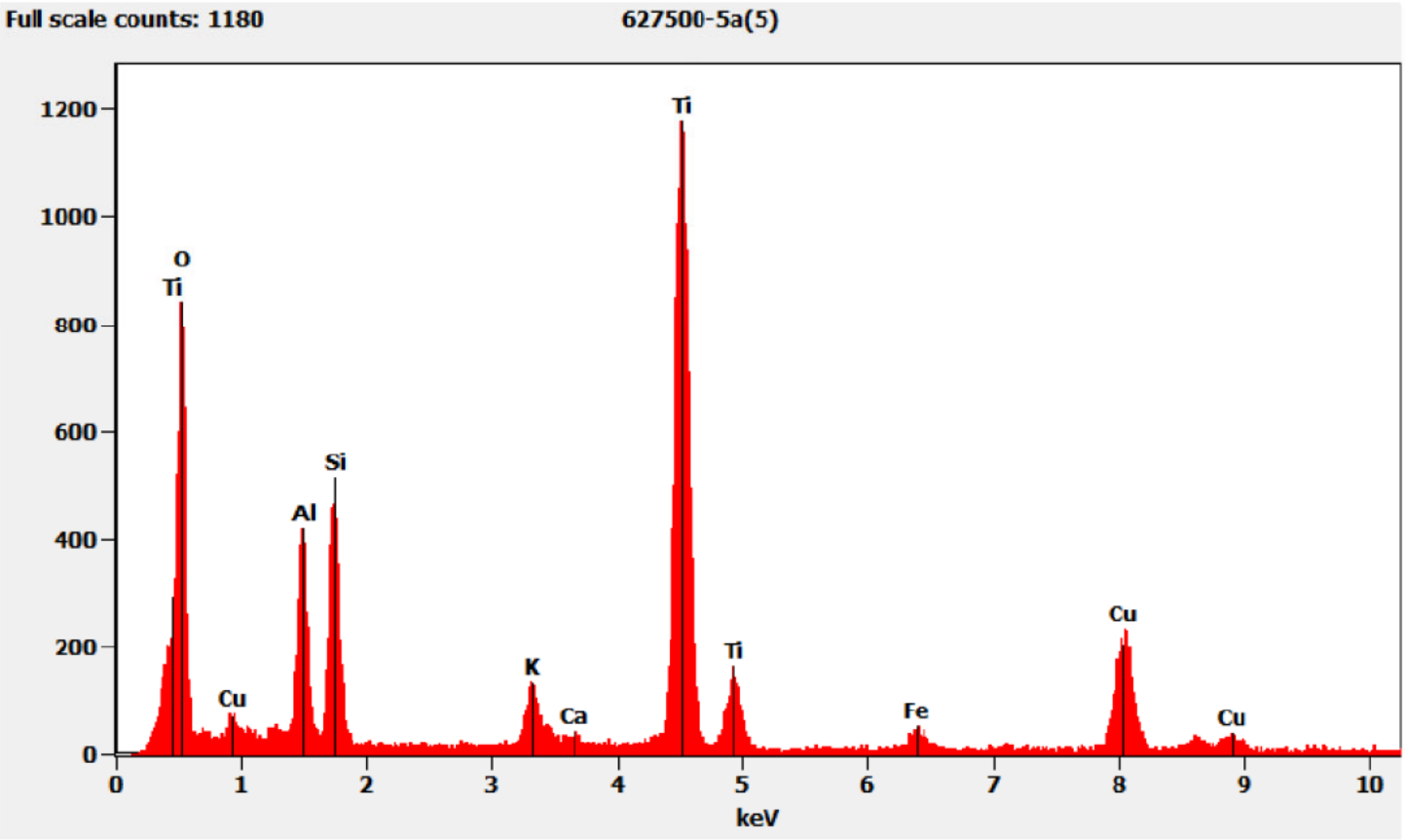
2 µm
HV=100kV
Direct Mag: 1000 x
AMA Analytical Services, Inc

Diffraction Pattern from the Mica Particle with Titanium pictured above

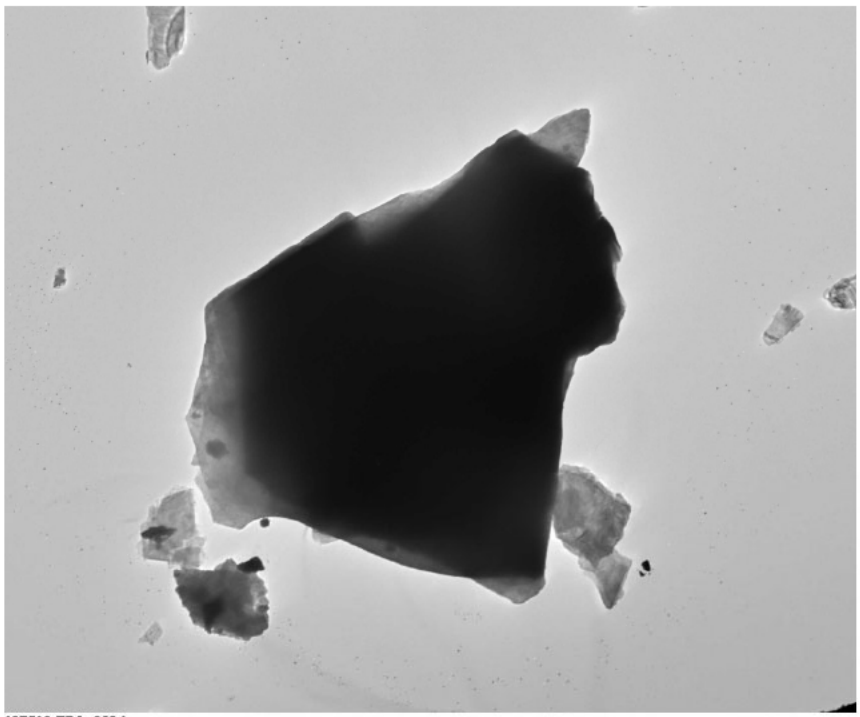
627500 FDA_053.jpg
627500-5a
Mica w/Ti Dif
11:27 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Mica Particle with Titanium pictured above



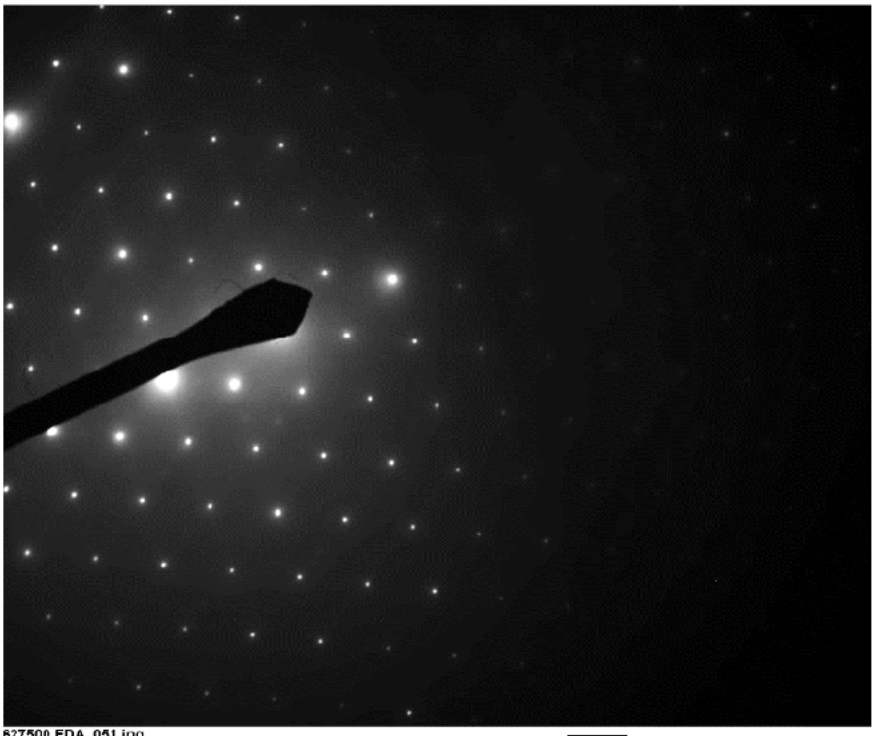
627500-5A, Talc Particle



627500 FDA_052.jpg
627500-5a
Talc Particle
Cal: 0.007355 µm/pix
11:23 7/22/2021
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

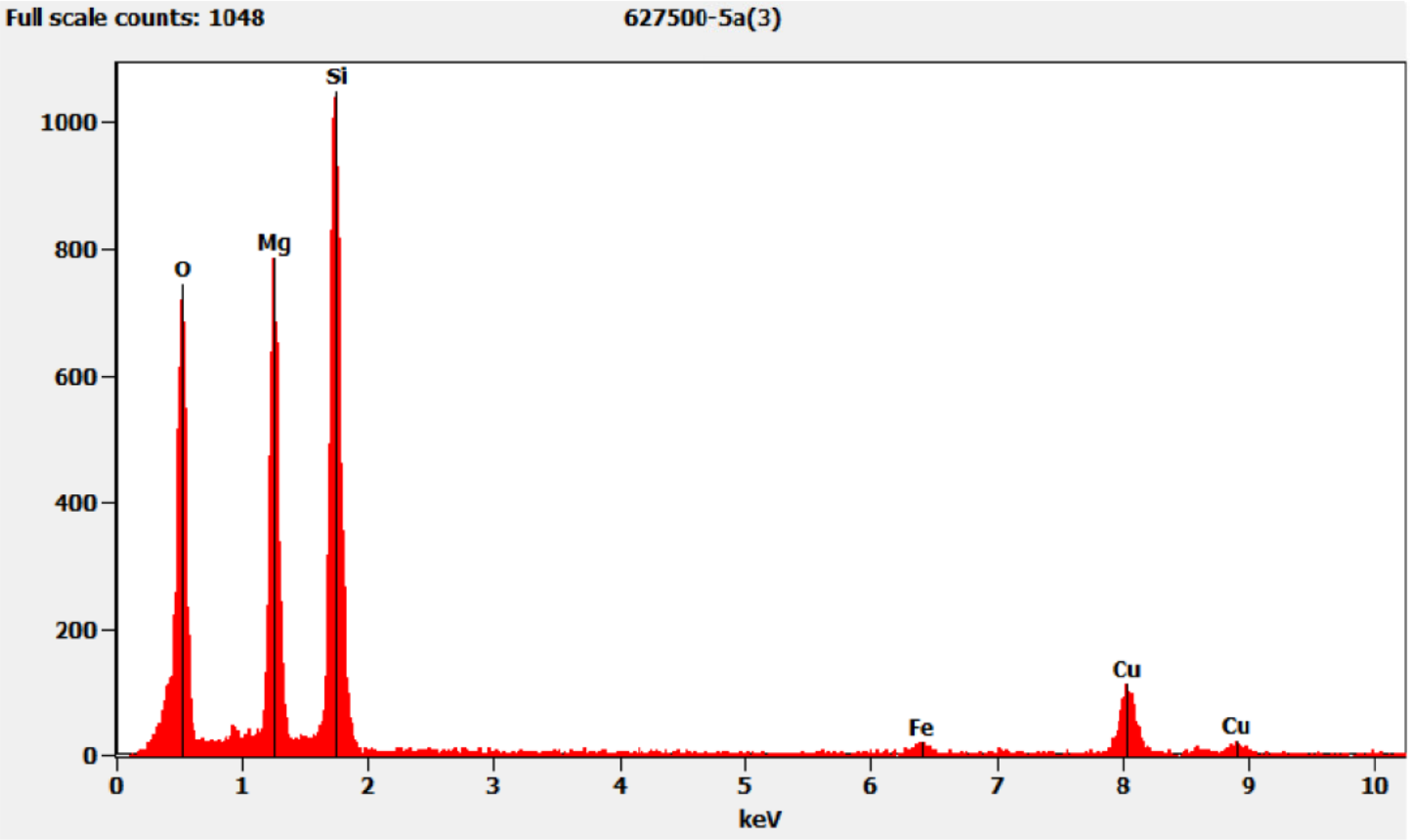
Hexagonal Diffraction Pattern from the Talc Particle pictured above



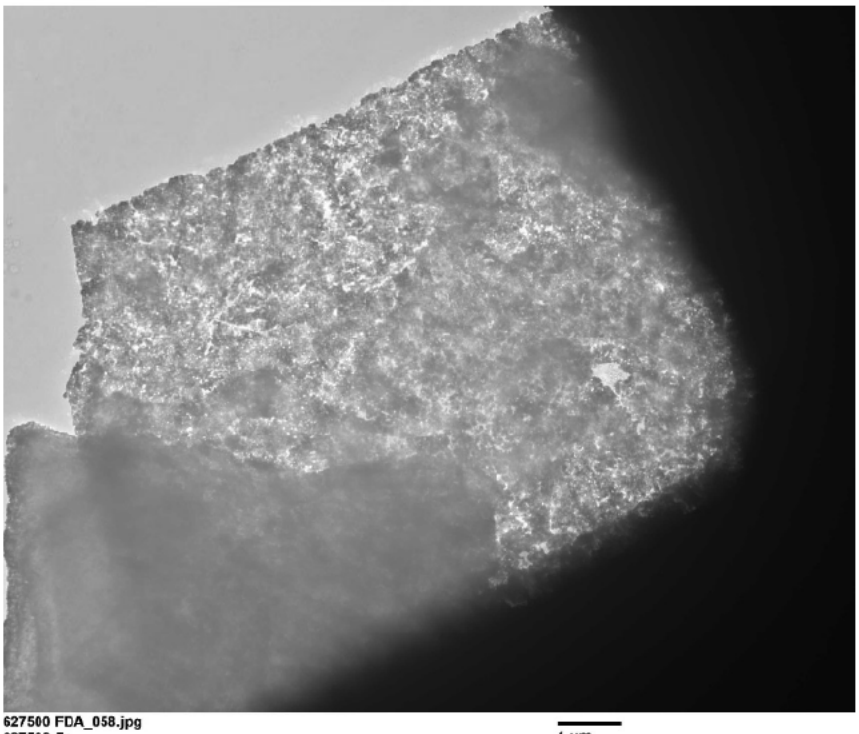
627500 FDA_051.jpg
627500-5a
Talc Particle Dil
11:22 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



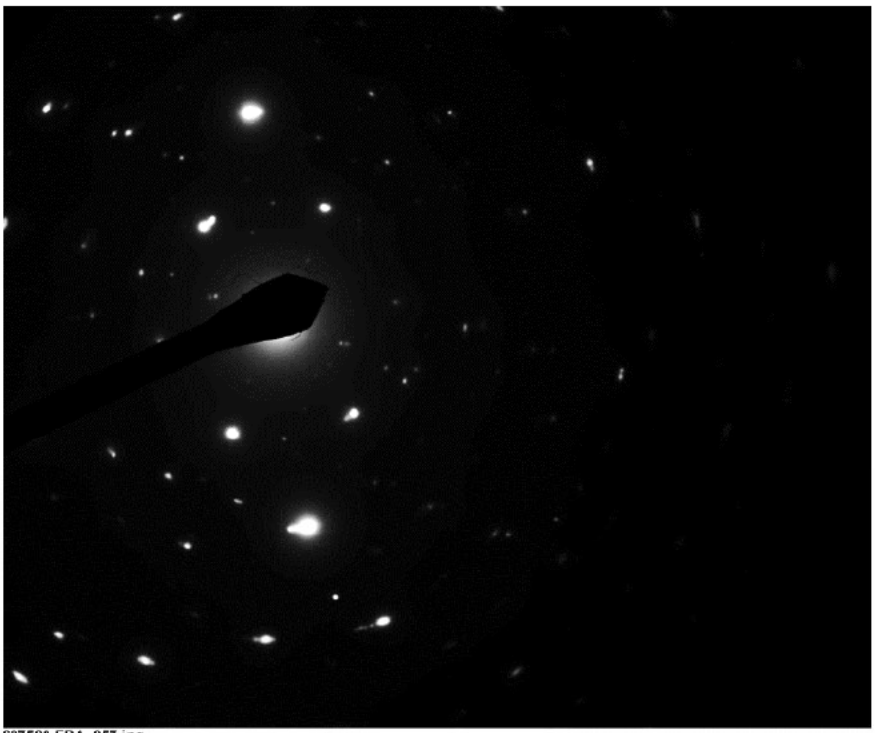
627500-5A, Iron Particle(s)



627500 FDA_058.jpg
627500-5a
Fe Particle
Cal: 0.005419 µm/pix
11:43 7/22/2021
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

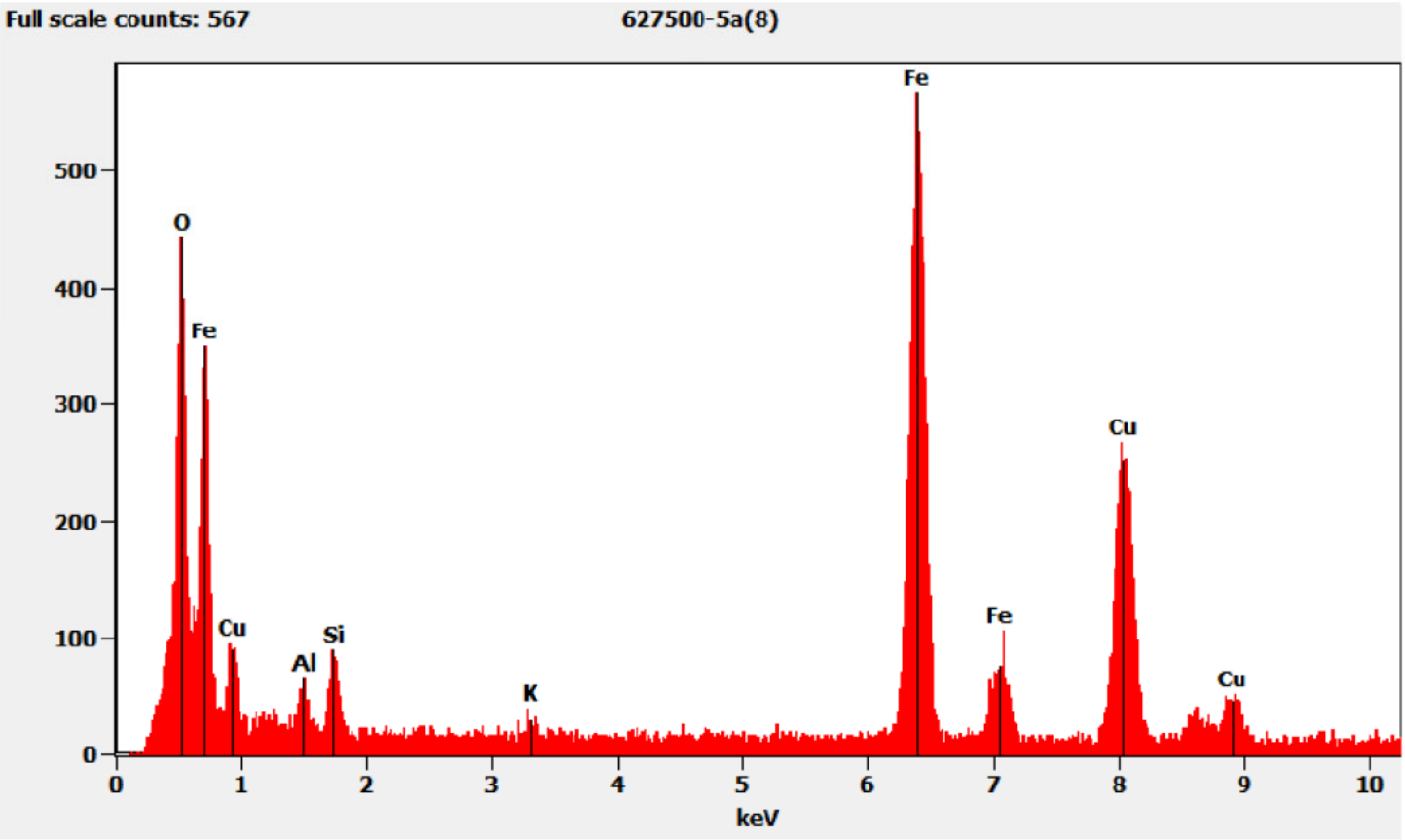
Diffraction Pattern from the Iron Particle(s) pictured above



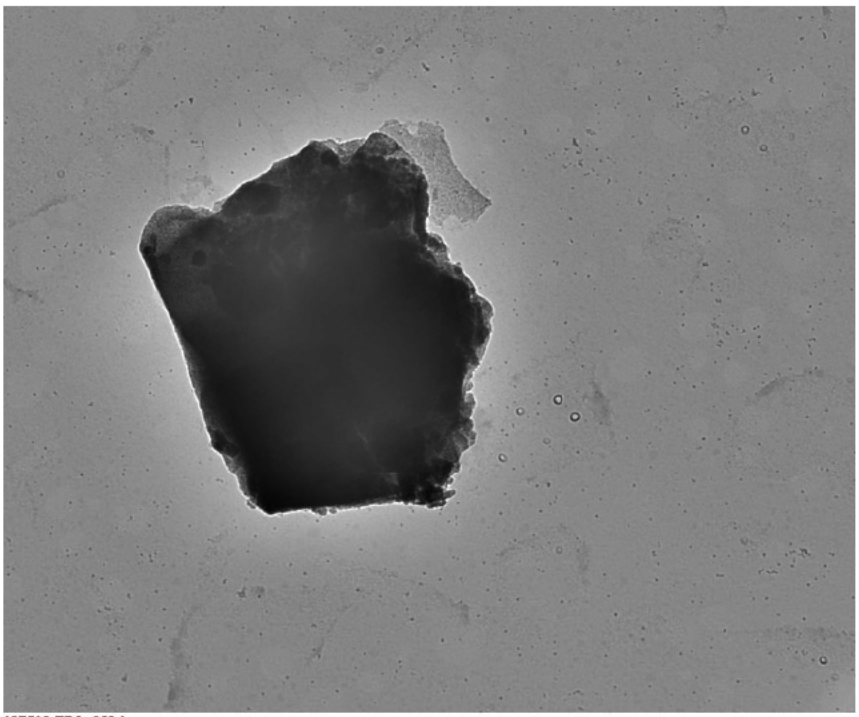
627500 FDA_057.jpg
627500-5a
Fe Particle Dif
11:42 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Iron Particle(s) pictured above

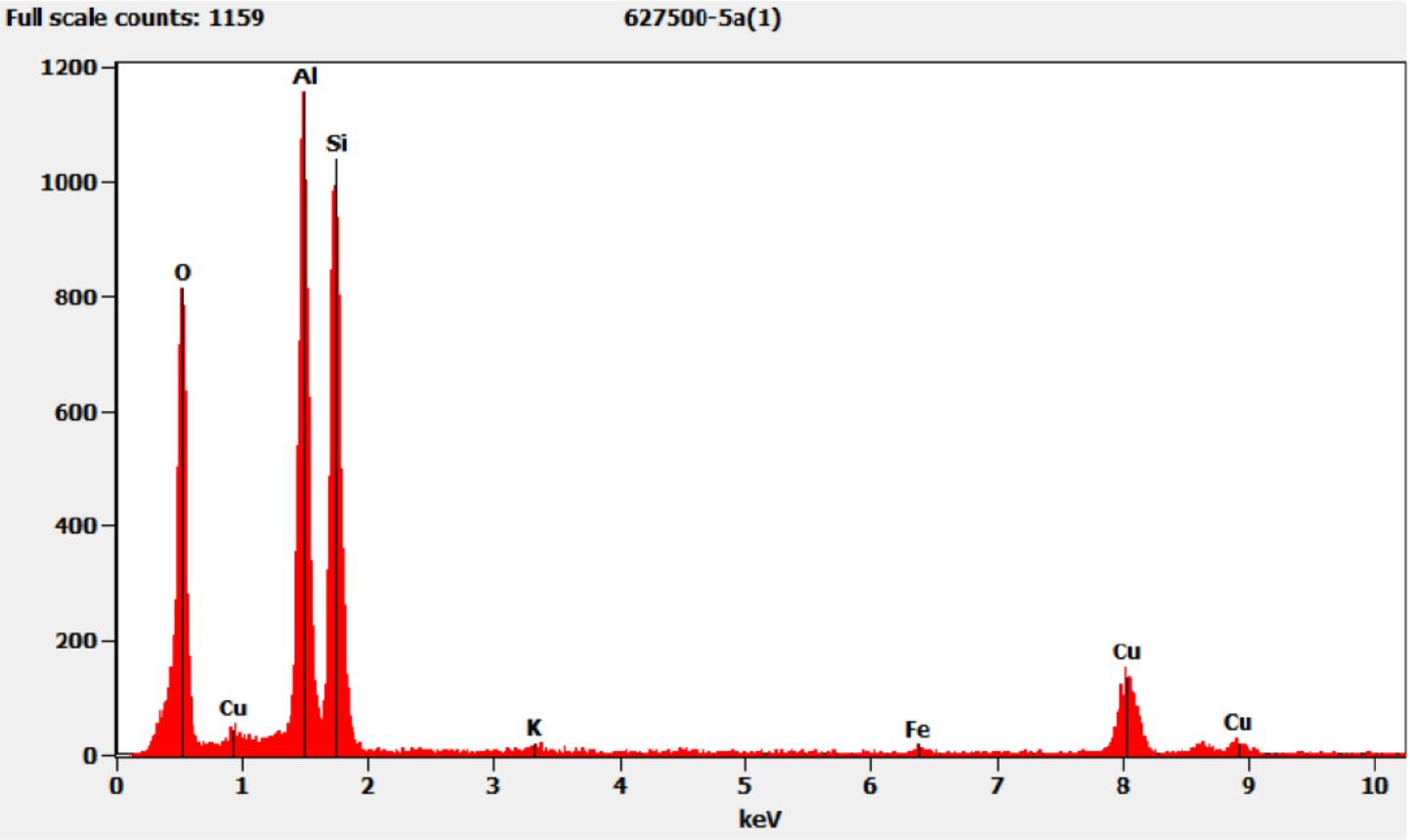


627500-5A, Particle containing Aluminum and Silicon

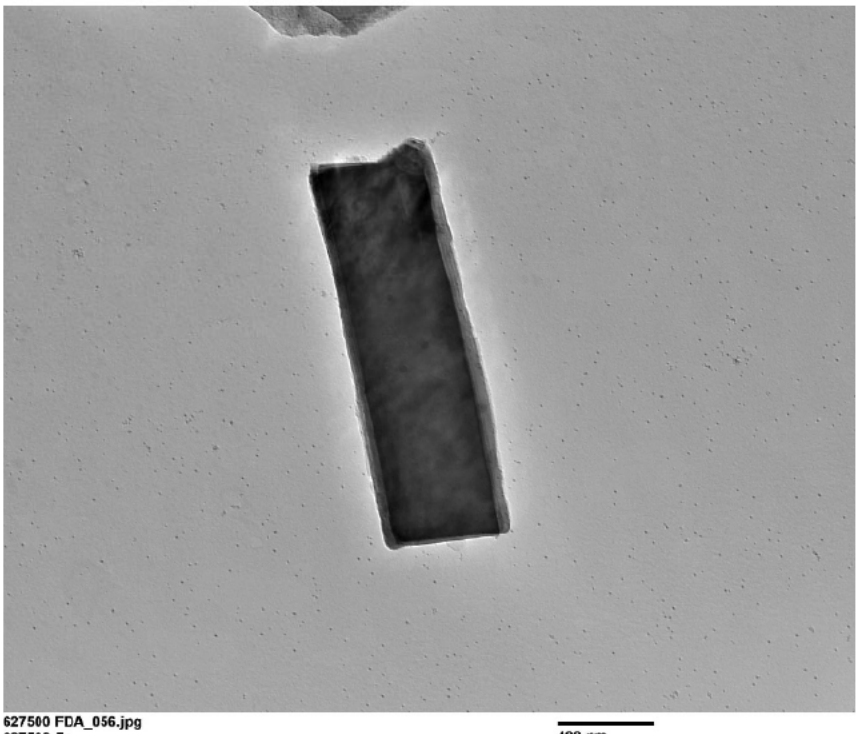


Diffraction Pattern from the Particle containing Aluminum and Silicon pictured above

Chemistry from the Particle containing Aluminum and Silicon pictured above



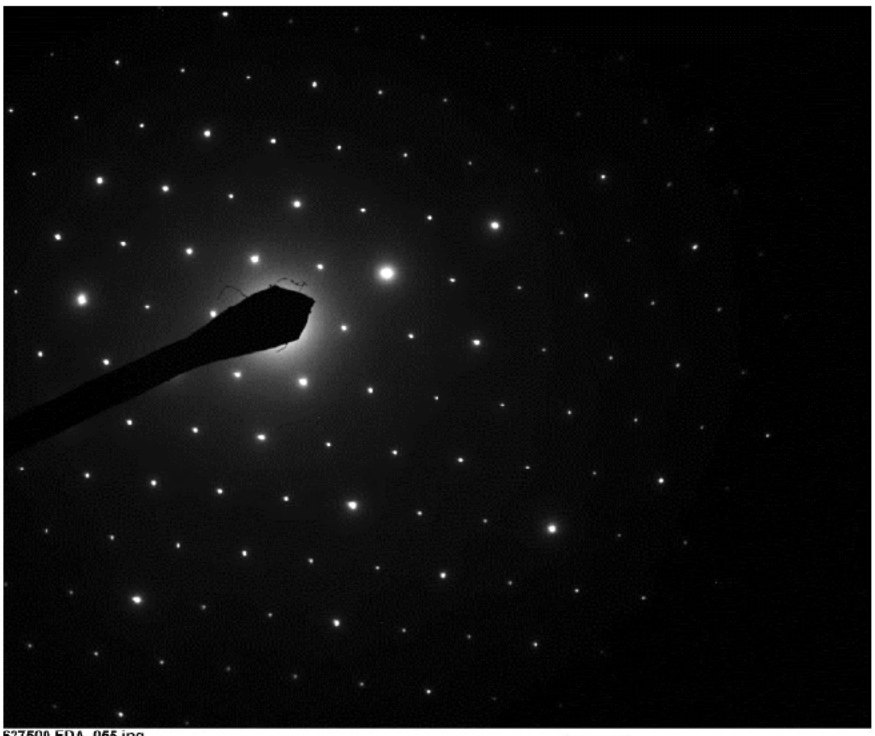
627500-5A, Talc Fiber



627500 FDA_056.jpg
627500-5a
Talc Fiber
Cal: 0.001430 µm/pix
11:33 7/22/2021
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

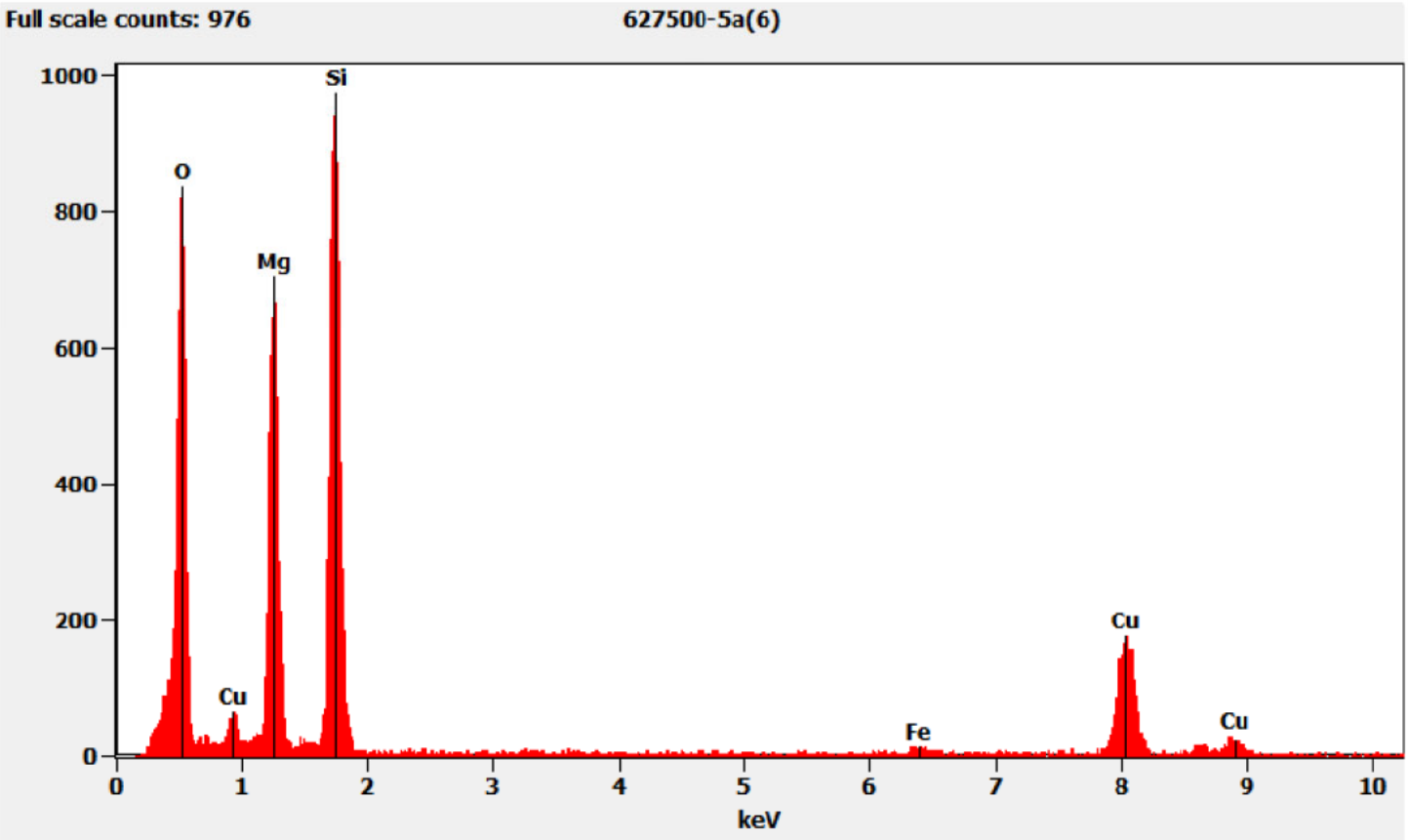
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



627500 FDA_055.jpg
627500-5a
Talc Fiber Dif
11:32 7/22/2021
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



627500-6A, 6B, 6C/Client Sample: 04272021-6

PLM

All three aliquots of sample 04272021-6 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-6A	No Asbestos Detected
627500-6B	No Asbestos Detected
627500-6C	No Asbestos Detected

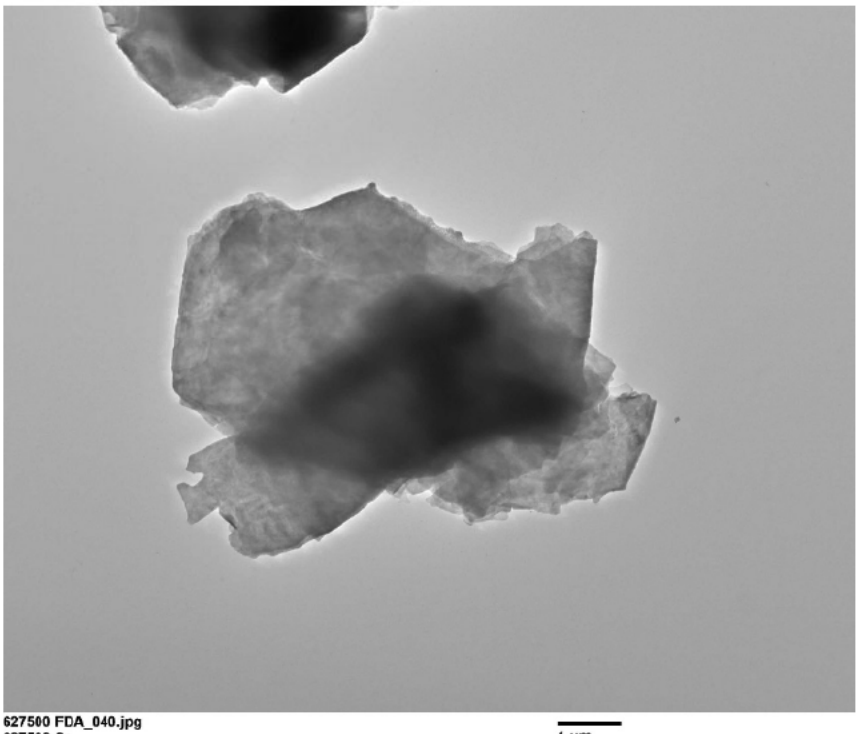
TEM

(b)(6) analyzed aliquot 6A on July 20, 2021. Andreas Saldivar analyzed aliquot 6B on July 22, 2021 and (b)(6) analyzed aliquot 6C on July 22, 2021. The primary particle observed was talc; talc fibers/ribbons were also observed along with a few chromium particles, copper particles, and particles containing magnesium, aluminum and silicon (and other trace elements). No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-6A	No Asbestos Detected
627500-6B	No Asbestos Detected
627500-6C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. Apart from the particles identified as copper particles, all 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.

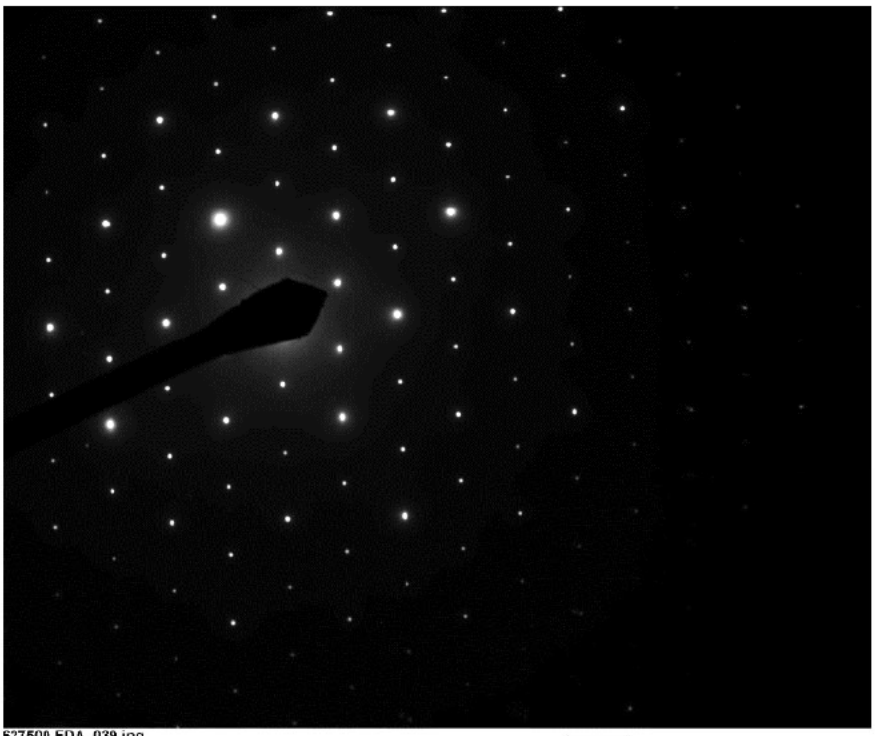
627500-6A, Talc Particle



627500 FDA_040.jpg
627500-6a
Talc Particle
Cal: 0.005419 µm/pix
14:42 7/20/2021
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

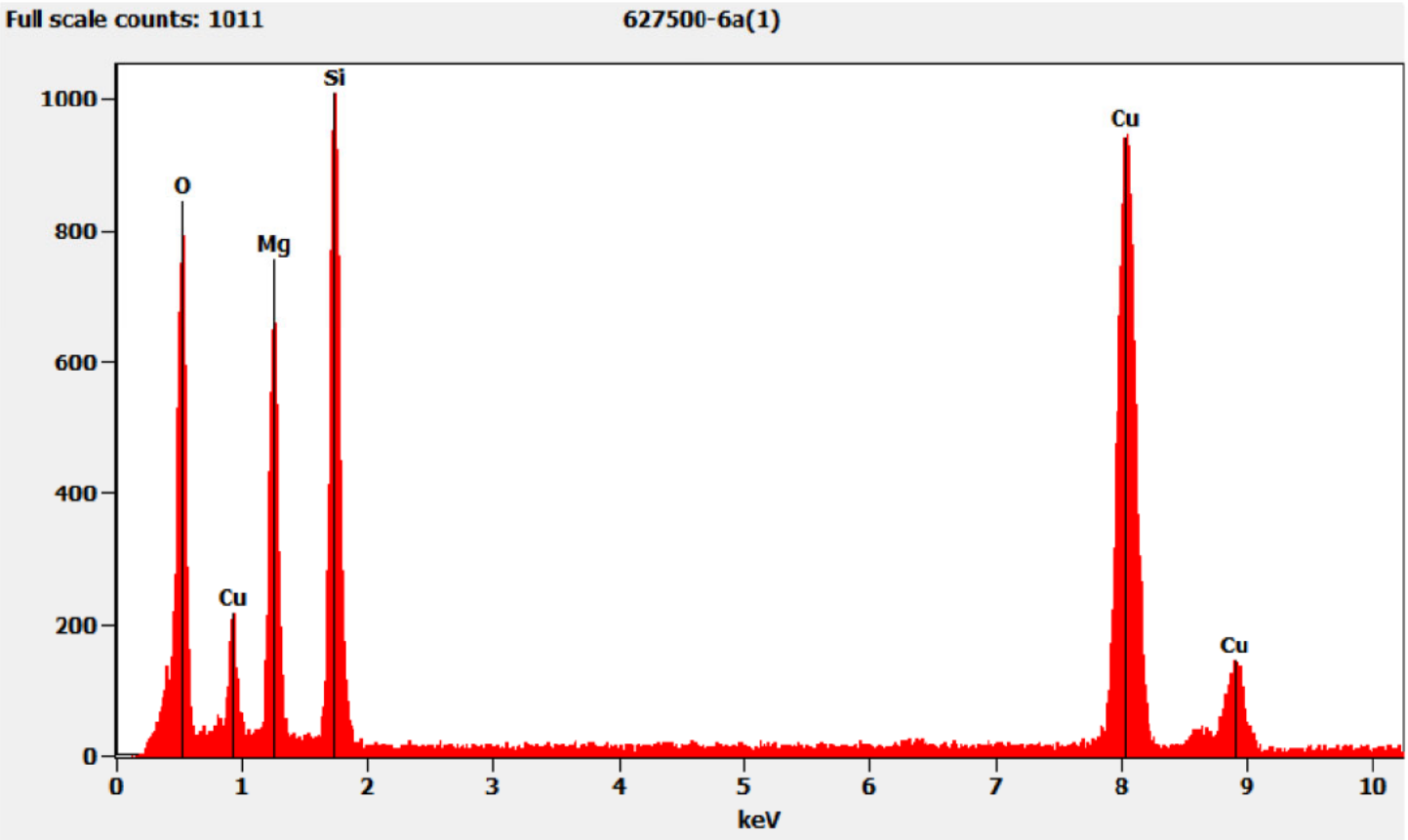
Hexagonal Diffraction Pattern from the Talc Particle pictured above



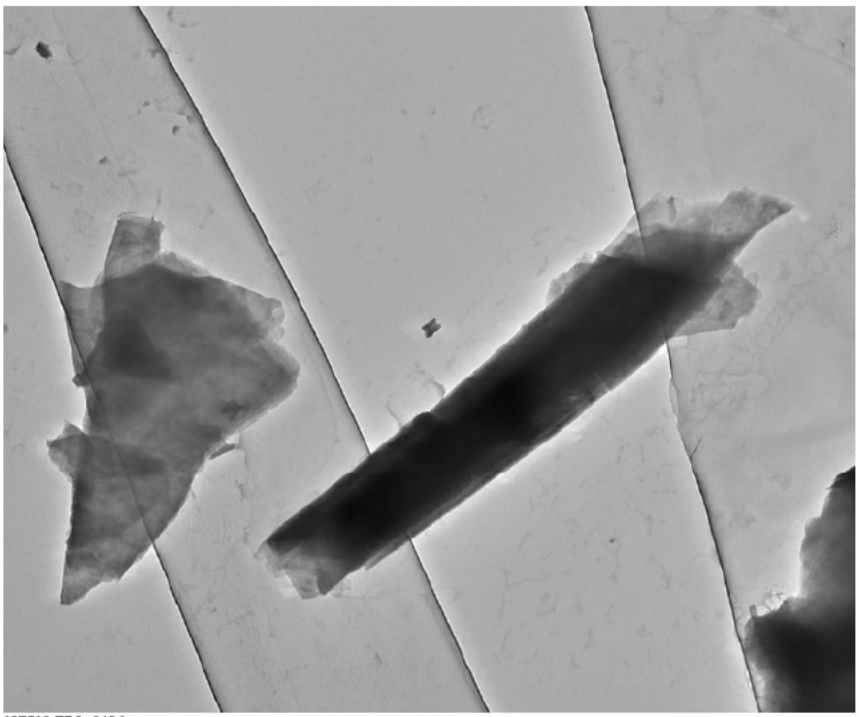
627500 FDA_039.jpg
627500-6a
Talc Particle Dif
14:41 7/20/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



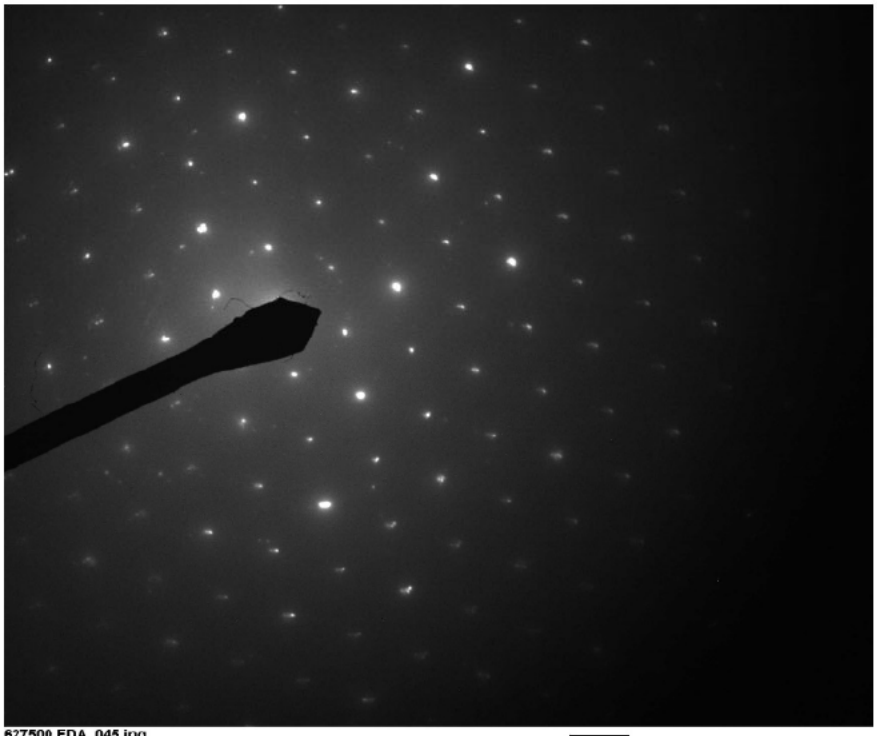
627500-6A, Talc Fiber



627500 FDA_046.jpg
627500-6a
Talc Fiber
Cal: 0.003702 µm/pix
15:50 7/20/2021
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

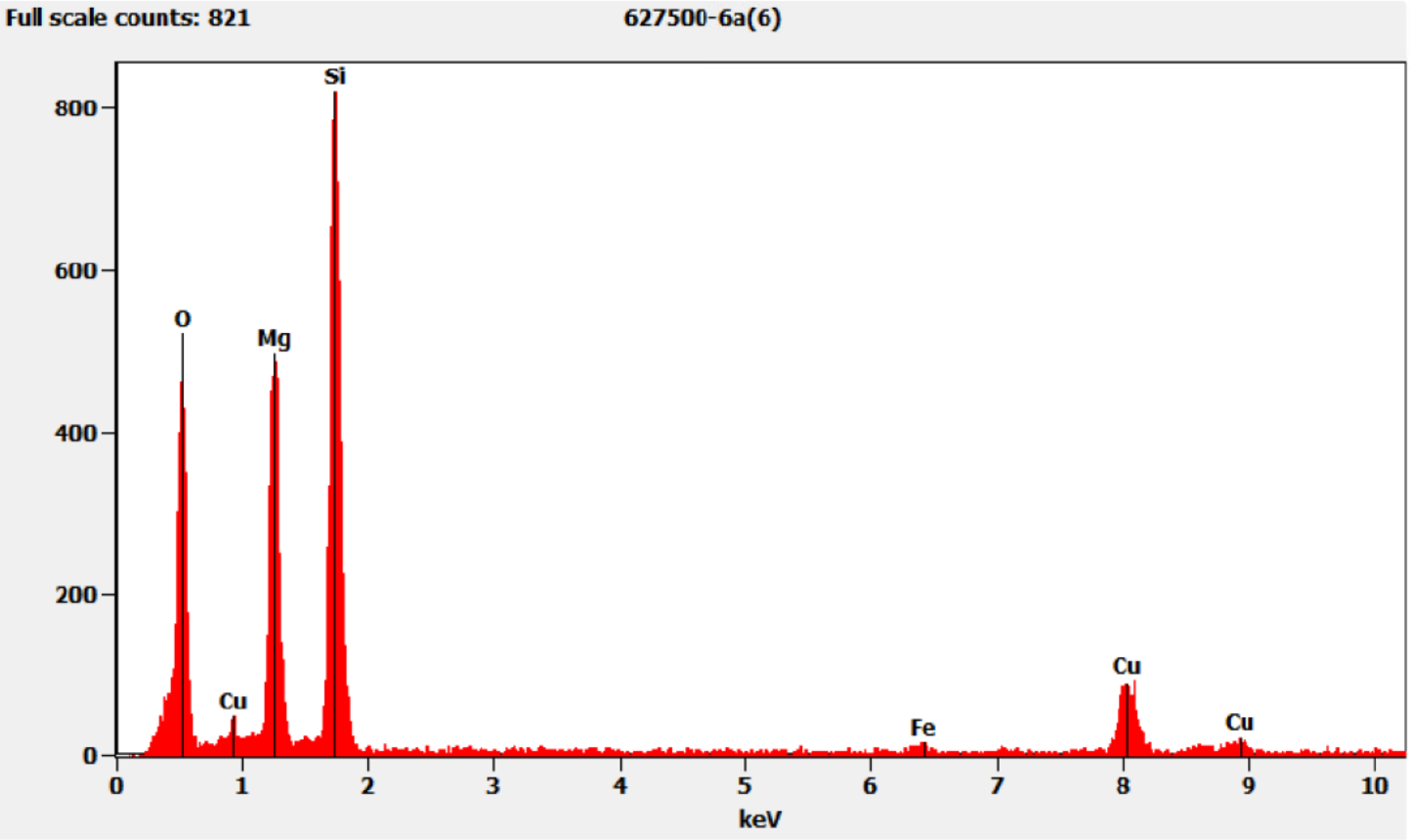
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



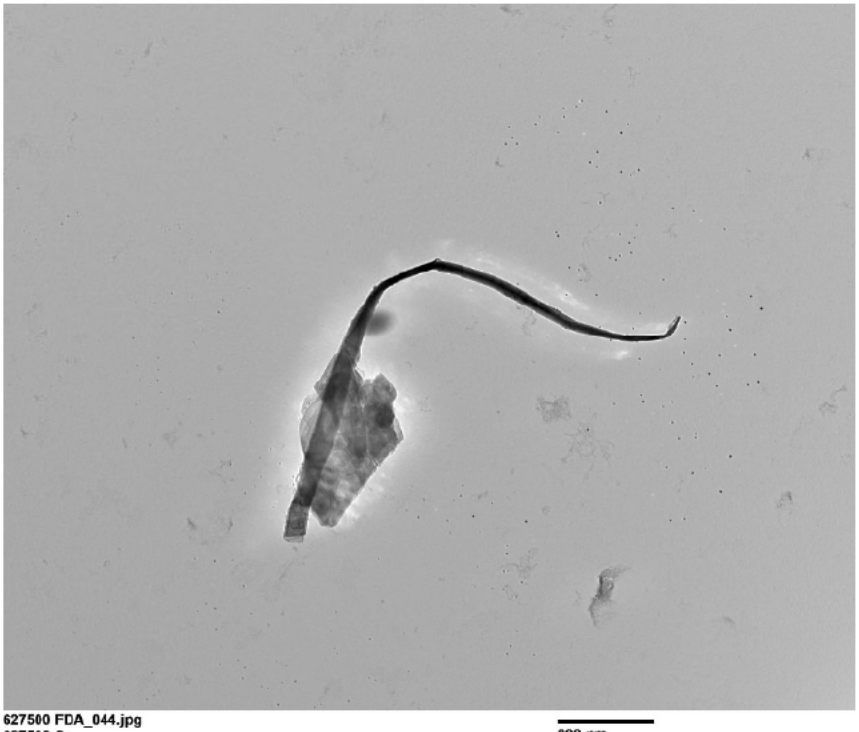
627500 FDA_045.jpg
627500-6a
Talc Fiber Dif
15:48 7/20/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



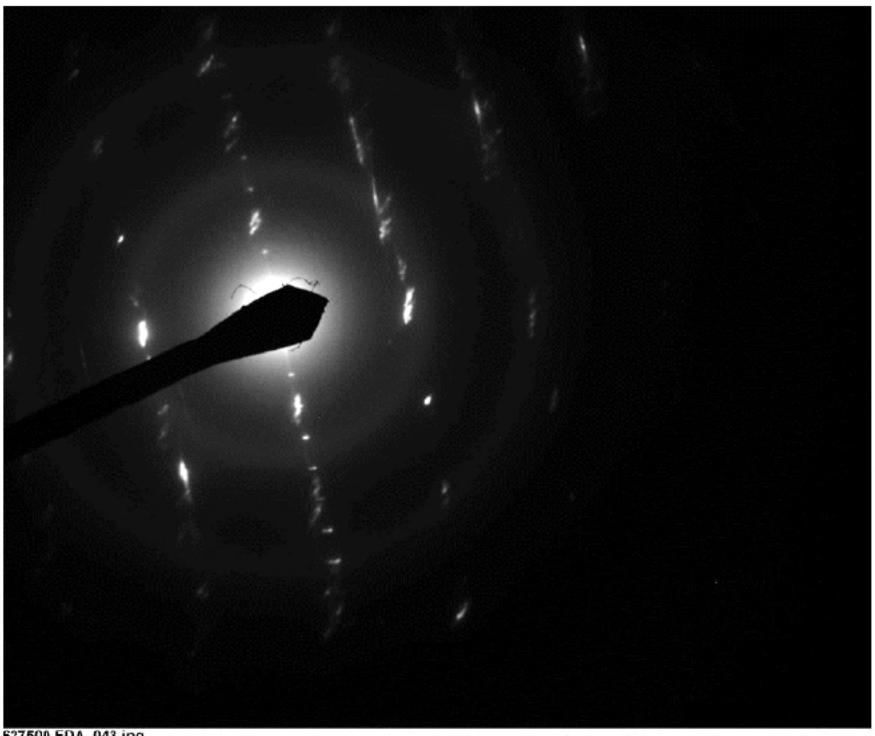
627500-6A, Talc Ribbon



627500 FDA_044.jpg
627500-6a
Talc Ribbon
Cal: 0.002860 µm/pix
15:14 7/20/2021
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

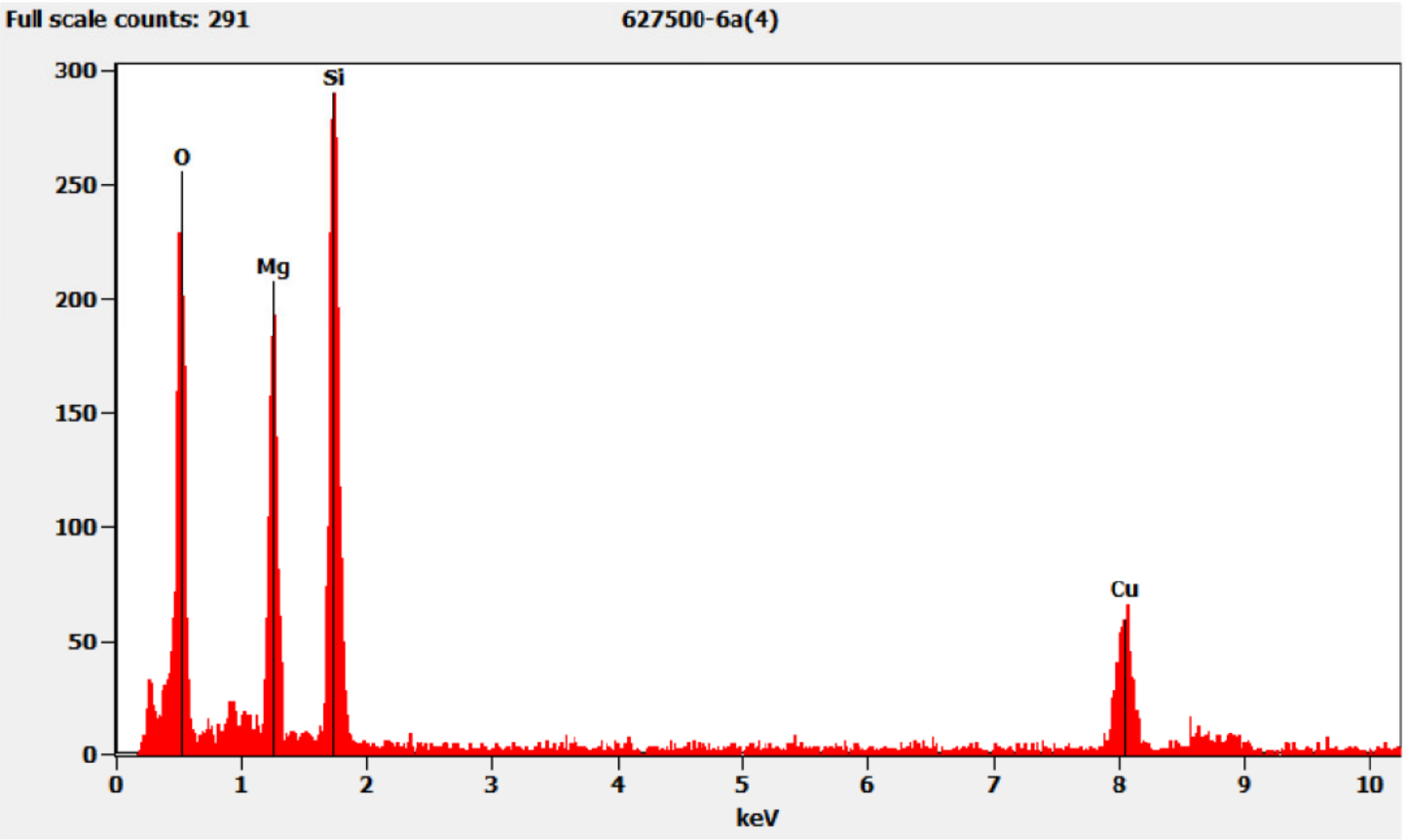
Diffraction Pattern from the Talc Ribbon pictured above



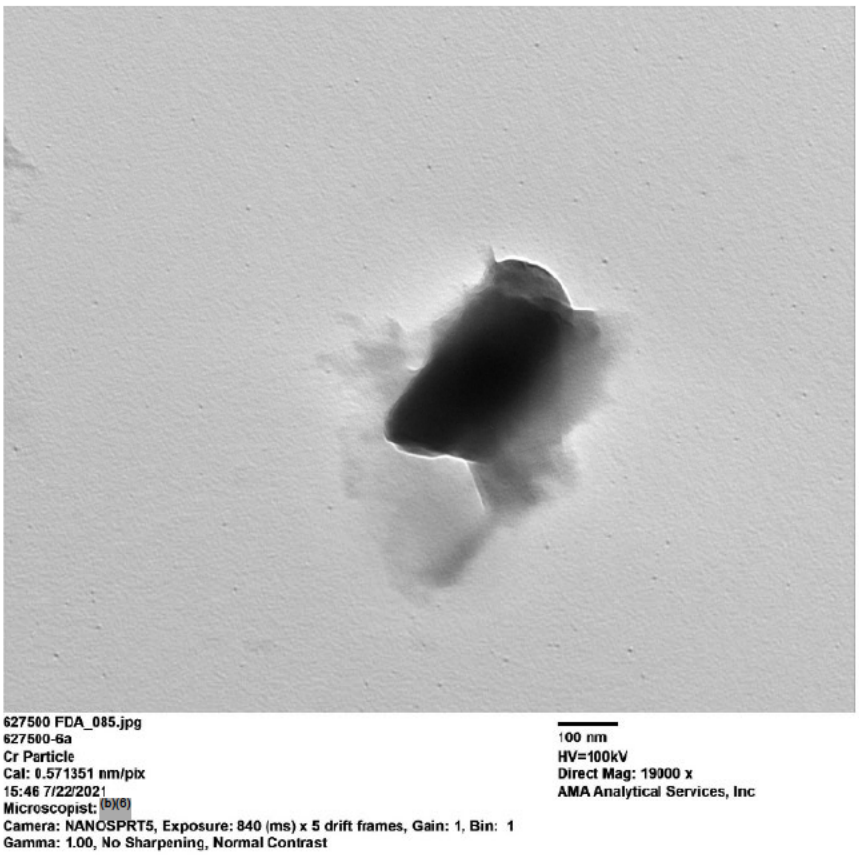
627500 FDA_043.jpg
627500-6a
Talc Ribbon Dif
15:13 7/20/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

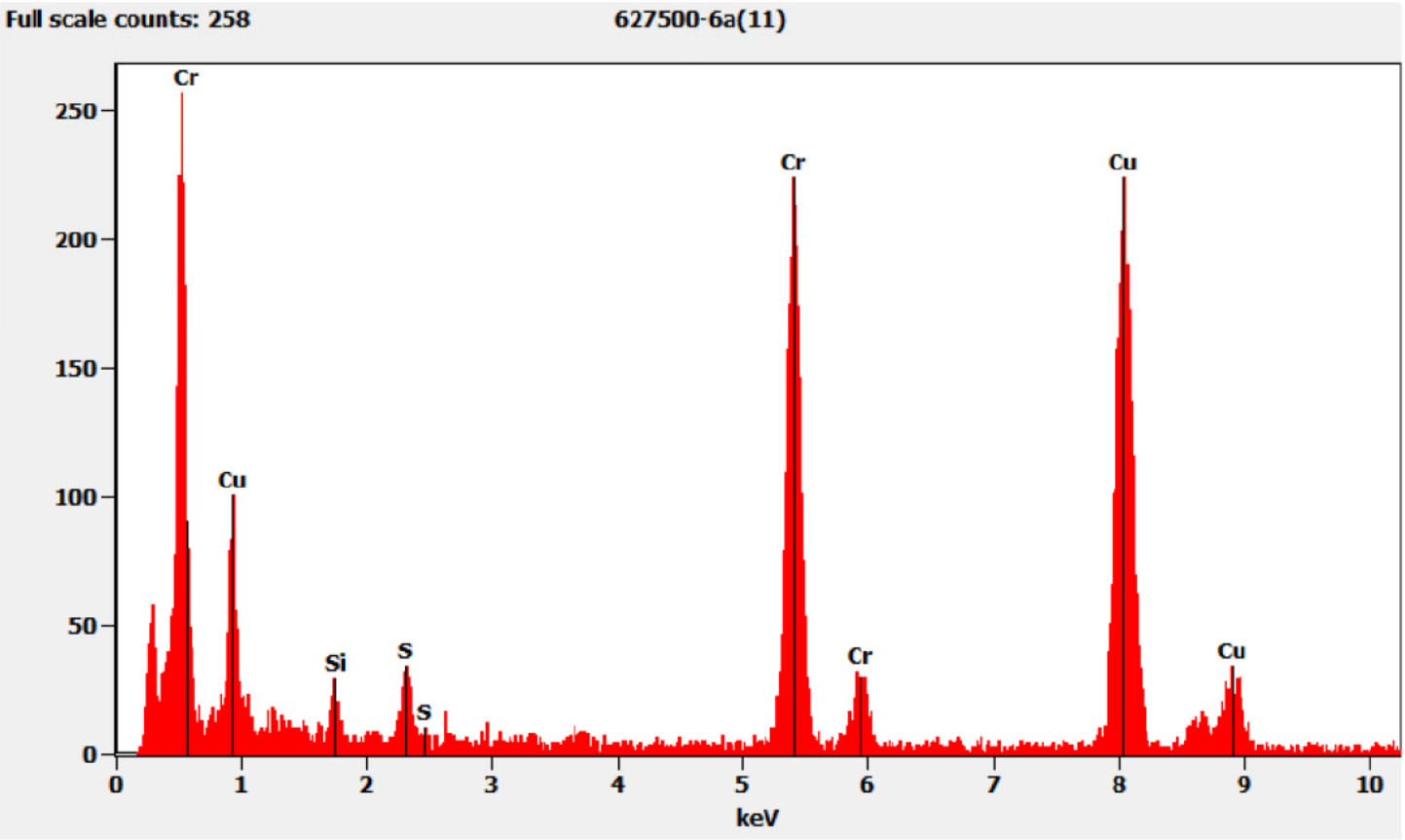
Chemistry from the Talc Ribbon pictured above



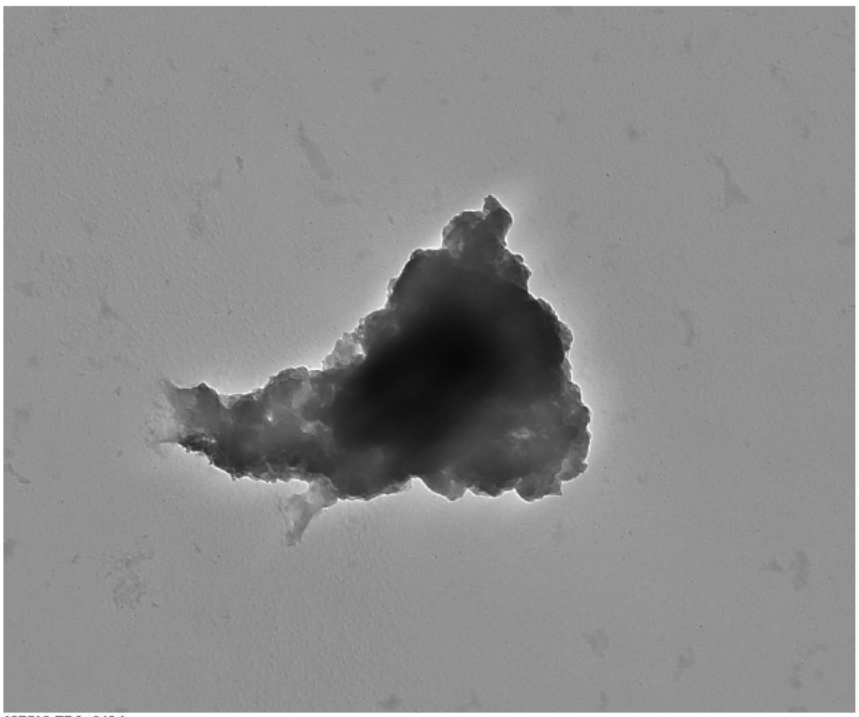
627500-6A, Chromium Particle



Chemistry from the Chromium Particle pictured above



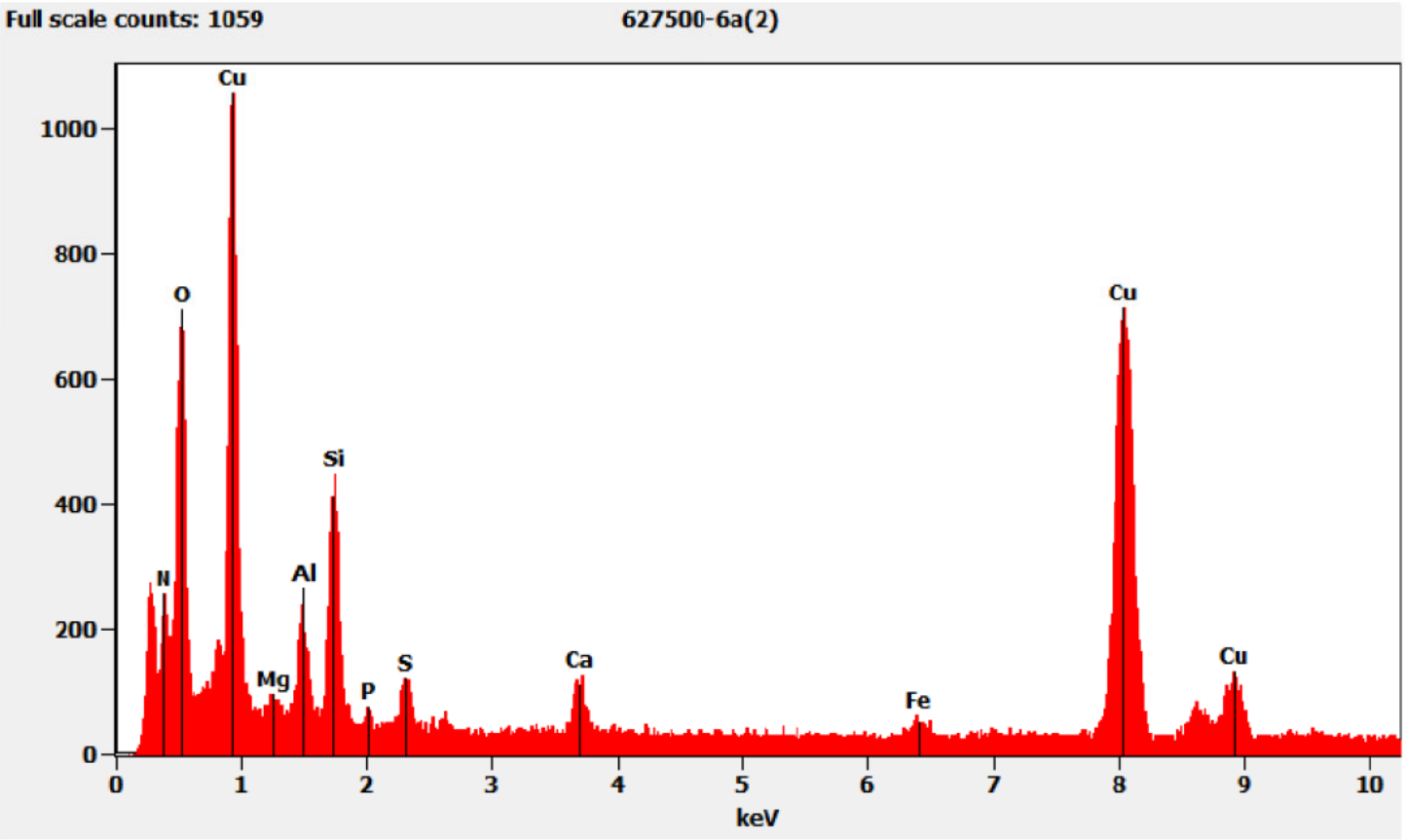
627500-6A, Particle containing Magnesium, Aluminum and Silicon (and other trace elements)



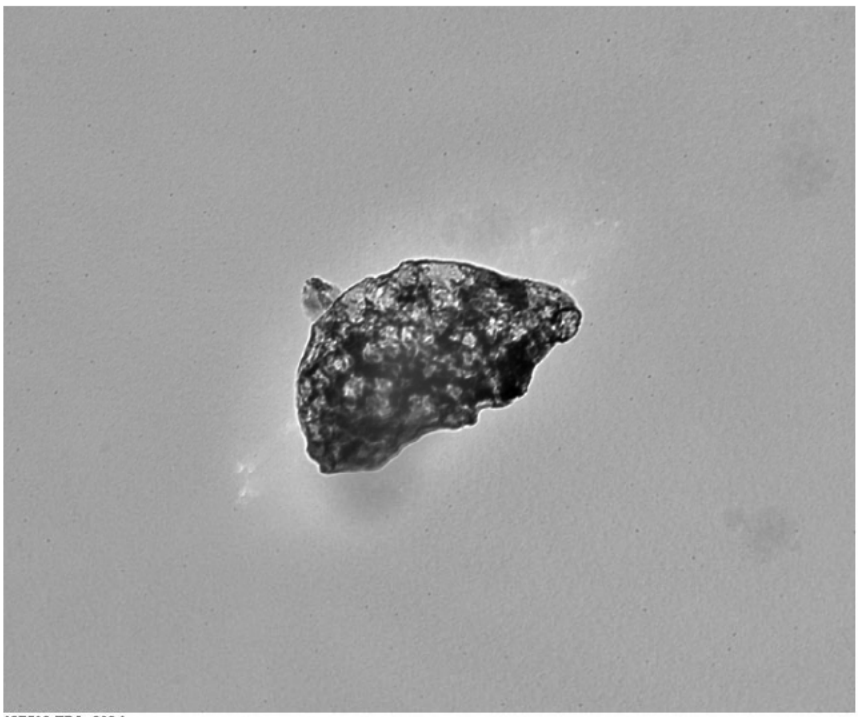
627500 FDA_042.jpg
627500-6a
NMgAlSiPSCaFe Particle
Cal: 0.001430 µm/pix
14:53 7/20/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Particle containing Magnesium, Aluminum and Silicon (and other trace elements) pictured above



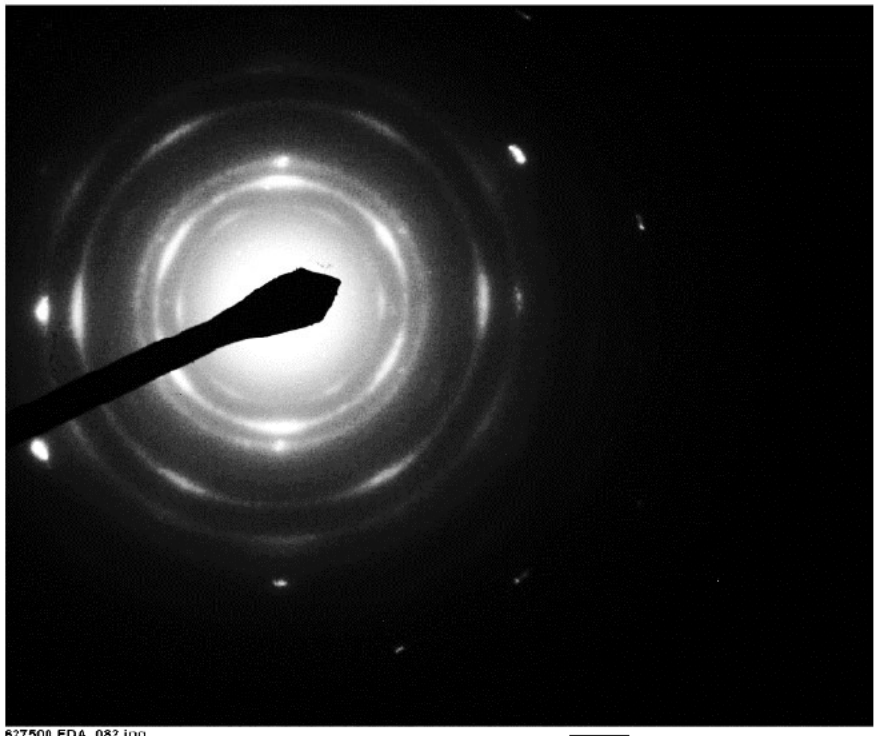
627500-6A, Copper Particle



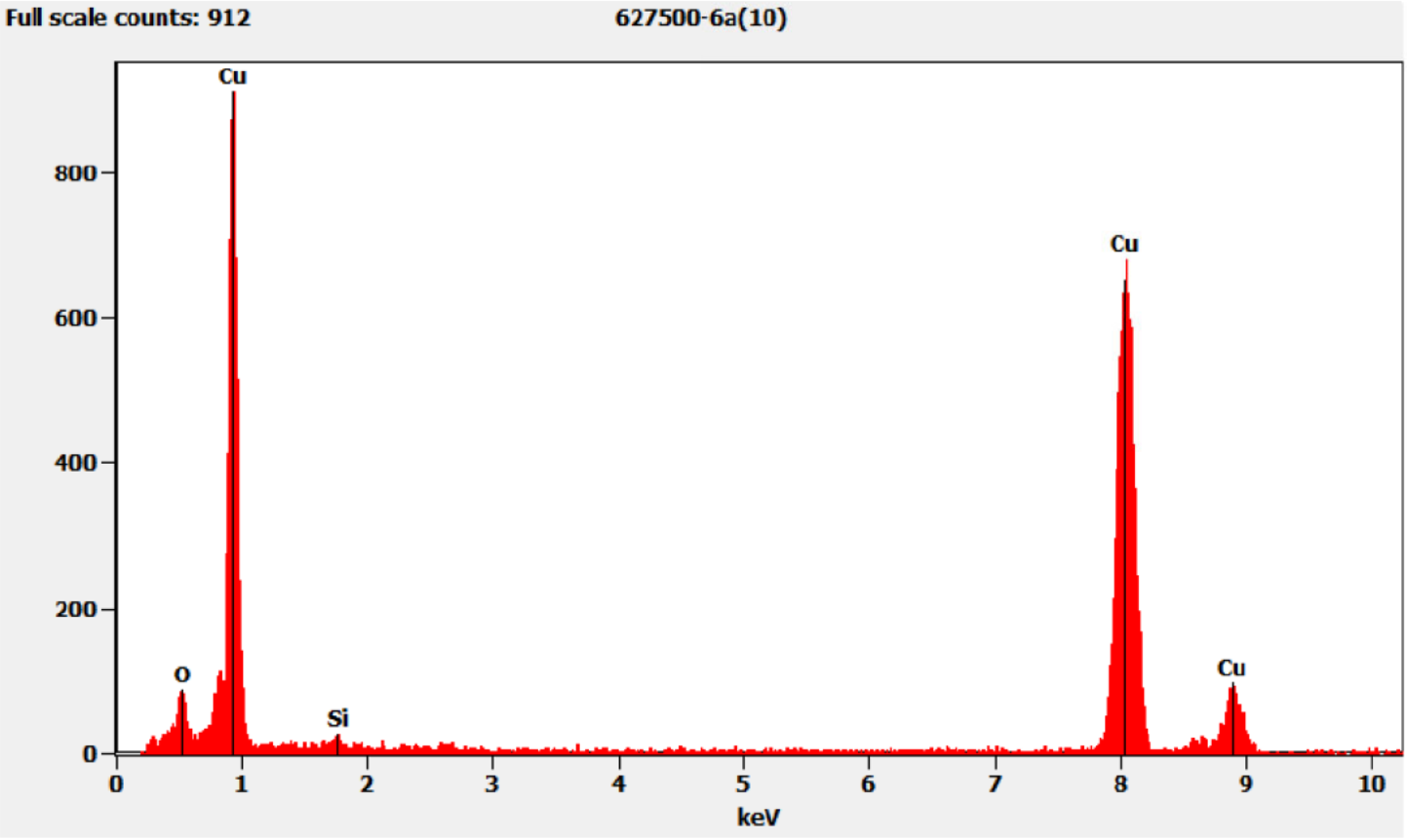
627500 FDA_083.jpg
627500-6a
Cu Particle
Cal: 0.001030 µm/pix
15:40 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

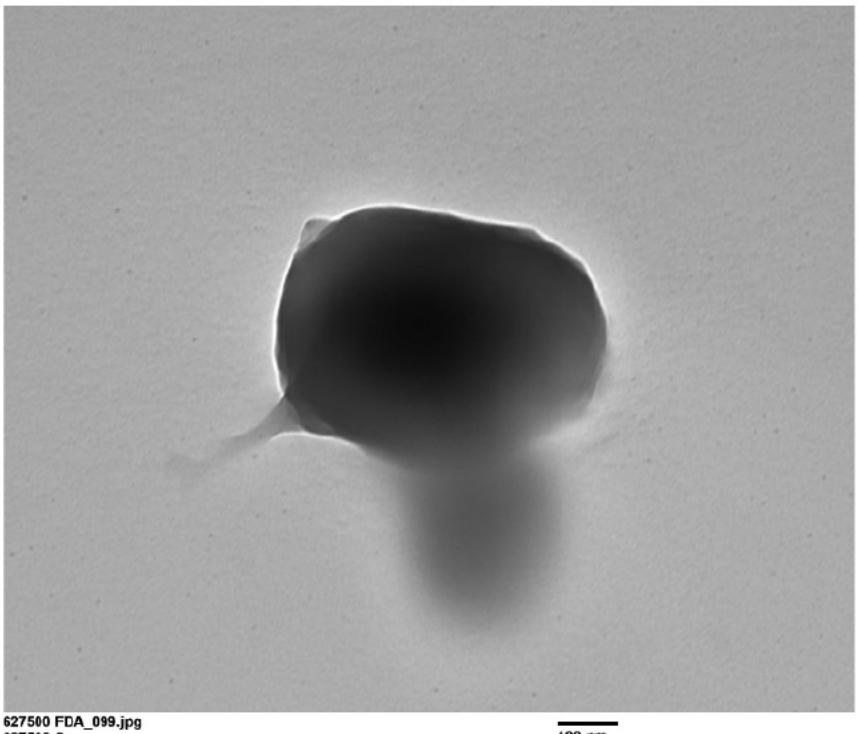
Diffraction Pattern from the Copper Particle pictured above



Chemistry from the Copper Particle pictured above



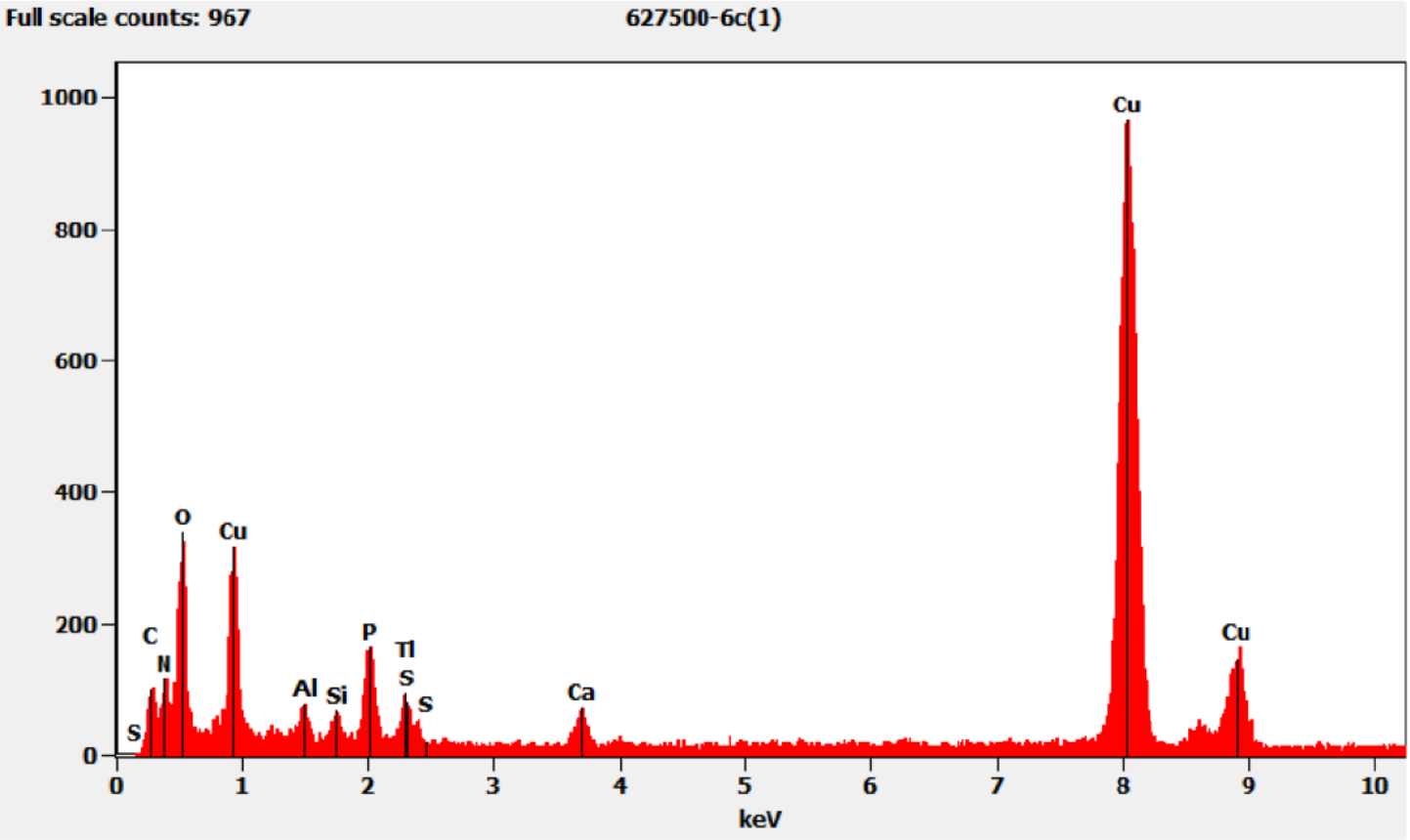
627500-6C Particle containing Aluminum, Silicon, Phosphorous, Titanium, Sulfur, and Calcium



627500 FDA_099.jpg
627500-6c
AlSiPSCaTi Particle
Cal: 0.571351 nm/pix
17:55 7/22/2021
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

Chemistry from the Particle containing Aluminum, Silicon, Phosphorous, Titanium, Sulfur, and Calcium pictured above



627500-7A, 7B, 7C/Client Sample: 04272021-7

PLM

All three aliquots of sample 04272021-7 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the C*alculations* section above.

627500-7A	No Asbestos Detected
627500-7B	No Asbestos Detected
627500-7C	No Asbestos Detected

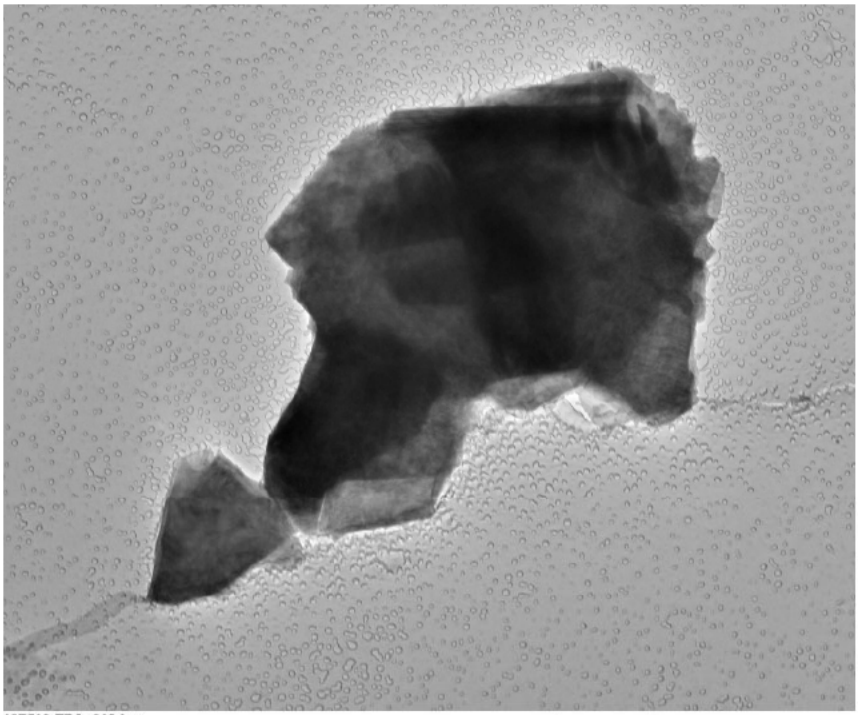
TEM

(b)(6) analyzed aliquot 7A on July 22, 2021 and aliquot 7C on July 27, 2021. Andreas Saldivar analyzed aliquot 7B on July 23, 2021. The primary particle observed was talc; calcium, chromium and titanium particles were also observed along with a few talc fibers/ribbons, copper particles, and particles containing phosphorus, silicon and calcium. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the C*alculations* section above.

627500-7A	No Asbestos Detected
627500-7B	No Asbestos Detected
627500-7C	No Asbestos Detected

Below are pictures, diffraction patterns, and chemistry from some of the observed particles. Apart from the particles identified as copper particles, all 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.

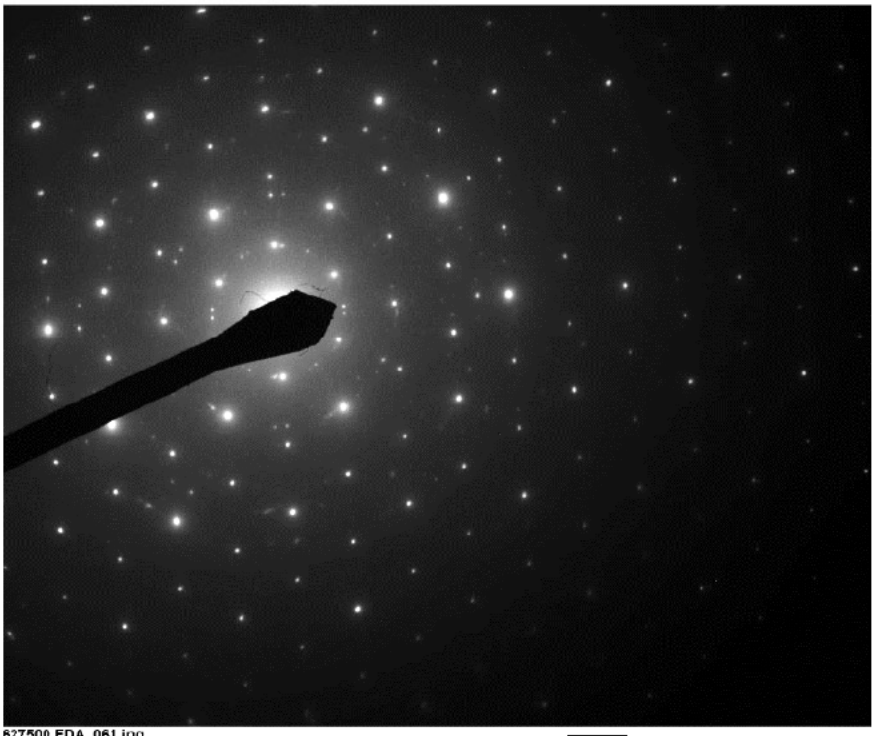
627500-7A, Talc Particle



627500 FDA_062.jpg
627500-7a
Talc Particle
Cal: 0.002860 µm/pix
12:39 7/22/2021
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

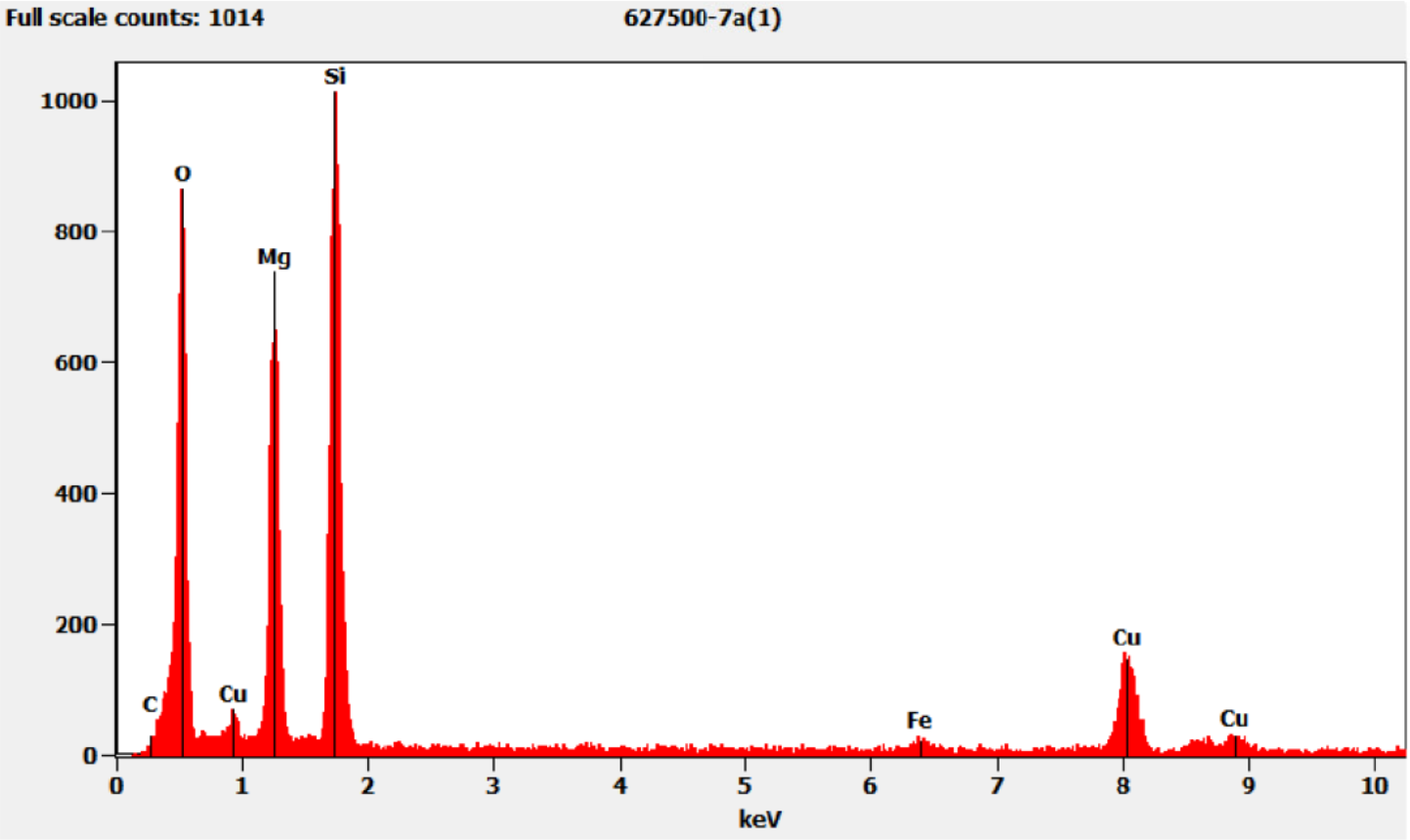
Hexagonal Diffraction Pattern from the Talc Particle pictured above



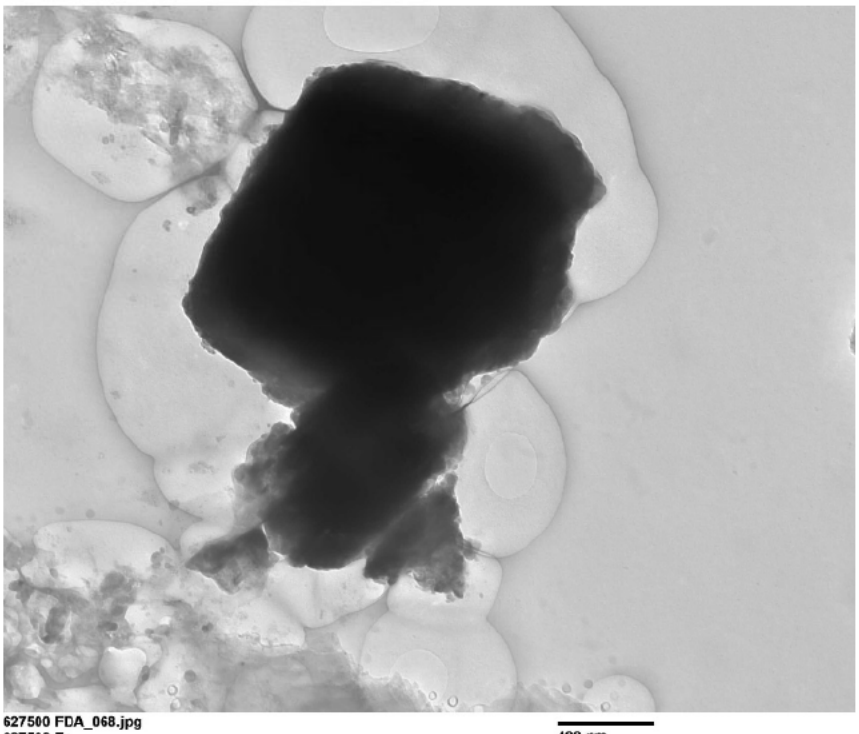
627500 FDA_061.jpg
627500-7a
Talc Particle Dil
12:38 7/22/2021
Microscopist:(b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



627500-7A, Calcium Particle



627500 FDA_068.jpg
627500-7a
Ca Particle
Cal: 0.001430 µm/pix
13:37 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

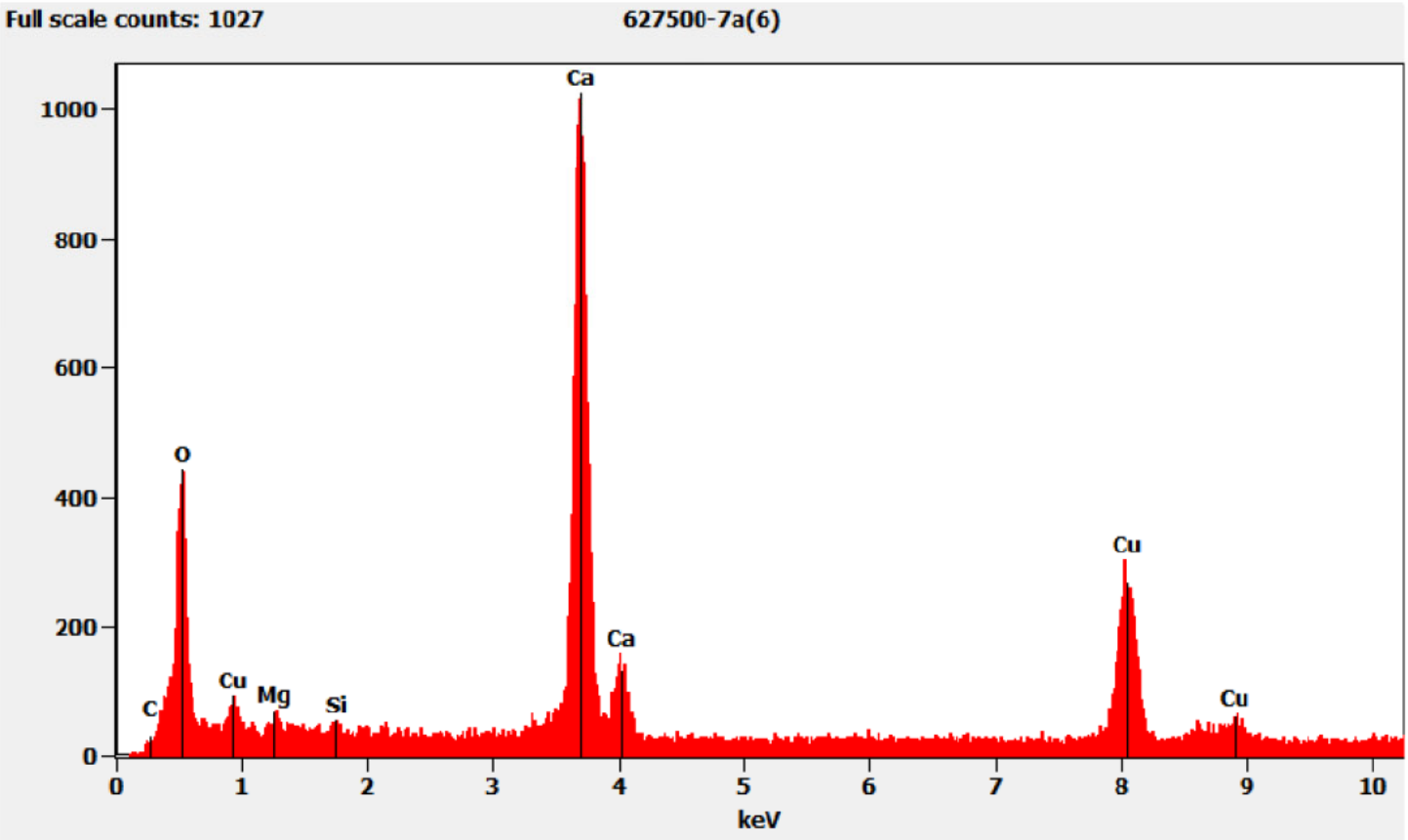
400 nm
HV=100kV
Direct Mag: 7200 x
AMA Analytical Services, Inc

Diffraction Pattern from the Calcium Particle pictured above

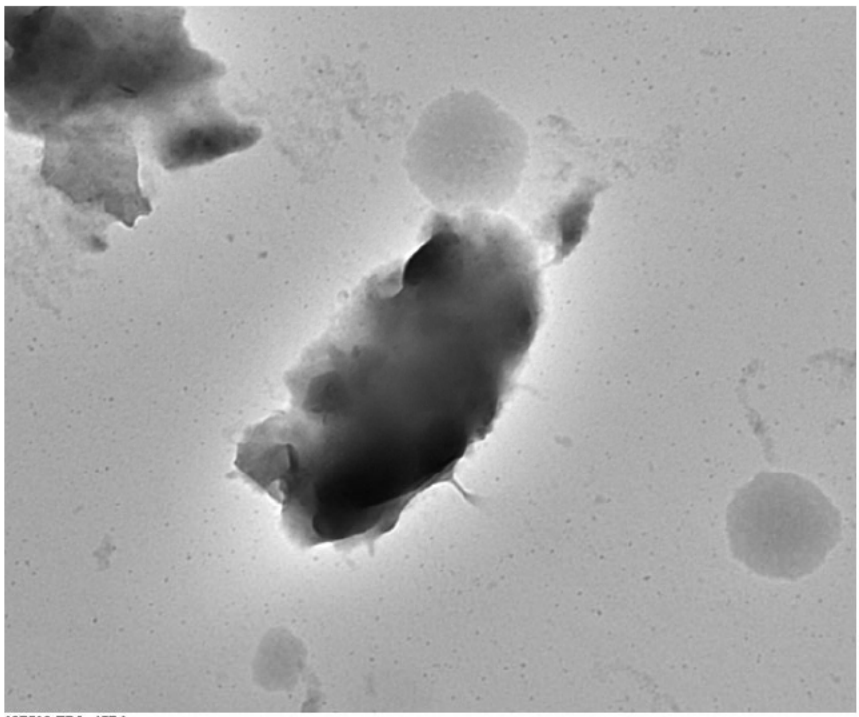
627500 FDA_067.jpg
627500-7a
Ca Particle Dif
13:35 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Calcium Particle pictured above



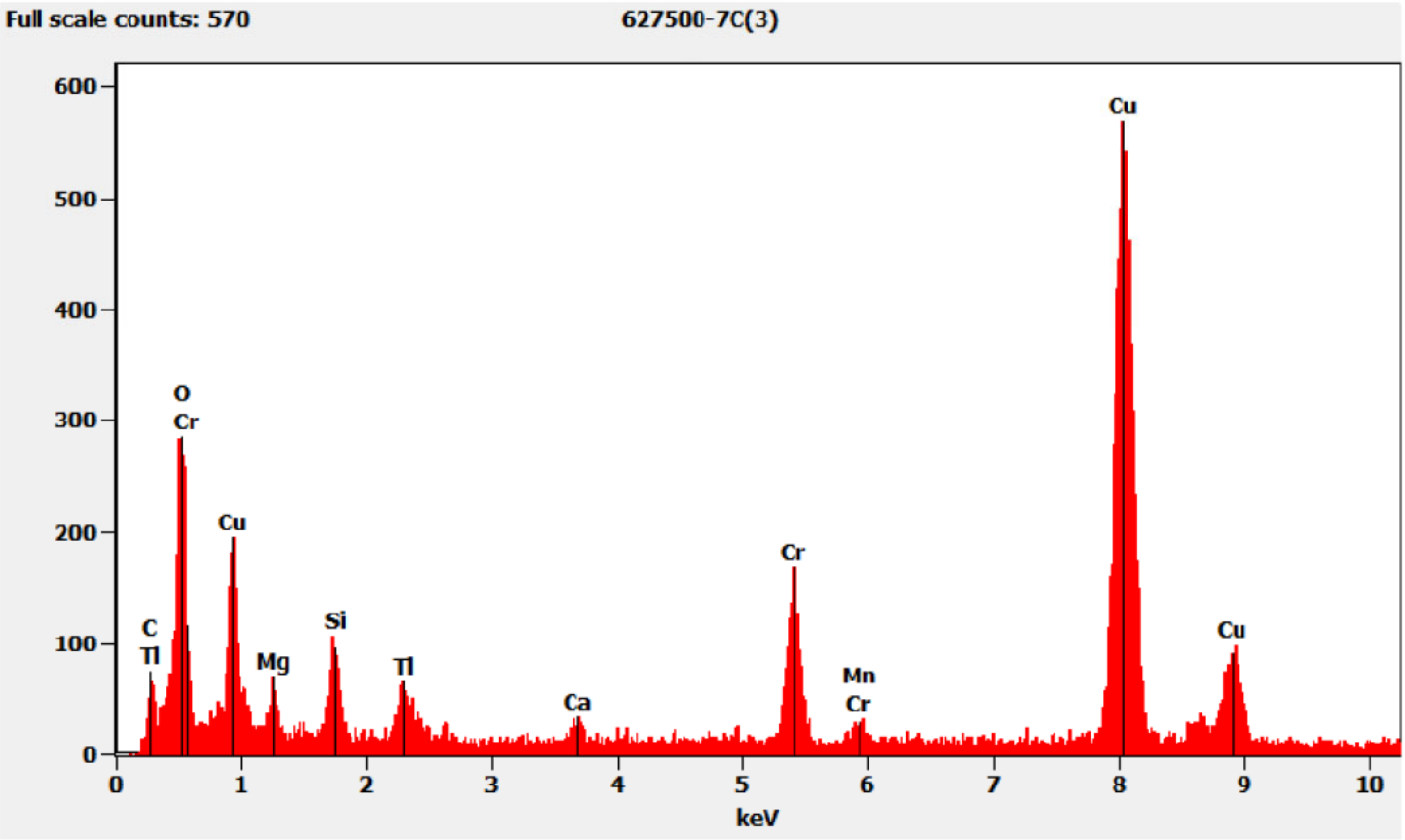
627500-7C, Chromium Particle



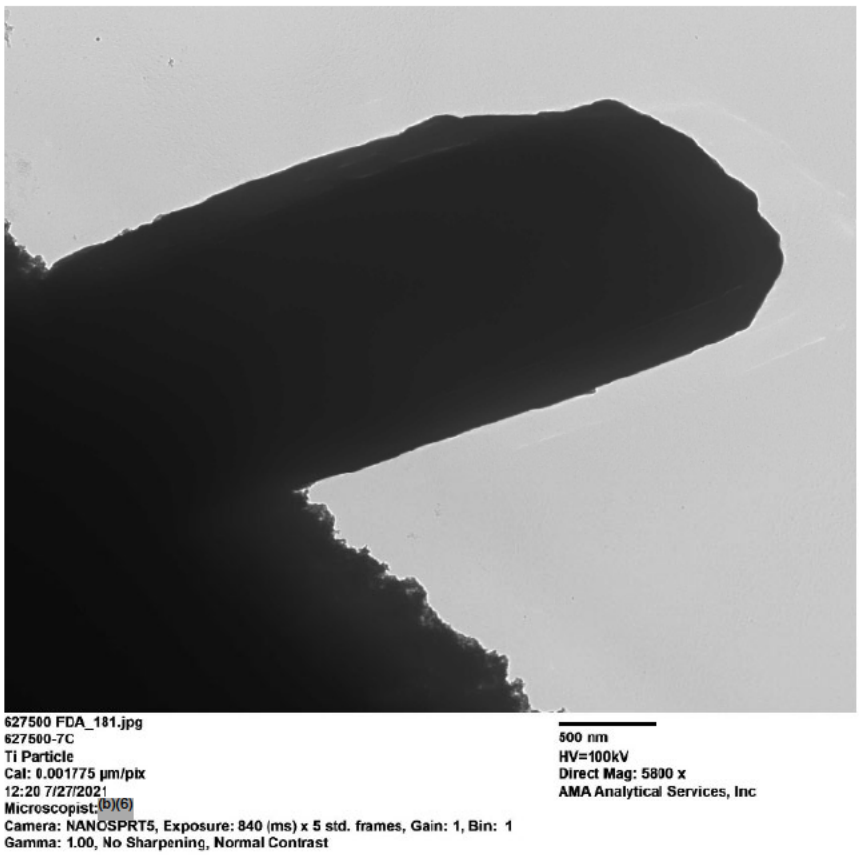
627500 FDA_177.jpg
627500-7C
Cr Particle
Cal: 0.001030 µm/pix
11:46 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

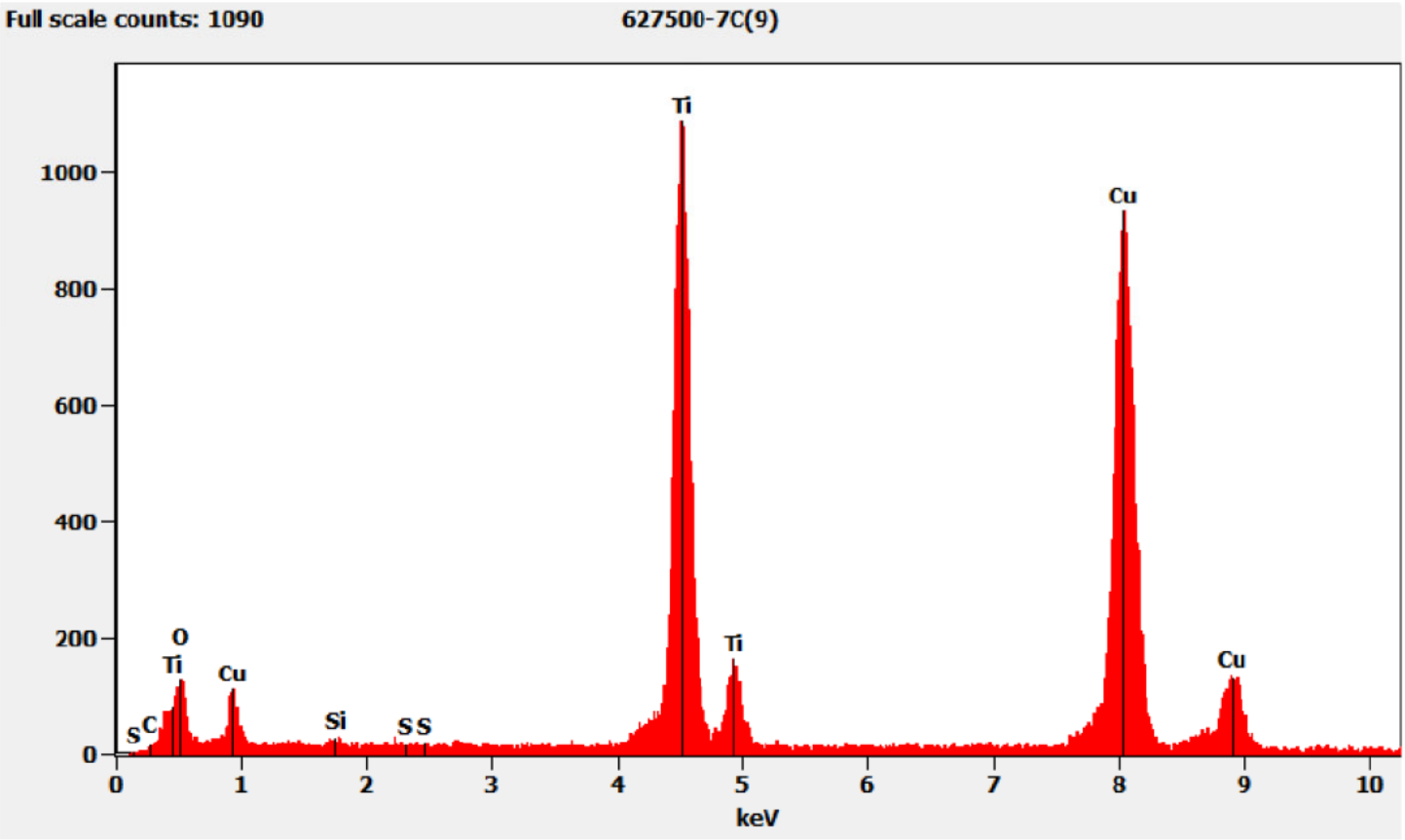
Chemistry from the Chromium Particle pictured above



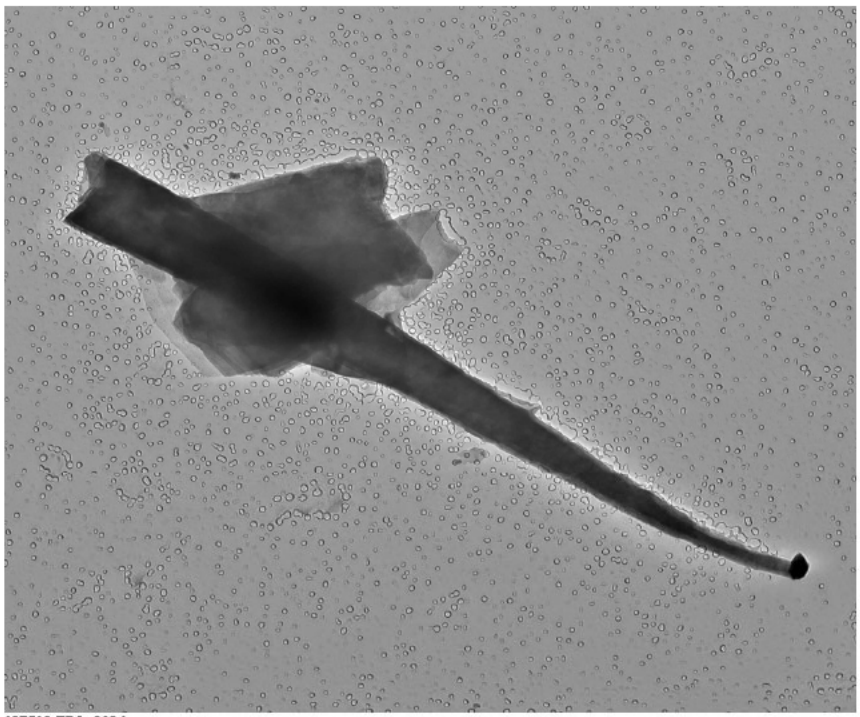
627500-7C, Titanium Particle



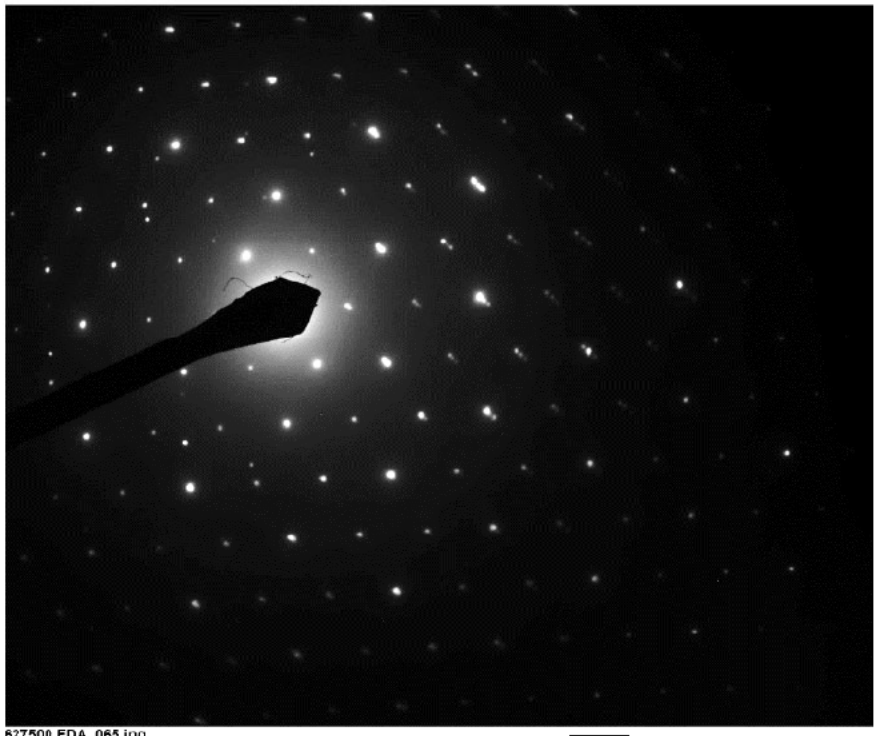
Chemistry from the Titanium Particle pictured above



627500-7A, Talc Fiber



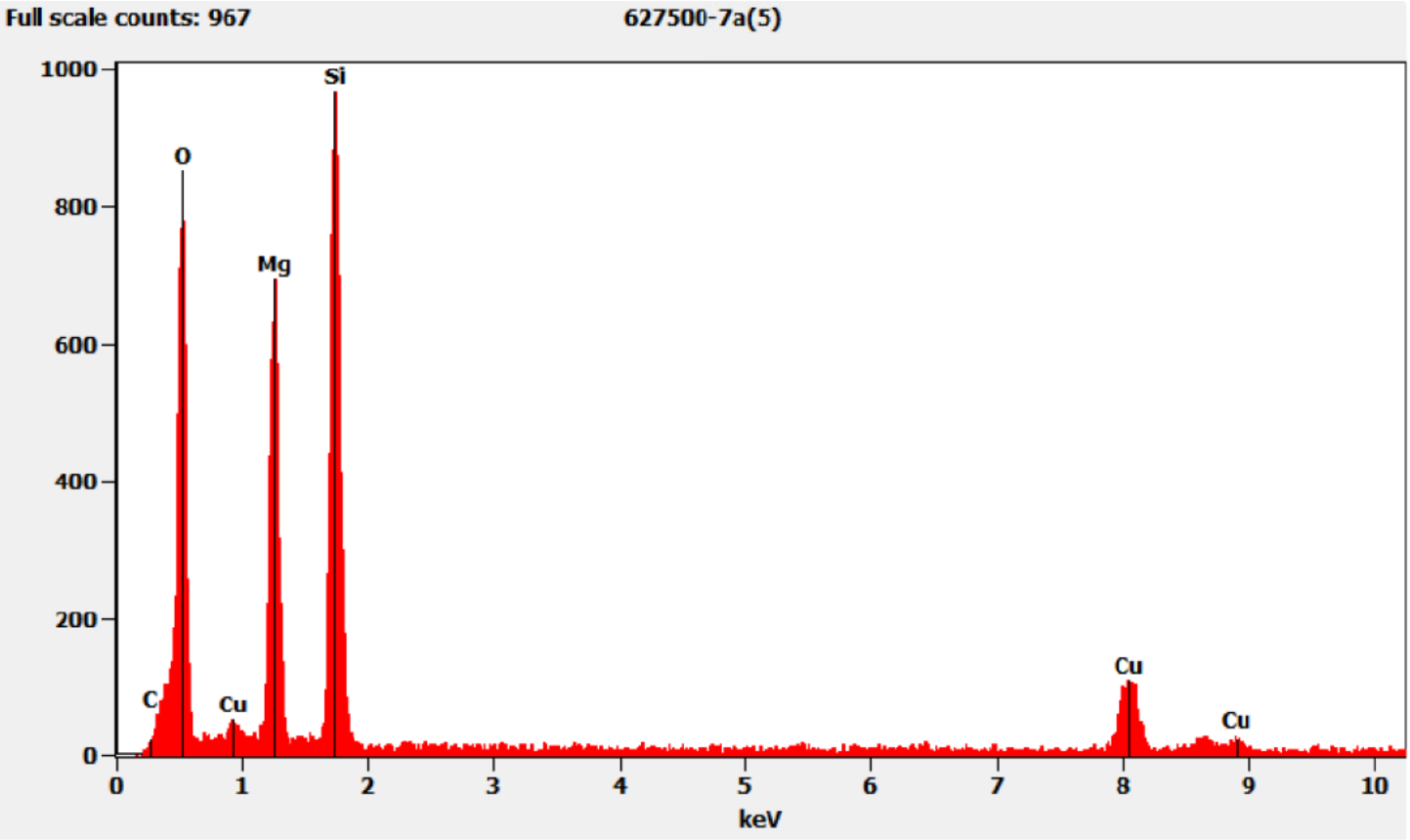
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



627500 FDA_065.jpg
627500-7a
Talc Fiber Dif
13:08 7/22/2021
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



627500-7C, Talc Ribbon

627500 FDA_184.jpg
627500-7C
Talc Ribbon
Cal: 0.001030 µm/pix
12:41 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

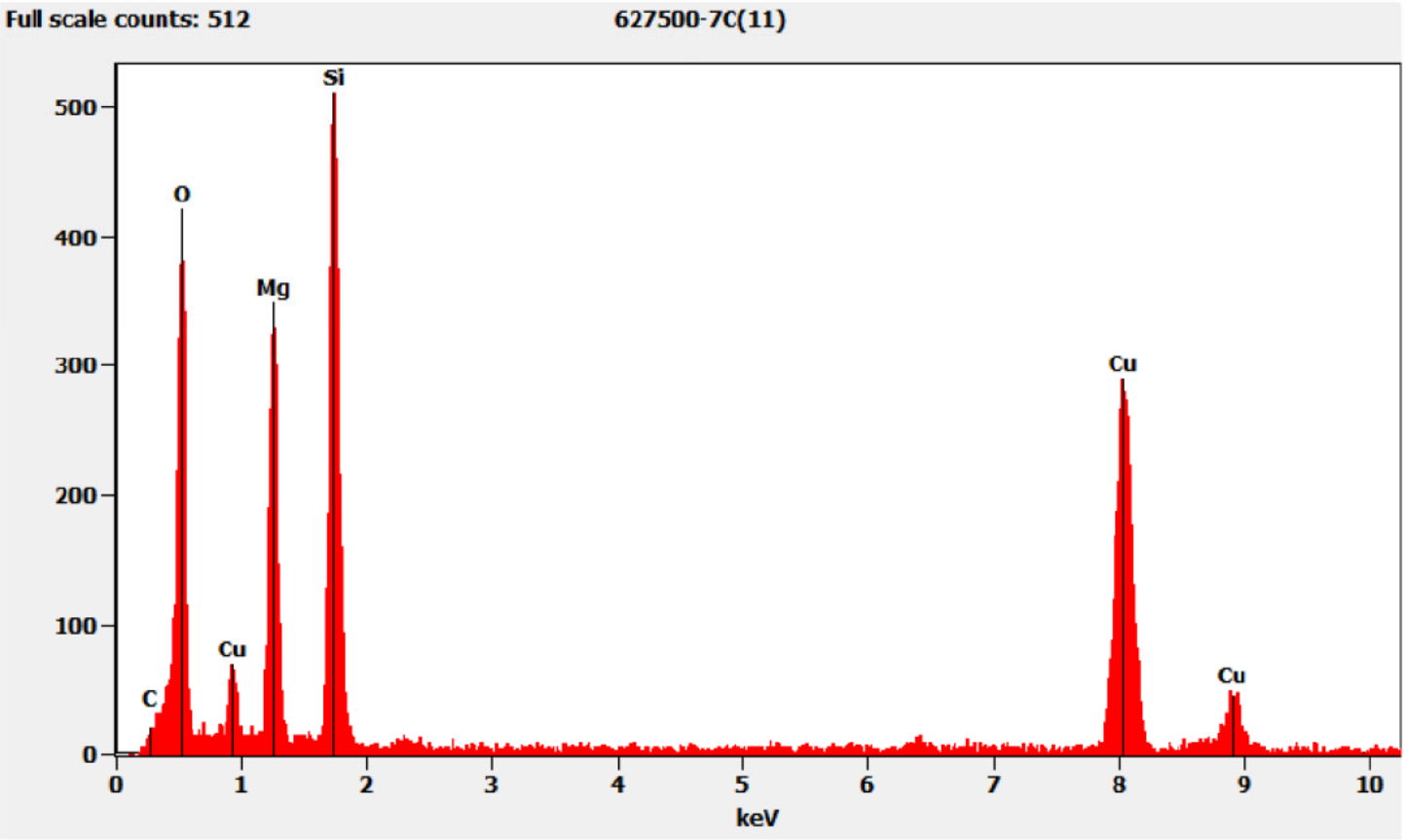
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Diffraction Pattern from the Talc Ribbon pictured above

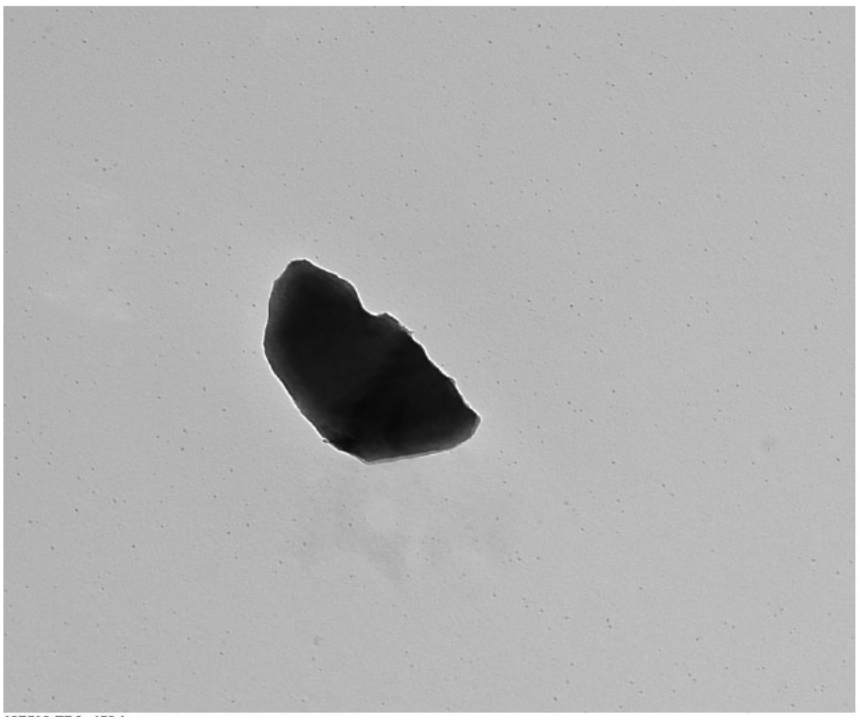
627500 FDA_183.jpg
627500-7C
Talc Ribbon Dif
12:40 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Ribbon pictured above



627500-7C, Copper Particle

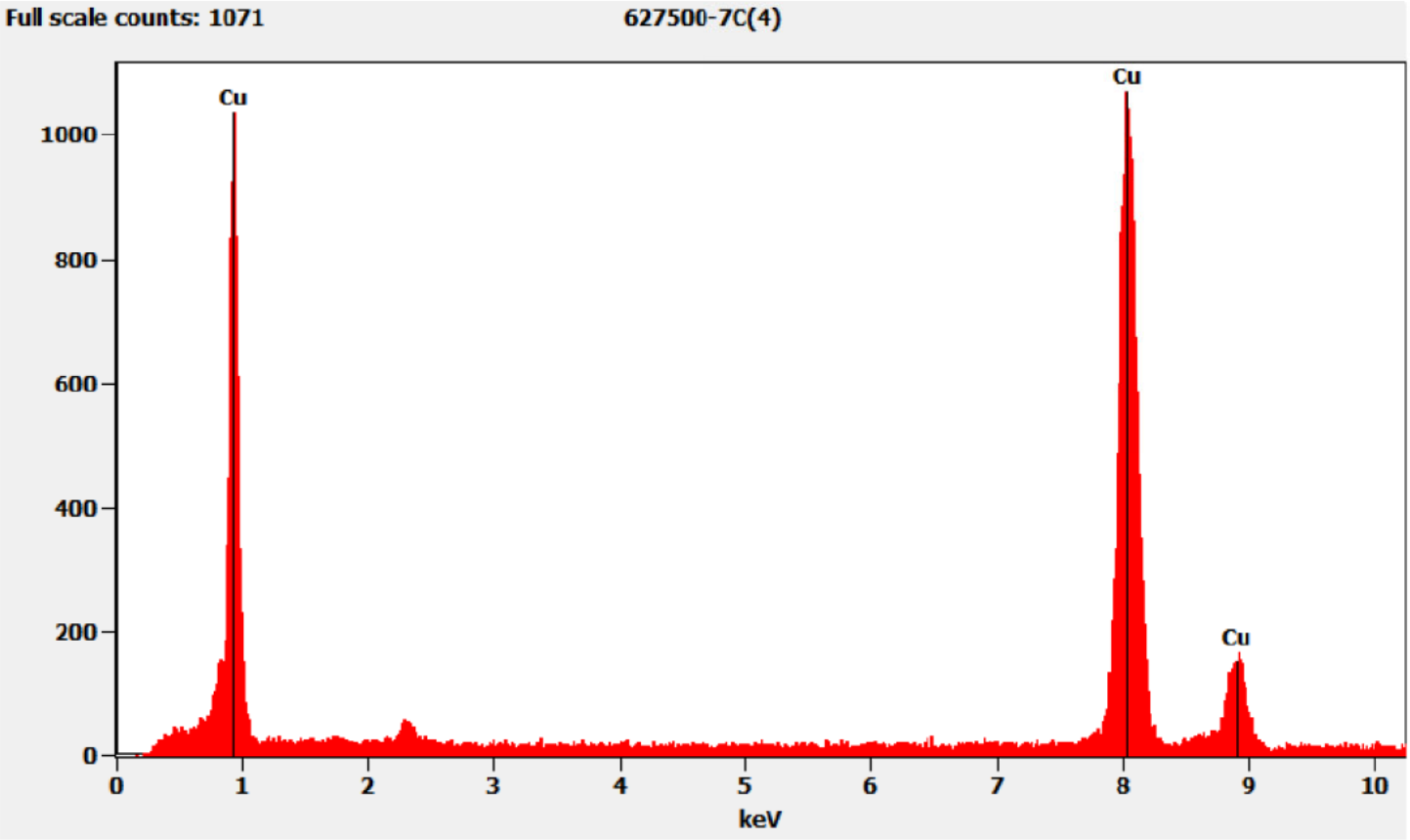


Diffraction Pattern from the Copper Particle pictured above

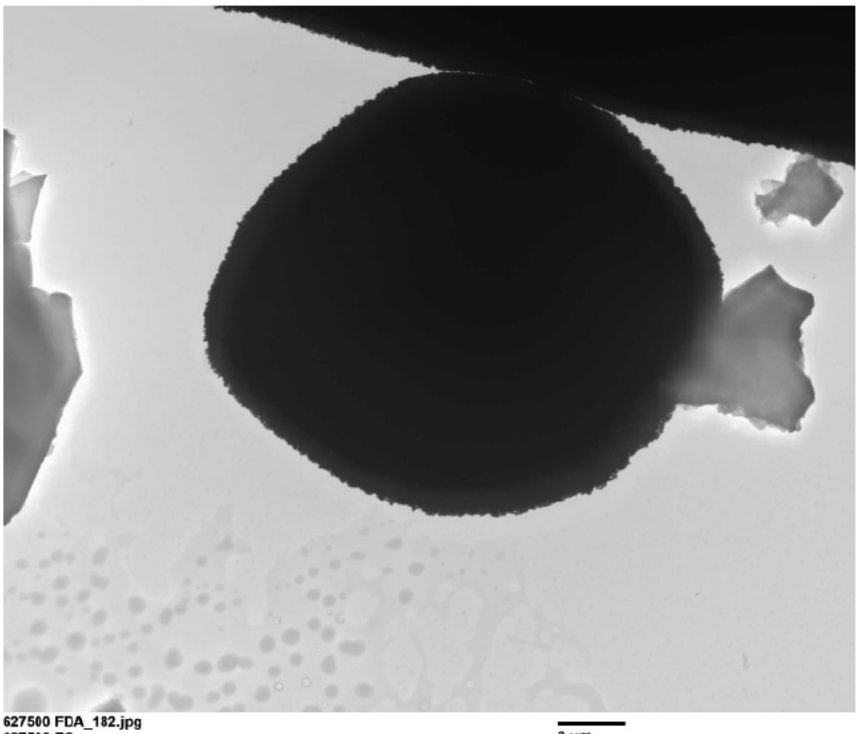
627500 FDA_178.jpg
627500-7C
Cu Particle Dif
11:49 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Copper Particle pictured above



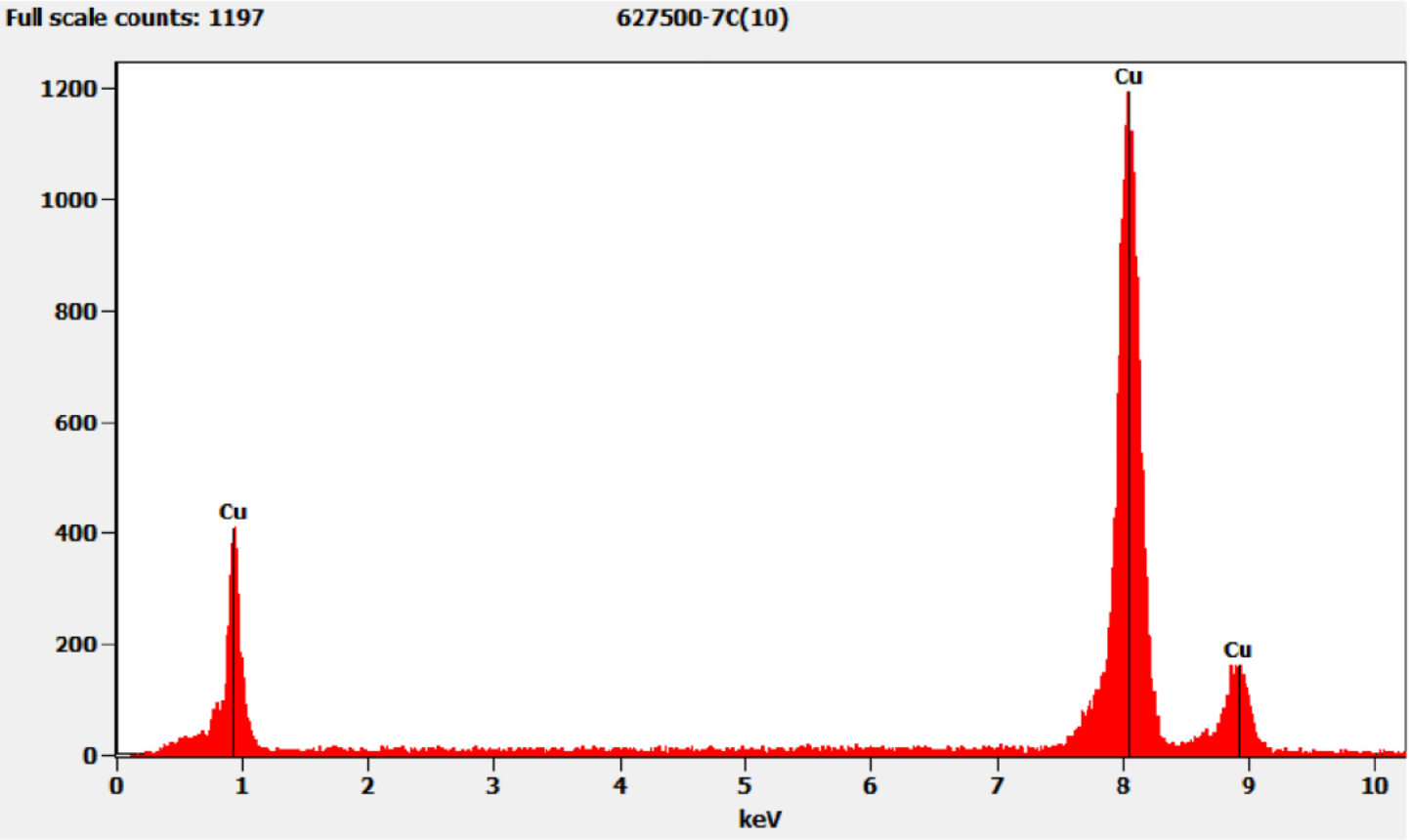
627500-7C Copper Particle



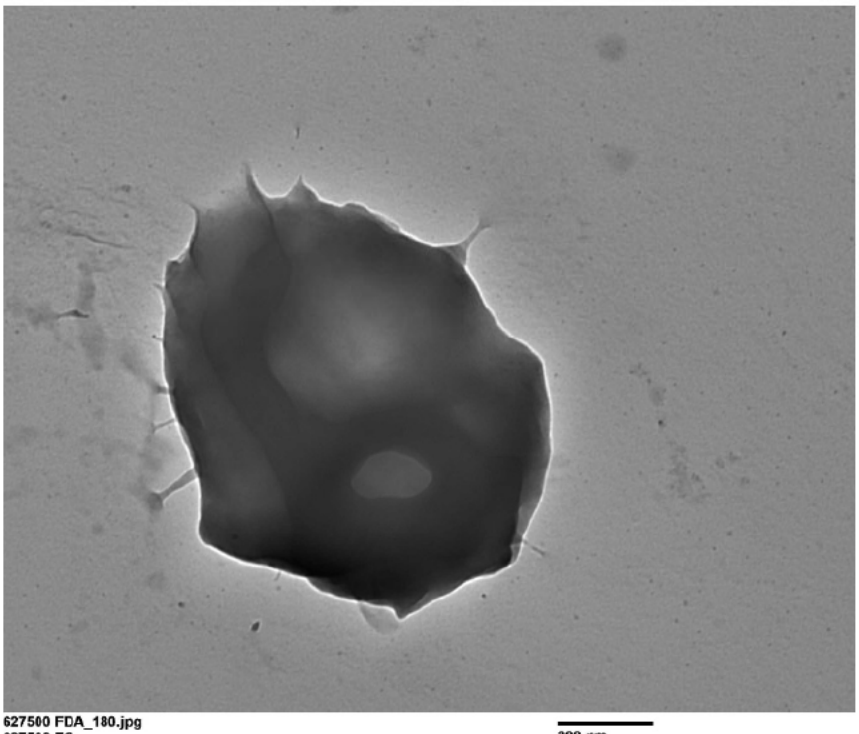
627500 FDA_182.jpg
627500-7C
Cu Particle
Cal: 0.010296 µm/pix
12:24 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Copper Particle pictured above



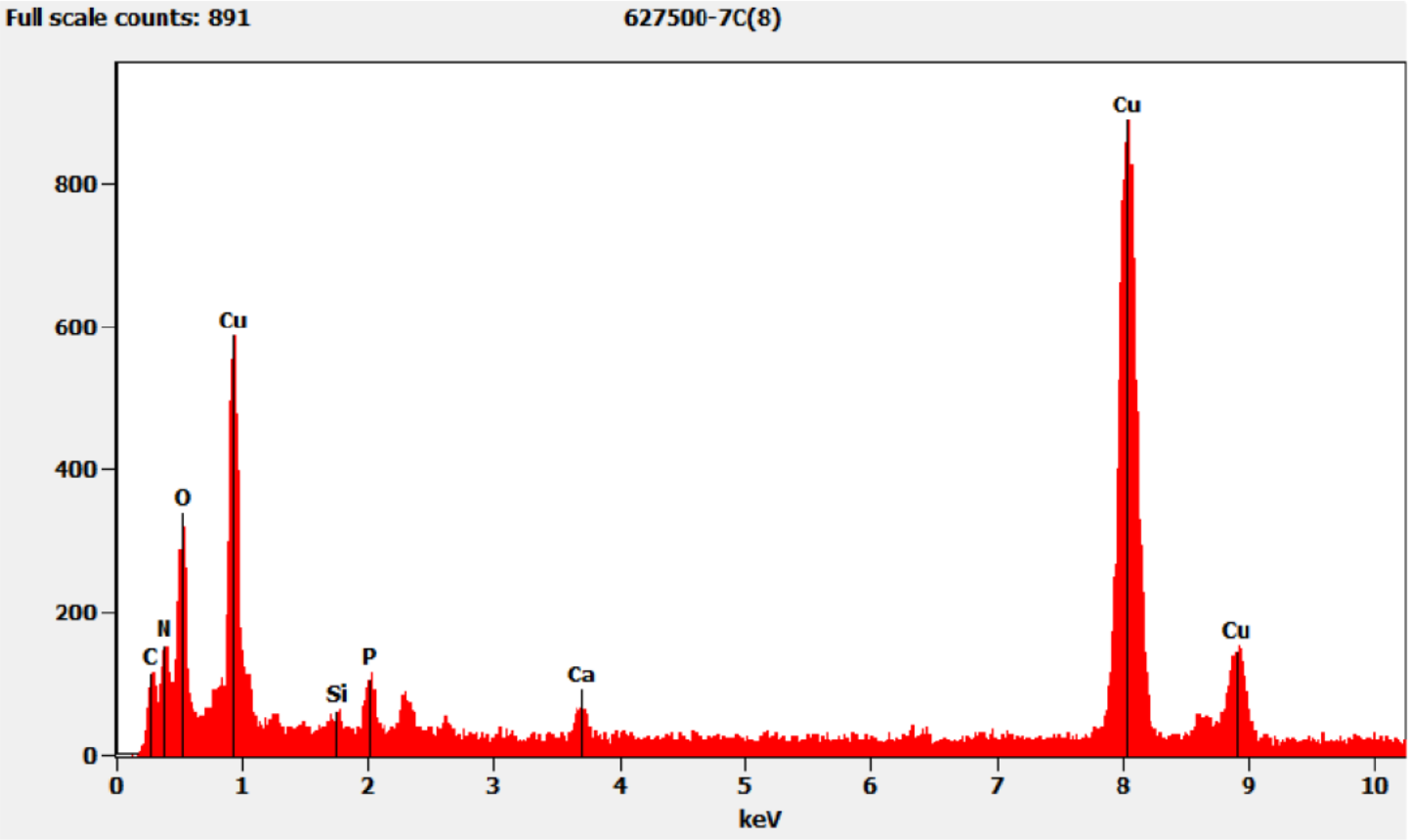
627500-7C, Particle containing Phosphorus, Silicon and Calcium



627500 FDA_180.jpg
627500-7C
PSCa Particle
Cal: 0.726816 nm/pix
12:09 7/27/2021
Microscopist (b)(6)
Camera: NANOSPR15, 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

Chemistry from the Particle containing Phosphorus, Silicon and Calcium pictured above



627500-8A, 8B, 8C/Client Sample: 04272021-8

PLM

All three aliquots of sample 04272021-8 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-8A	No Asbestos Detected
627500-8B	No Asbestos Detected
627500-8C	No Asbestos Detected

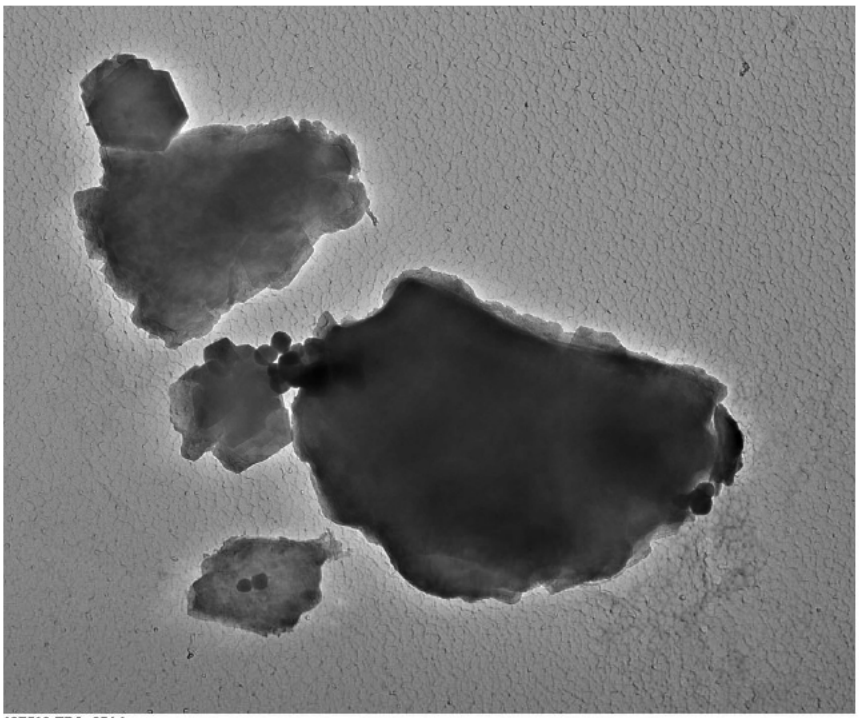
TEM

(b)(6) analyzed aliquot 8A on July 22, 2021. Andreas Saldivar analyzed aliquots 8B and 8C on July 23, 2021. The primary particles observed was talc; titanium particles were also observed along with a few talc fibers/ribbons and particles containing silicon (and other trace elements). No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-8A	No Asbestos Detected
627500-8B	No Asbestos Detected
627500-8C	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 chemistry spectra are zinc and carbon from the TEM specimen holder.

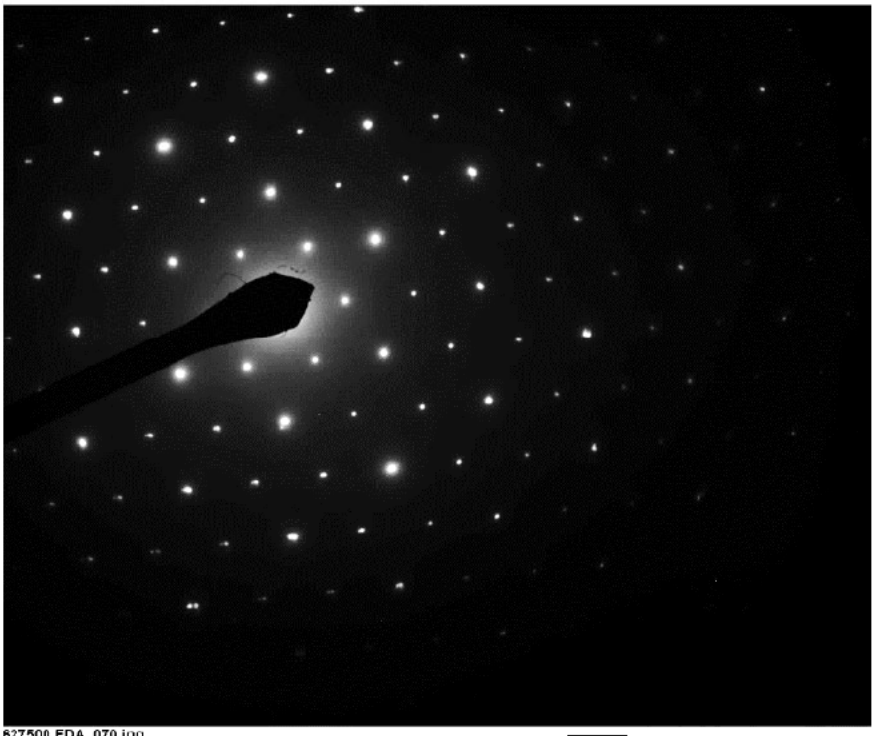
627500-8A, Talc Particle



627500 FDA_071.jpg
627500-8a
Talc Particle
Cal: 0.002860 µm/pix
14:12 7/22/2021
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

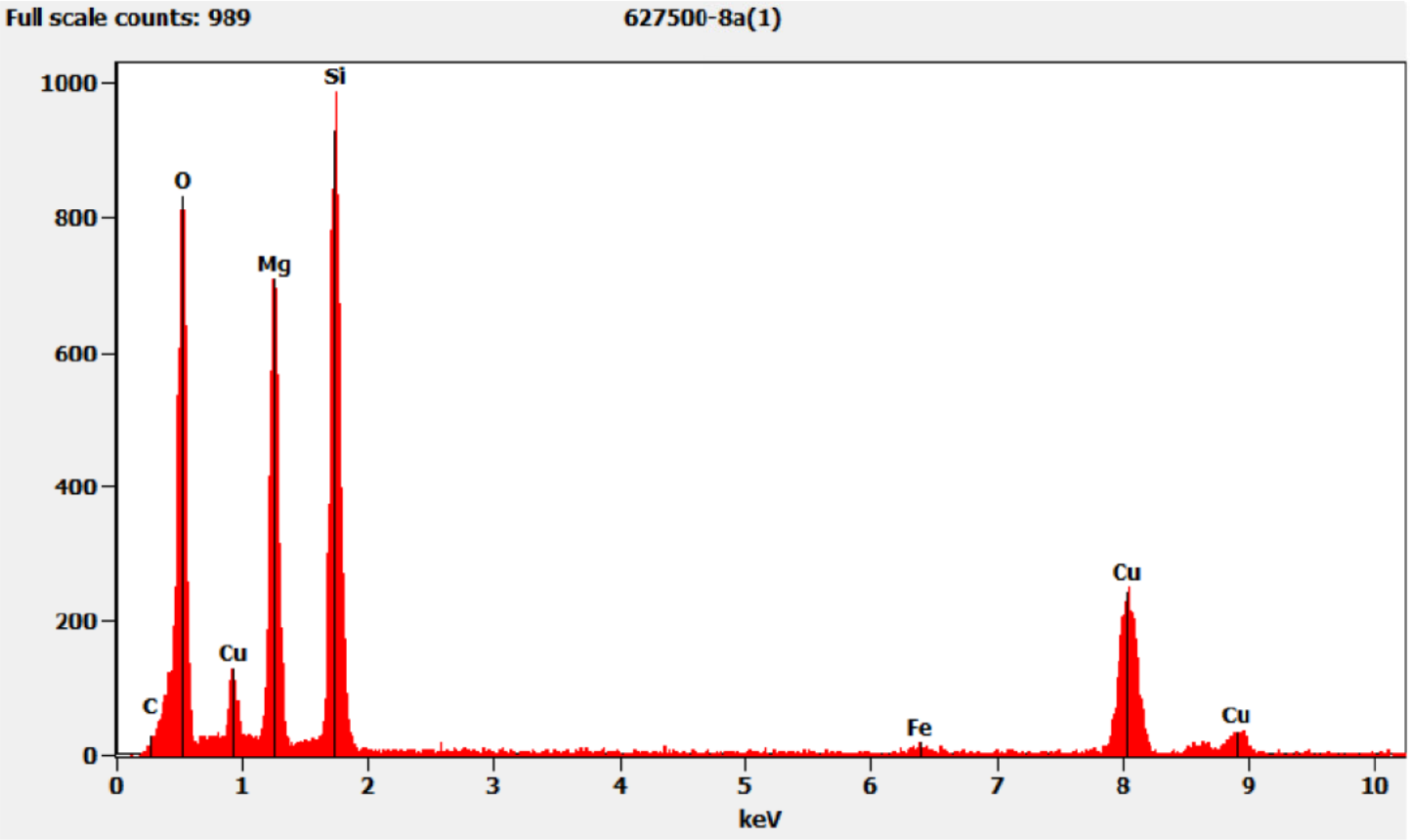
Hexagonal Diffraction Pattern from the Talc Particle pictured above



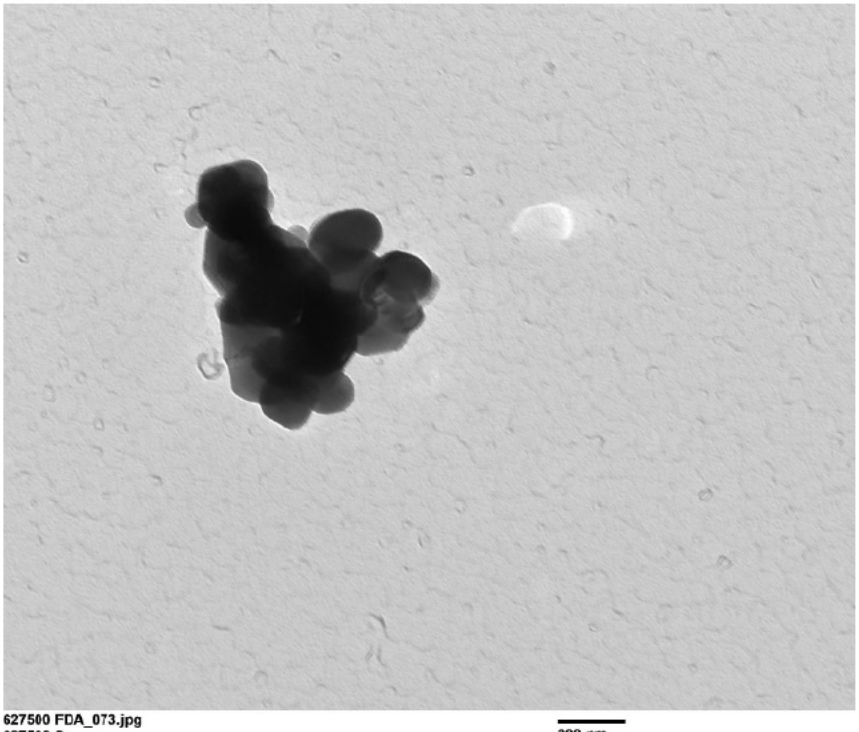
627500 FDA_070.jpg
627500-8a
Talc Particle DII
14:11 7/22/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



627500-8A, Titanium Particles



627500 FDA_073.jpg
627500-8a
Ti Particle
Cal: 0.001030 µm/pix
14:16 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

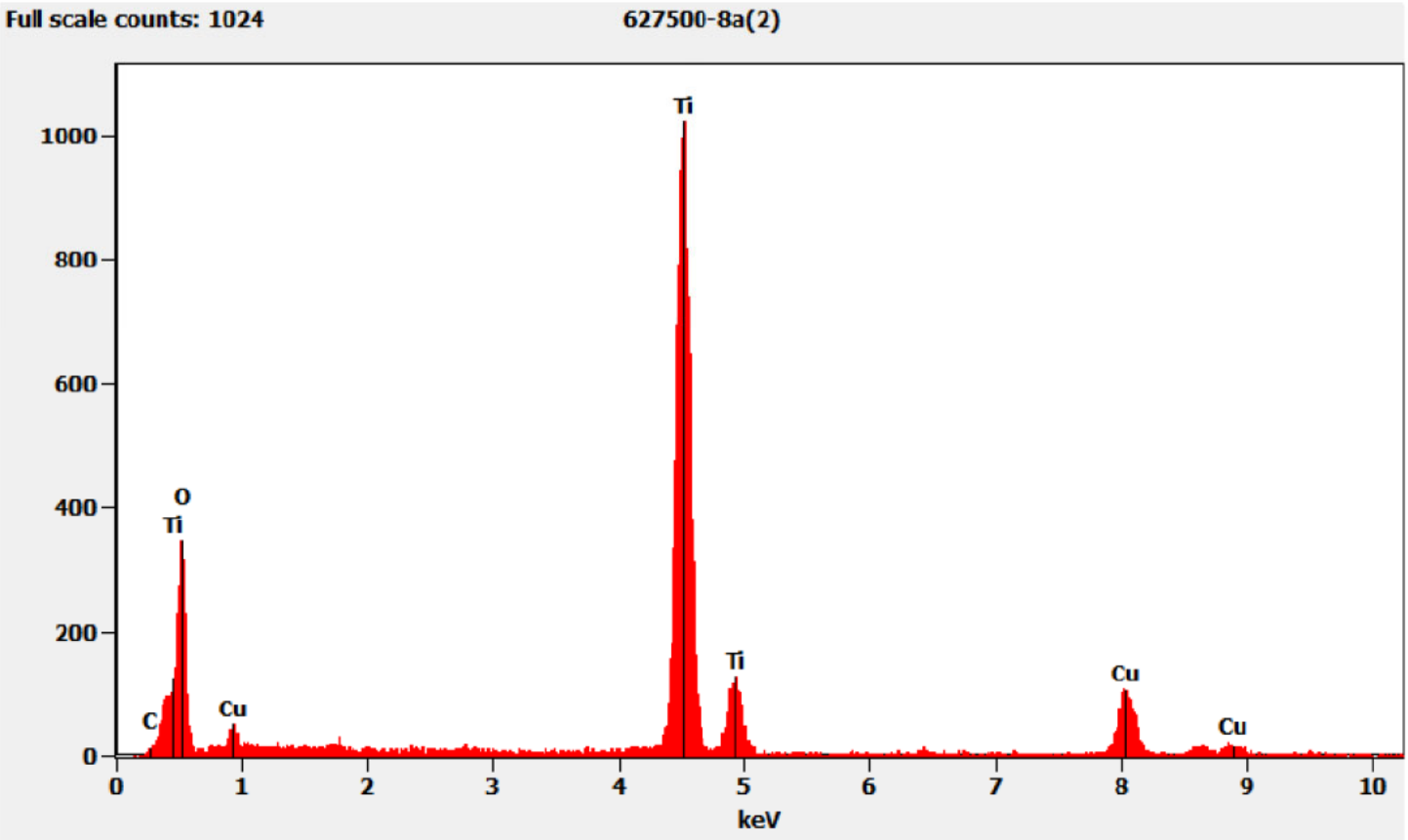
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Diffraction Pattern from Titanium Particles pictured above

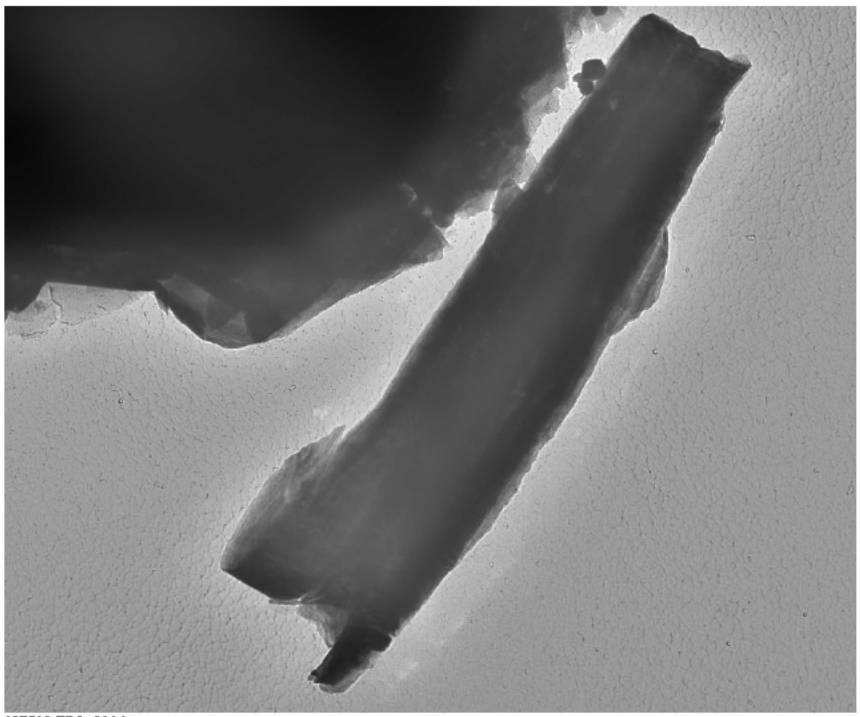
627500 FDA_072.jpg
627500-8a
Ti Particle Dif
14:15 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Titanium Particles pictured above



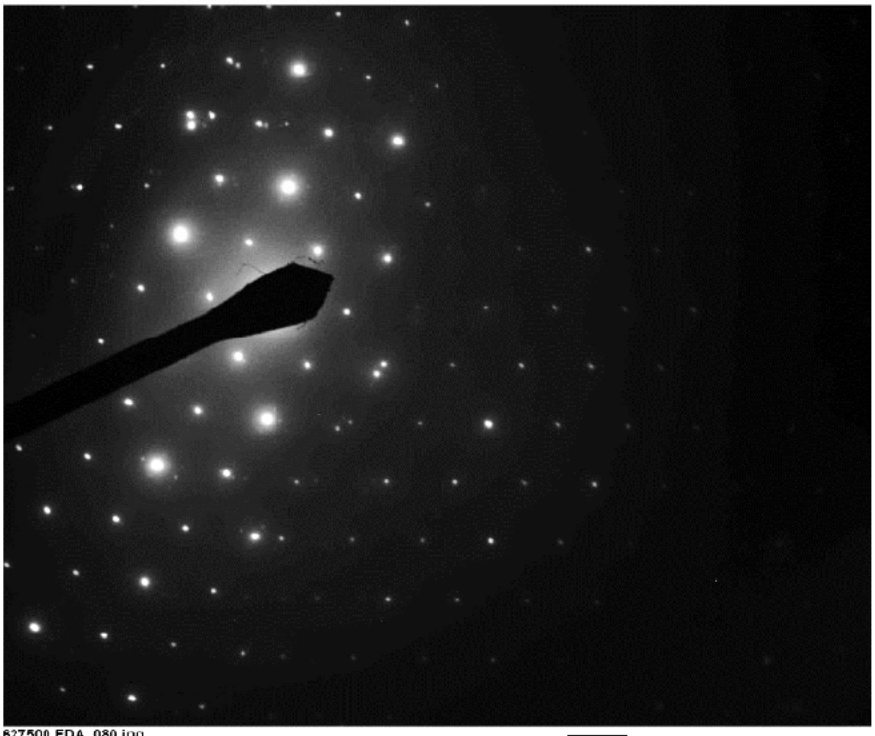
627500-8A, Talc Fiber



627500 FDA_081.jpg
627500-8a
Talc Fiber
Cal: 0.002860 µm/pix
15:17 7/22/2021
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

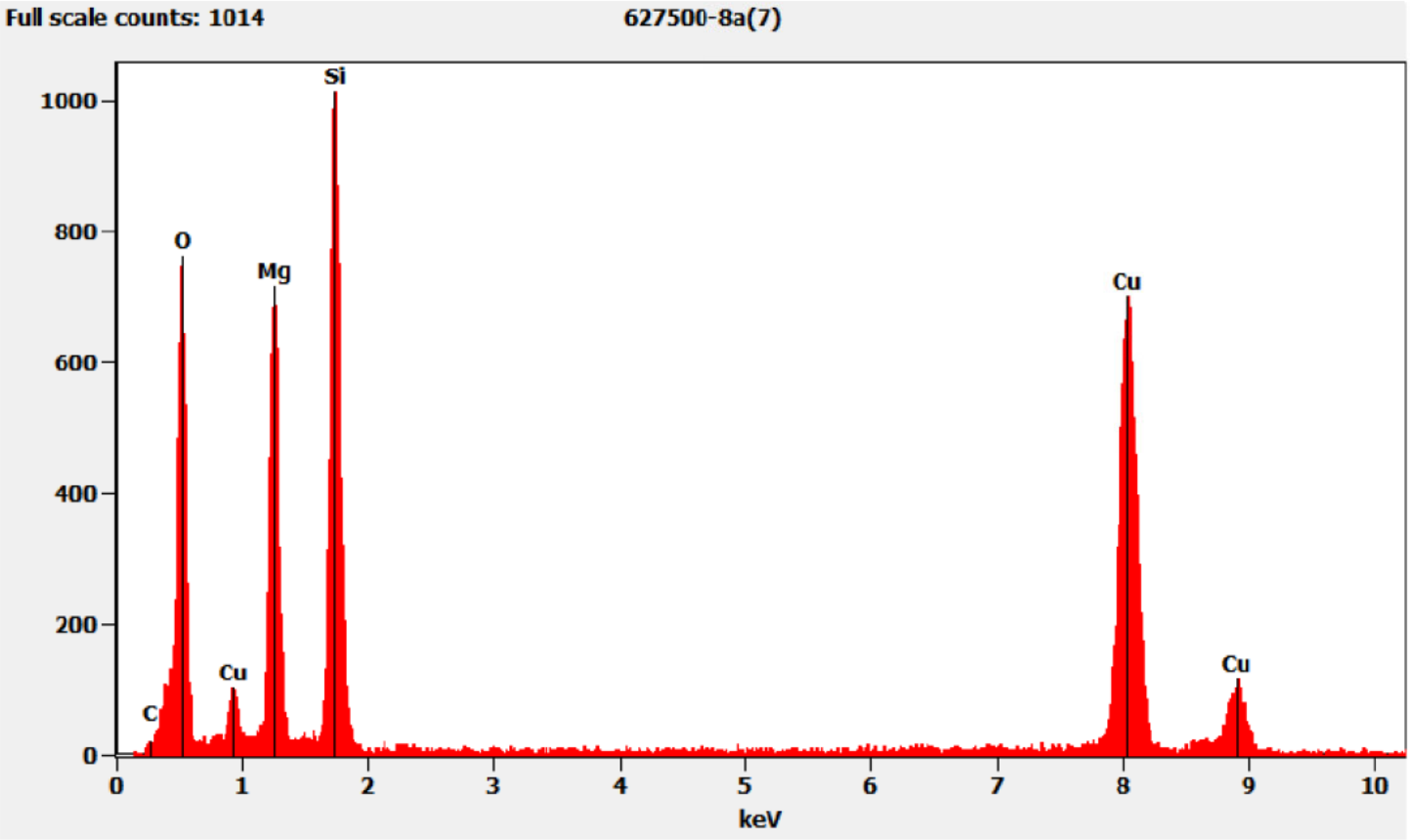
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



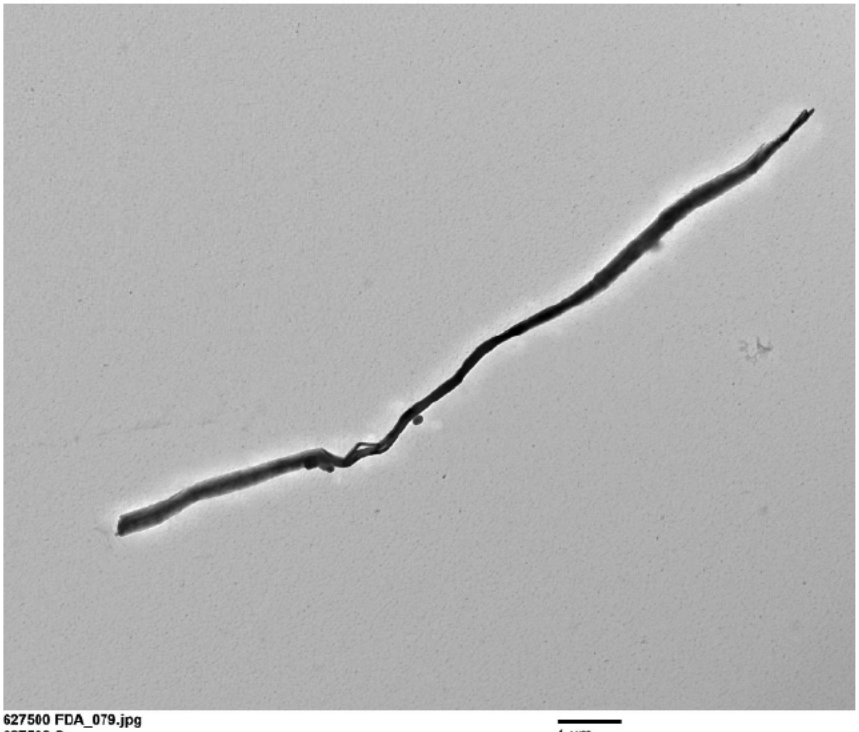
627500 FDA_080.jpg
627500-8a
Talc Fiber Dif
15:16 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



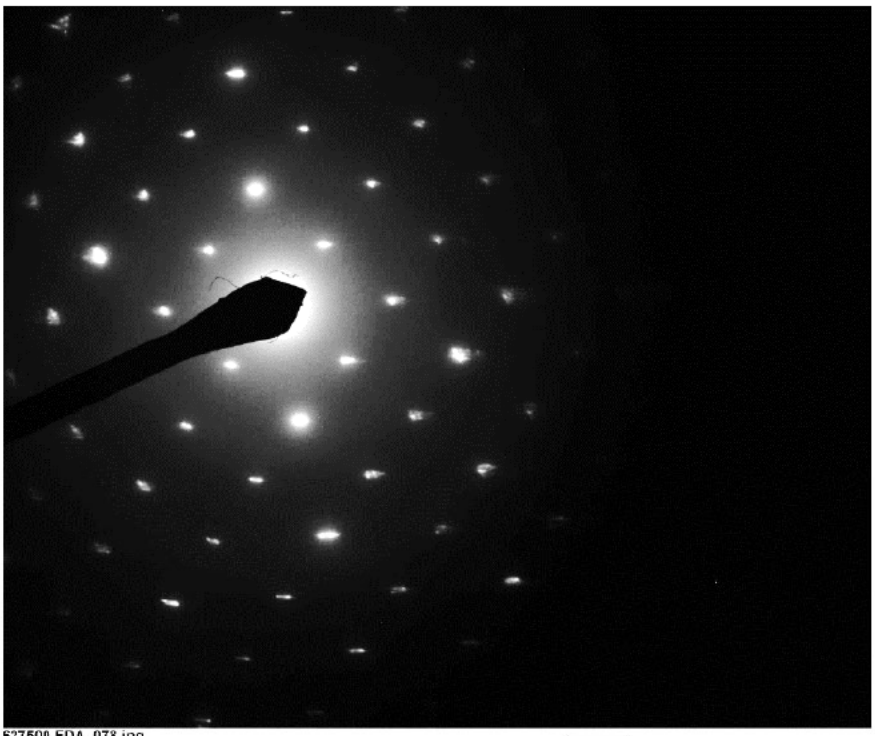
627500-8A, Talc Ribbon



627500 FDA_079.jpg
627500-8a
Talc Ribbon
Cal: 0.005419 µm/pix
15:14 7/22/2021
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

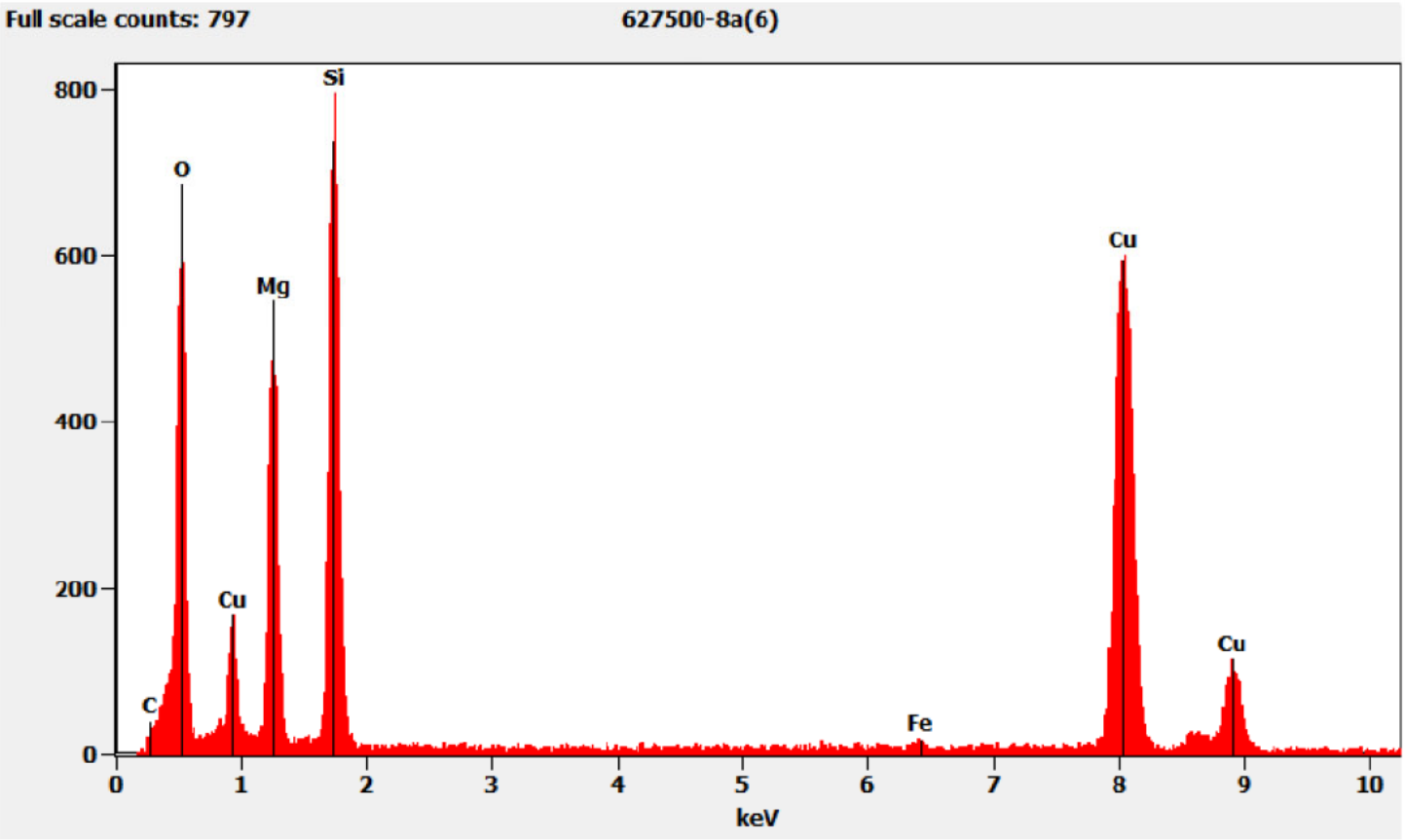
Diffraction Pattern from the Talc Ribbon pictured above



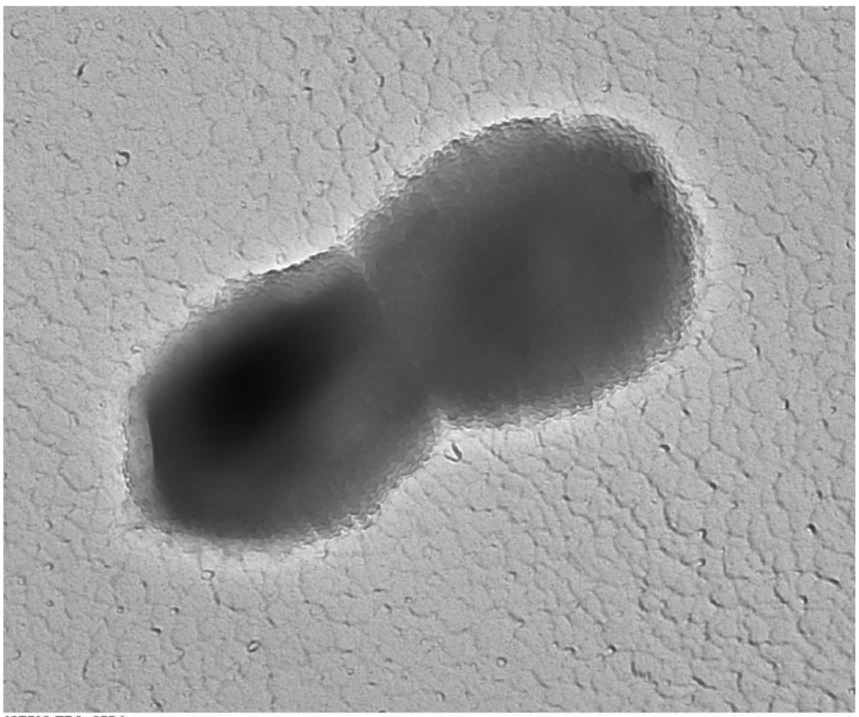
627500 FDA_078.jpg
627500-8a
Talc Ribbon Dif
15:13 7/22/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Ribbon pictured above



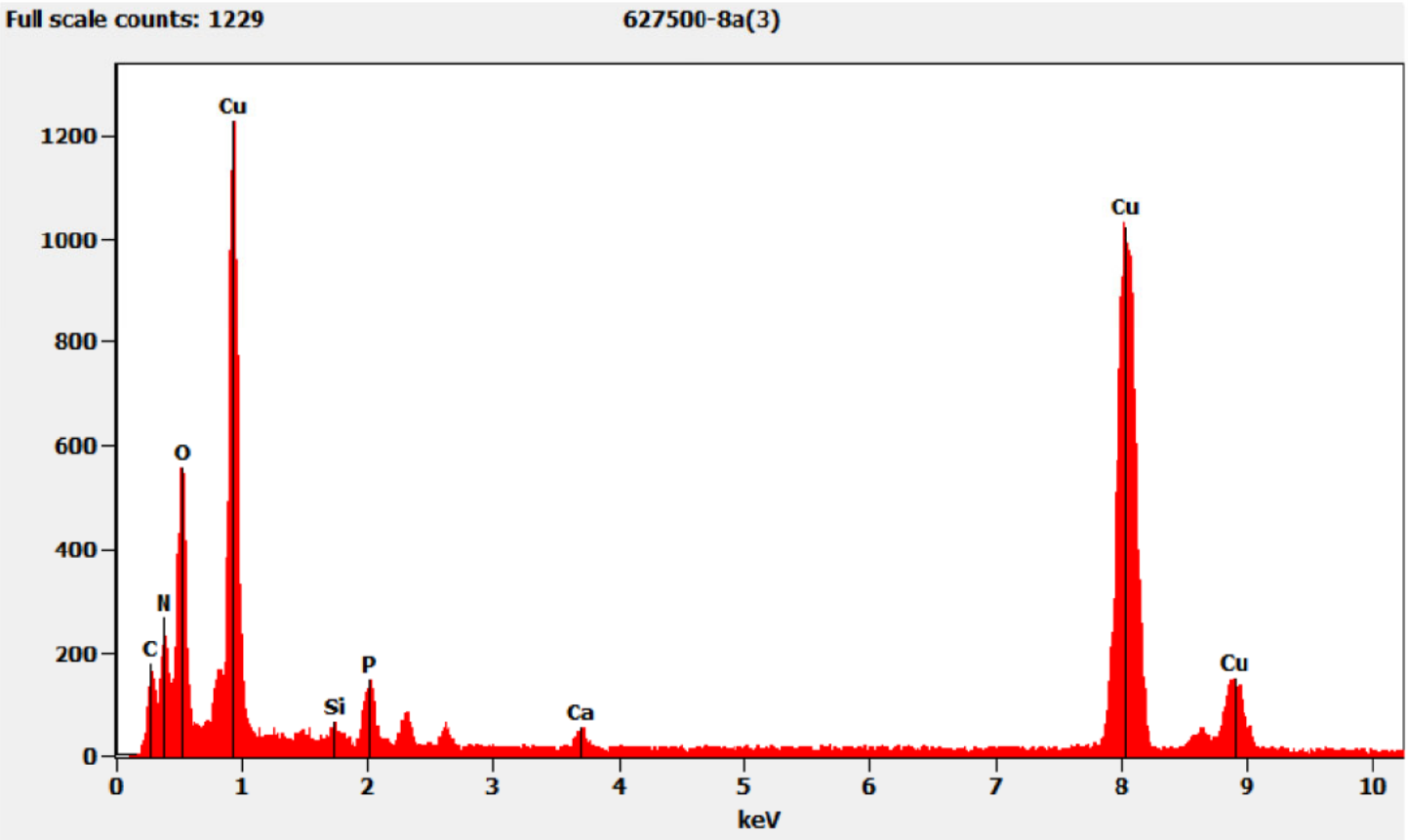
627500-8A, Particle Containing Phosphorus, Silicon and Calcium



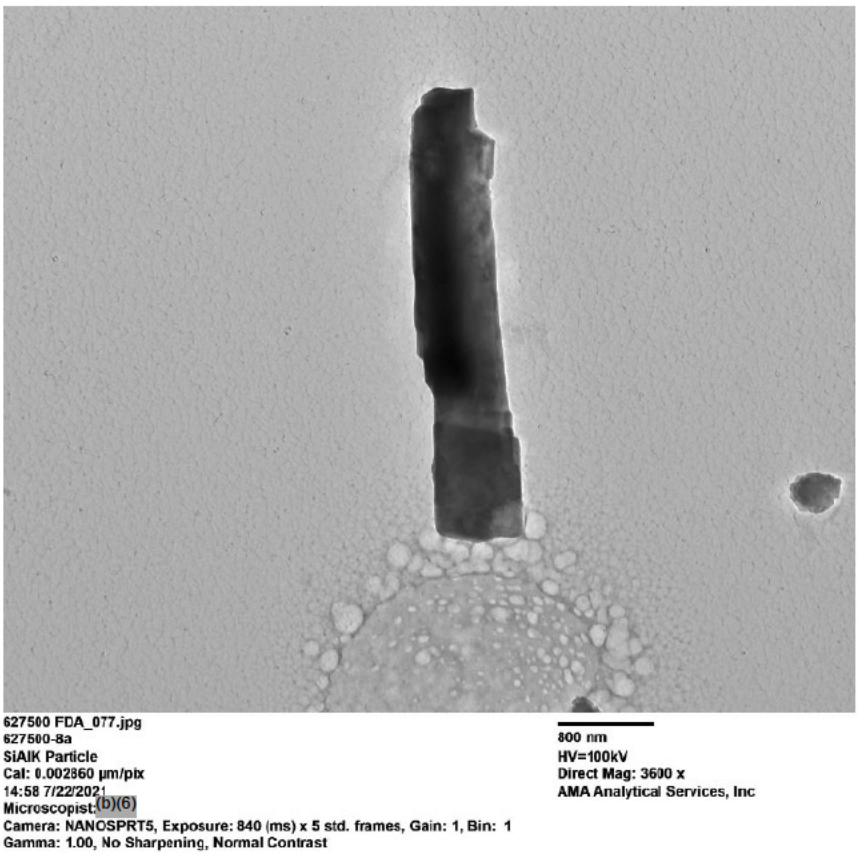
627500 FDA_075.jpg
627500-8a
OPNSiCa Particle
Cal: 0.001030 µm/pix
14:39 7/22/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

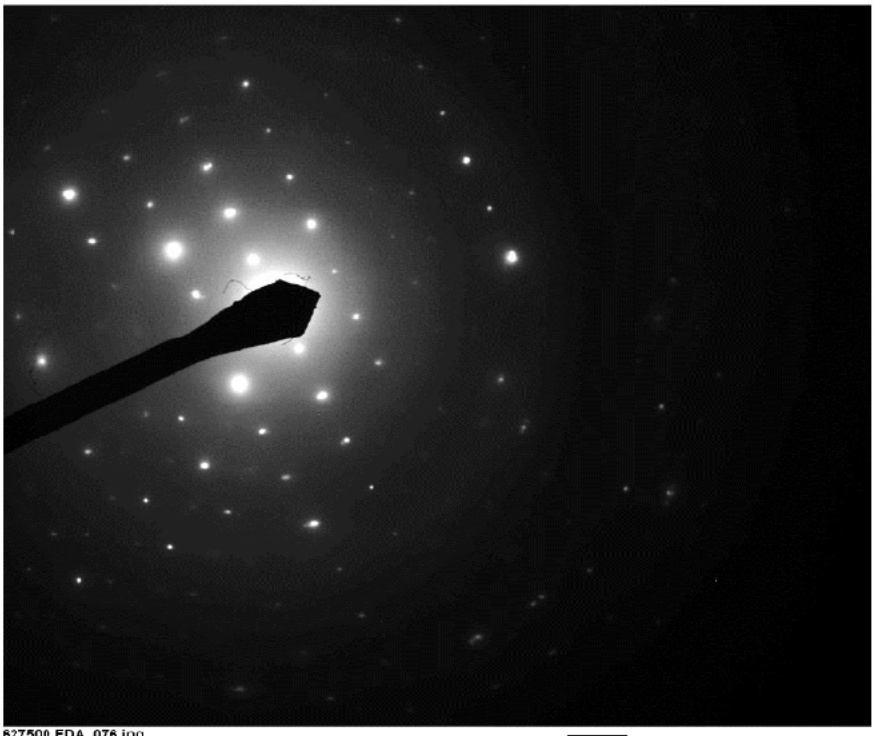
Chemistry from the Particle Containing Phosphorus, Silicon and Calcium pictured above



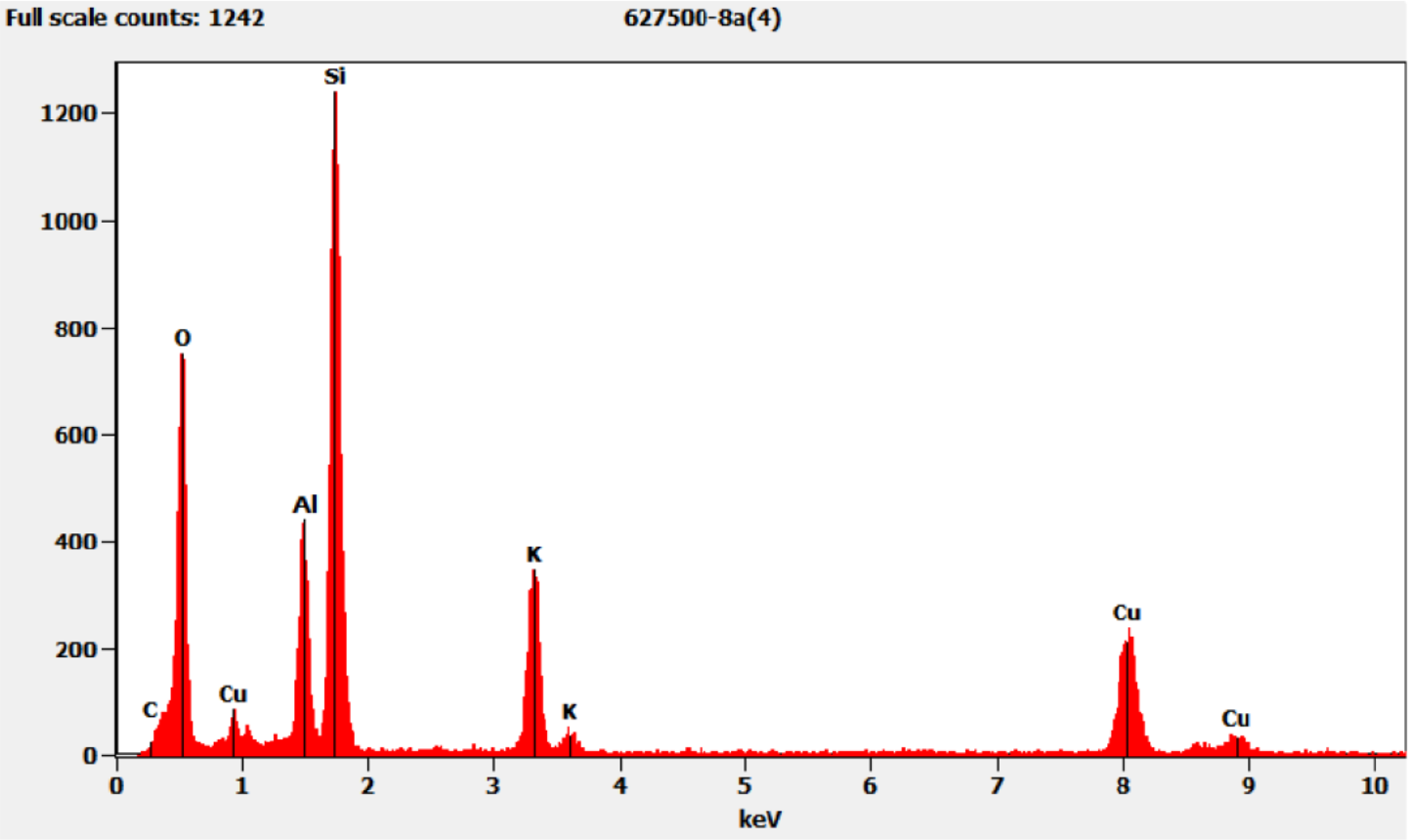
627500-8A, Particle Containing Aluminum, Silicon and Potassium



Diffraction Pattern from the Particle Containing Aluminum, Silicon and Potassium pictured above



Chemistry from the Particle Containing Aluminum, Silicon and Potassium pictured above



627500-9A, 9B, 9C/Client Sample: 04272021-9

PLM

All three aliquots of sample 04272021-9 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-9A	No Asbestos Detected
627500-9B	No Asbestos Detected
627500-9C	No Asbestos Detected

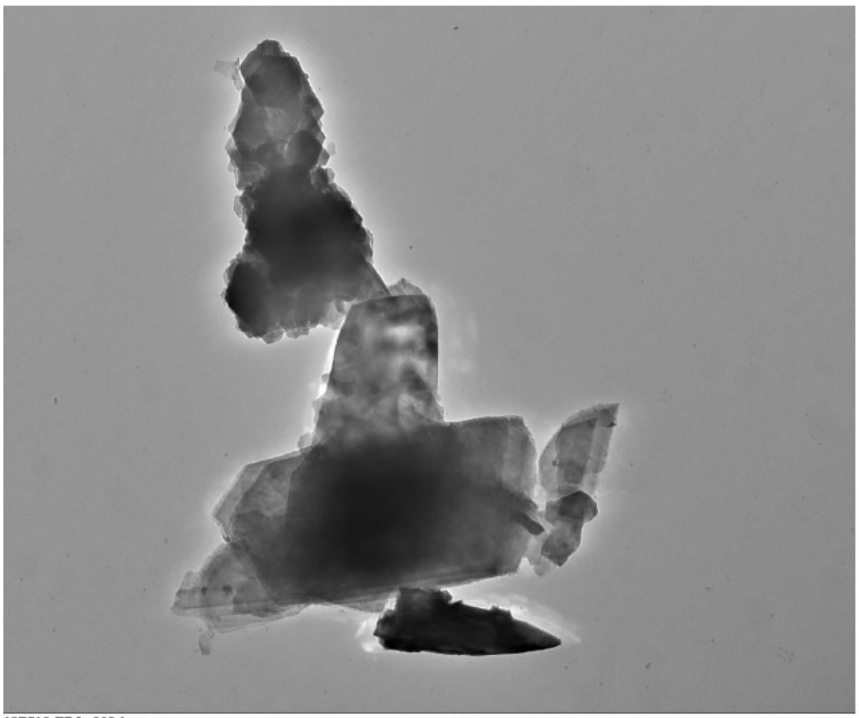
TEM

(b)(6) analyzed aliquot 9A on July 22, 2021, aliquot 9B on July 23, 2021 and aliquot 9C on July 26, 2021. The primary particle observed was talc; talc fibers/ribbons and mica were also observed along with a few calcium particles, silica particles, and particles containing aluminum and silicon (and other trace elements). No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-9A	No Asbestos Detected
627500-9B	No Asbestos Detected
627500-9C	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 chemistry spectra are zinc and carbon from the TEM specimen holder.

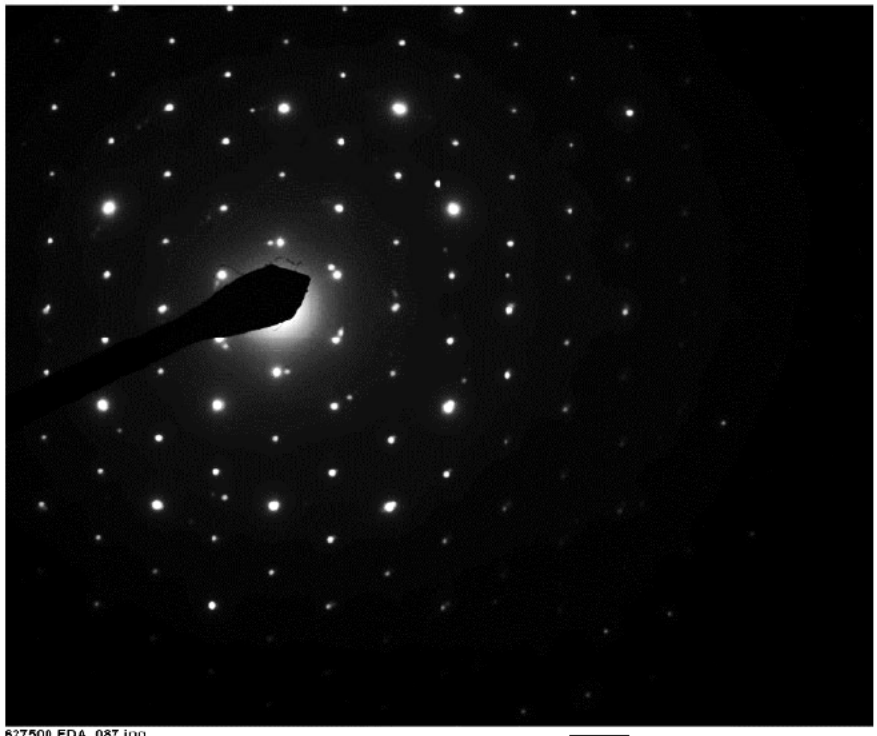
627500-9A, Talc Particle with Aluminum



627500 FDA_088.jpg
627500-9a
Talc Particle w/Al
Cal: 0.002860 µm/pix
16:15 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

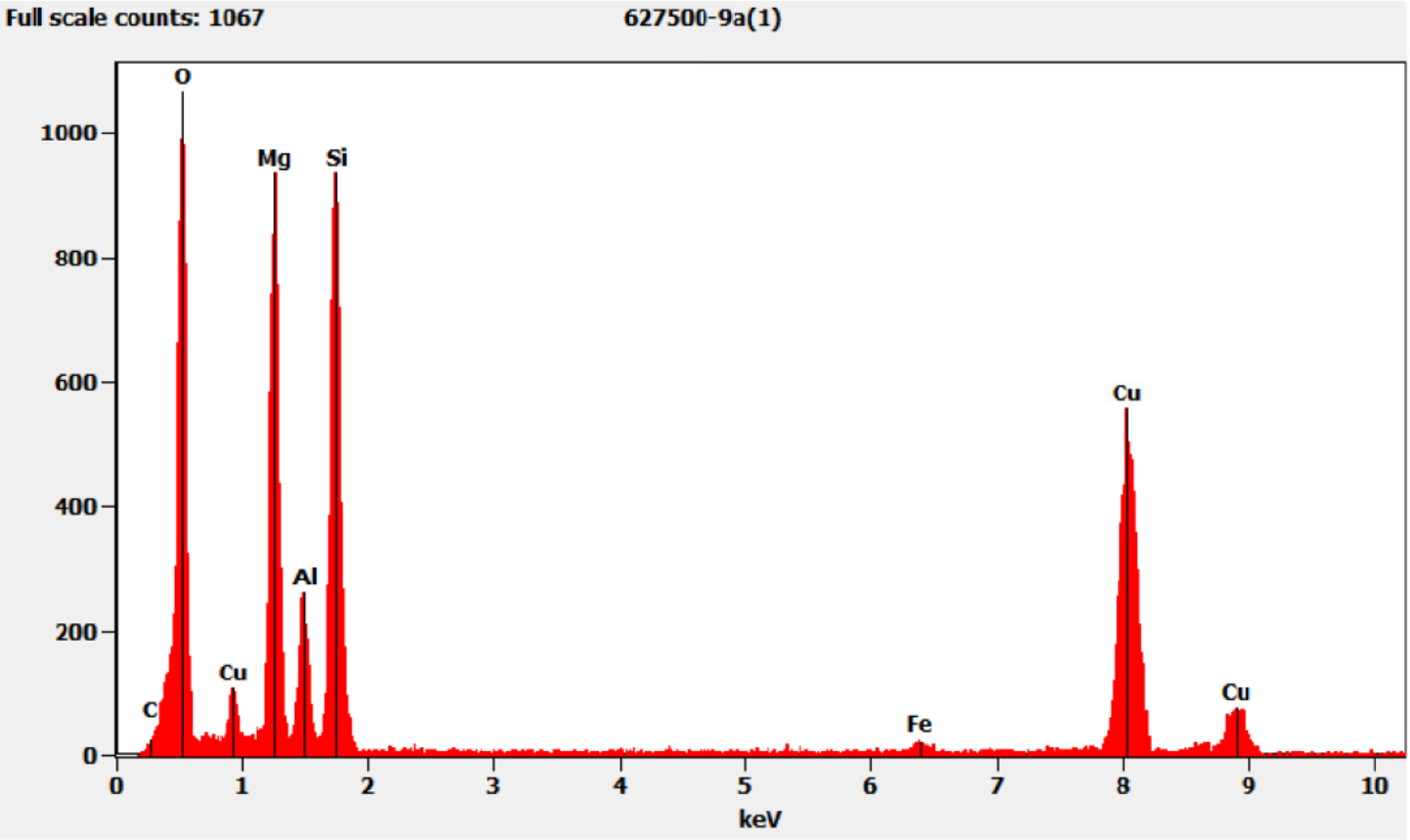
Hexagonal Diffraction Pattern from the Talc Particle pictured above



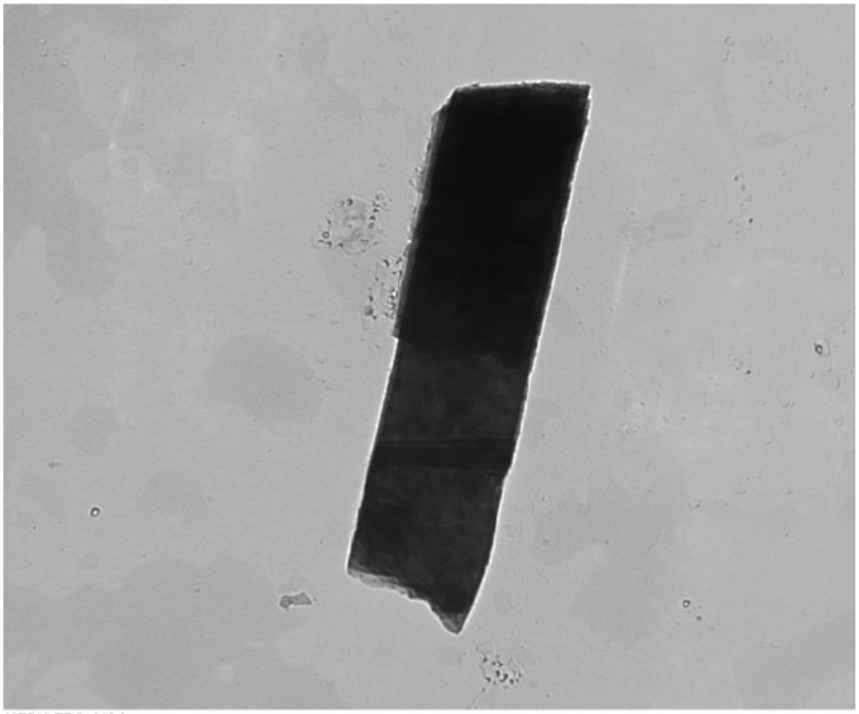
627500 FDA_087.jpg
627500-9a
Talc Particle w/Al Dif
16:14 7/22/2021
Microscopist:(b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



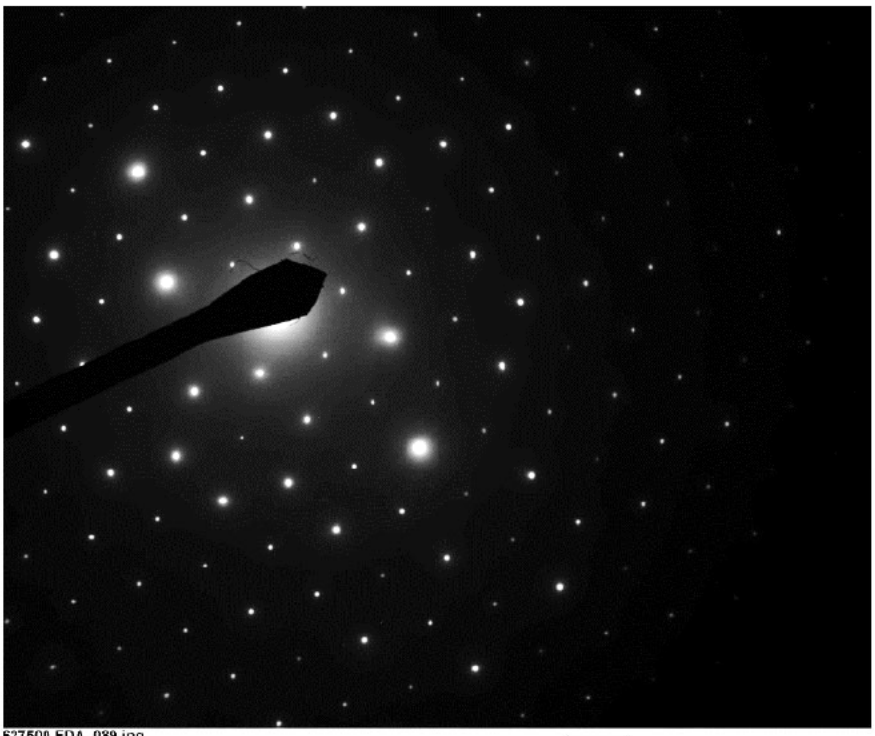
627500-9A, Talc Fiber



627500 FDA_090.jpg
627500-9a
Talc Fiber
Cal: 0.002860 µm/pix
16:21 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

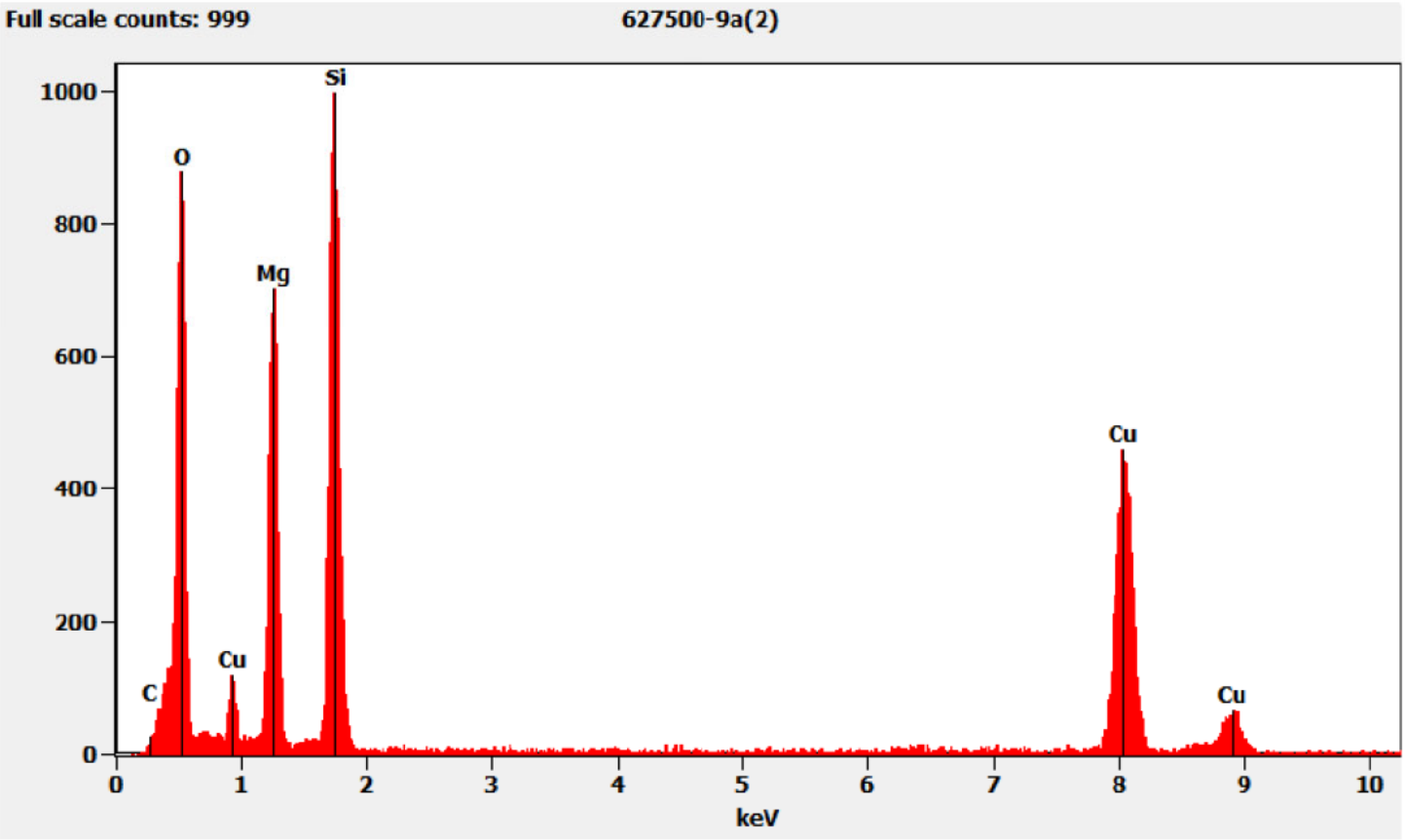
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



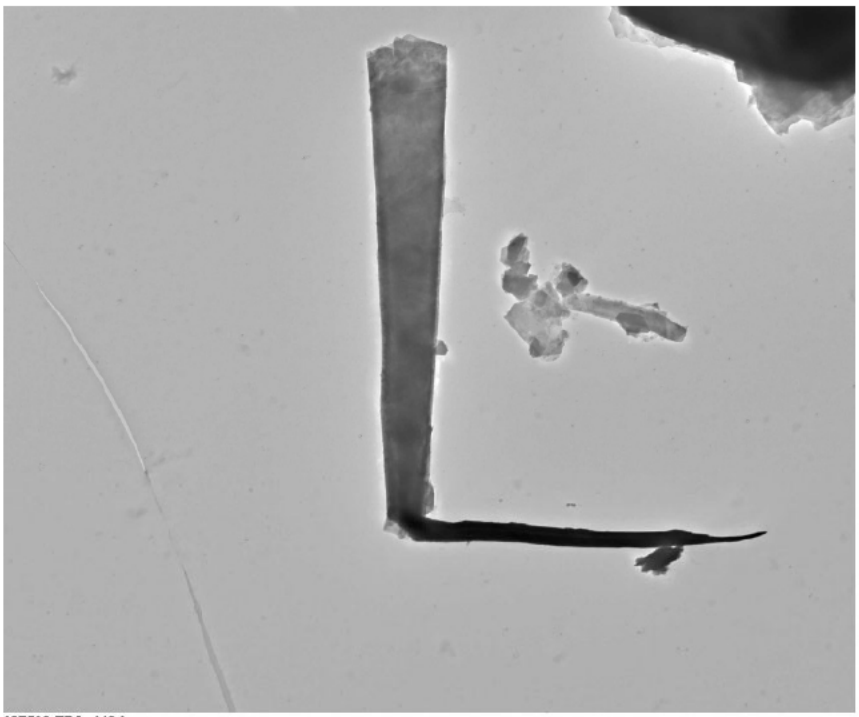
627500 FDA_089.jpg
627500-9a
Talc Fiber Dif
16:20 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



627500-9B, Talc Ribbon



627500 FDA_143.jpg
627500-9b
Talc Ribbon
Cal: 0.007355 µm/pix
16:28 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

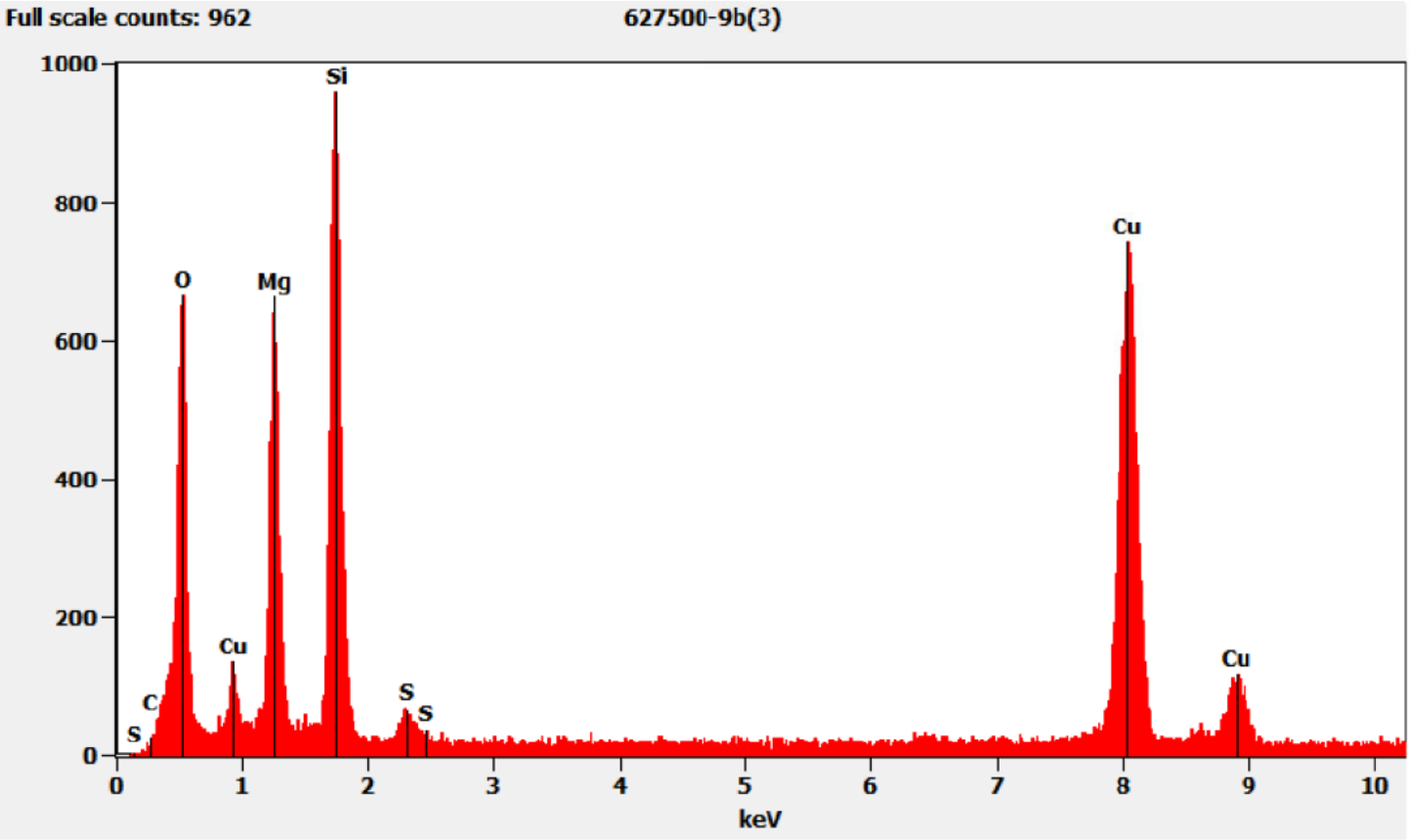
2 µm
HV=100kV
Direct Mag: 1400 x
AMA Analytical Services, Inc

Diffraction Pattern from Talc Ribbon pictured above

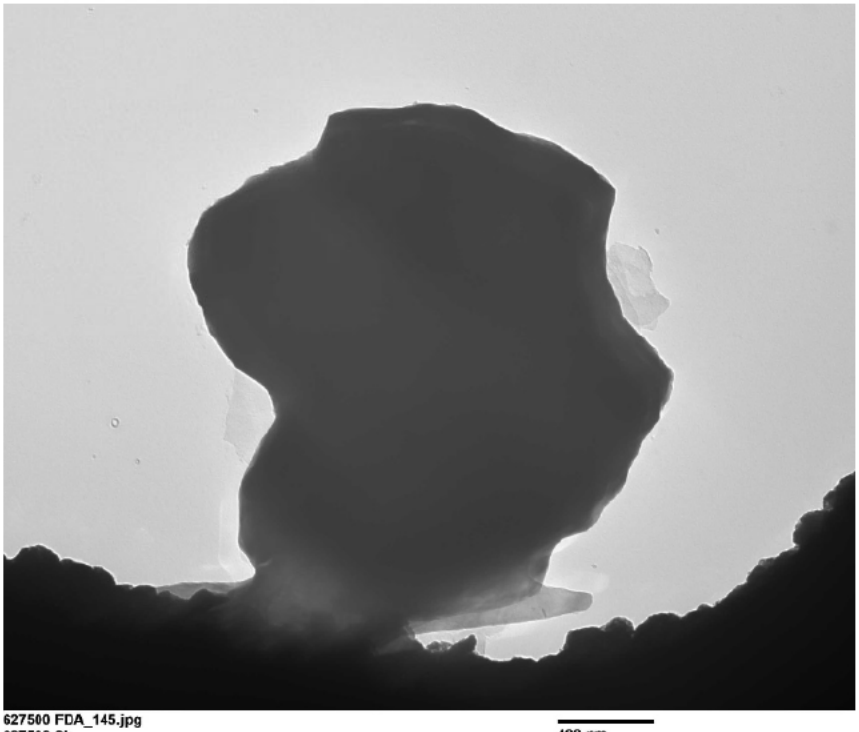
627500 FDA_142.jpg
627500-9b
Talc Ribbon Dif
16:28 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Ribbon pictured above



627500-9B, Mica Particle



627500 FDA_145.jpg
627500-9b
Mica Particle
Cal: 0.001430 µm/pix
16:40 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

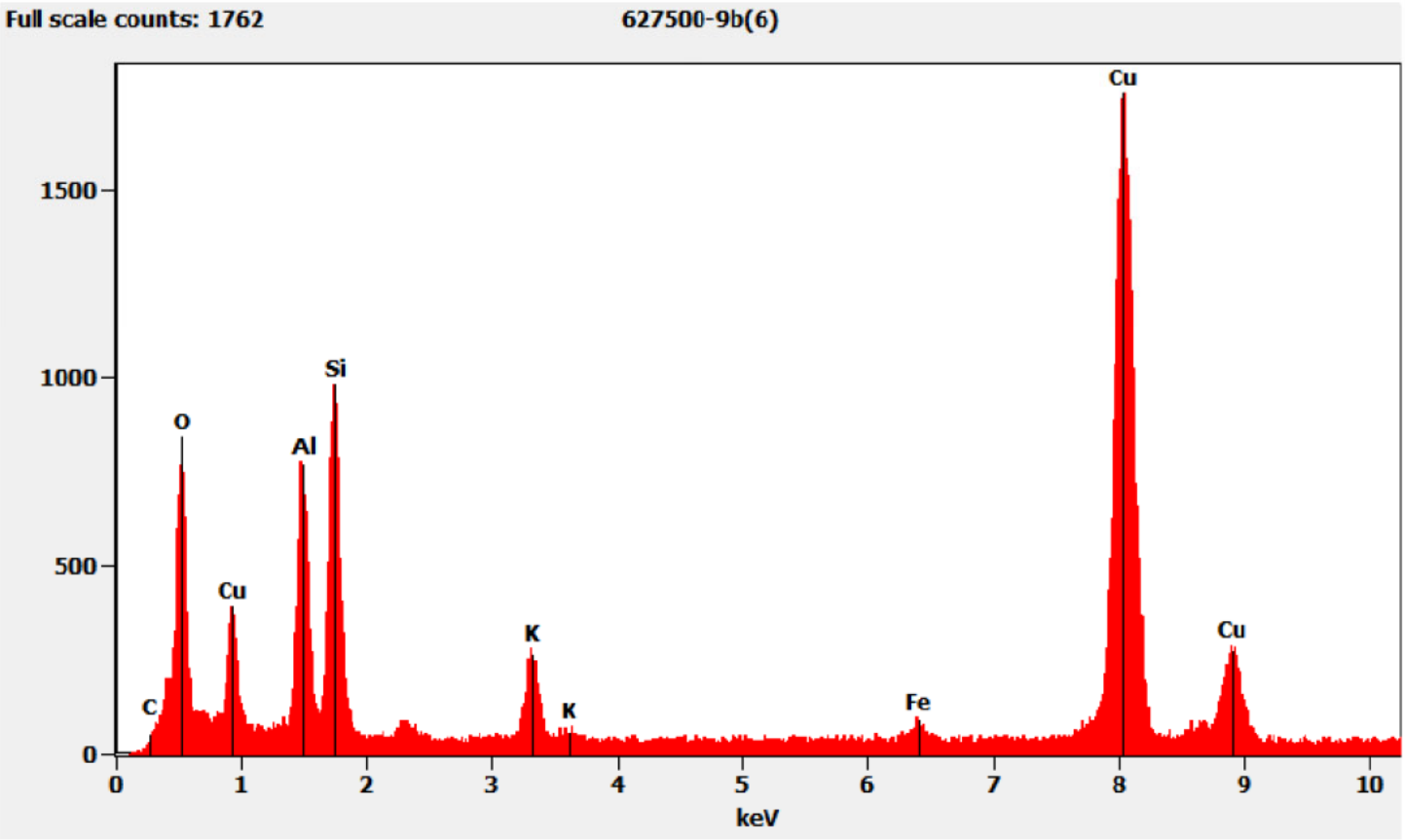
400 nm
HV=100kV
Direct Mag: 7200 x
AMA Analytical Services, Inc

Hexagonal Diffraction Pattern from the Mica Particle pictured above

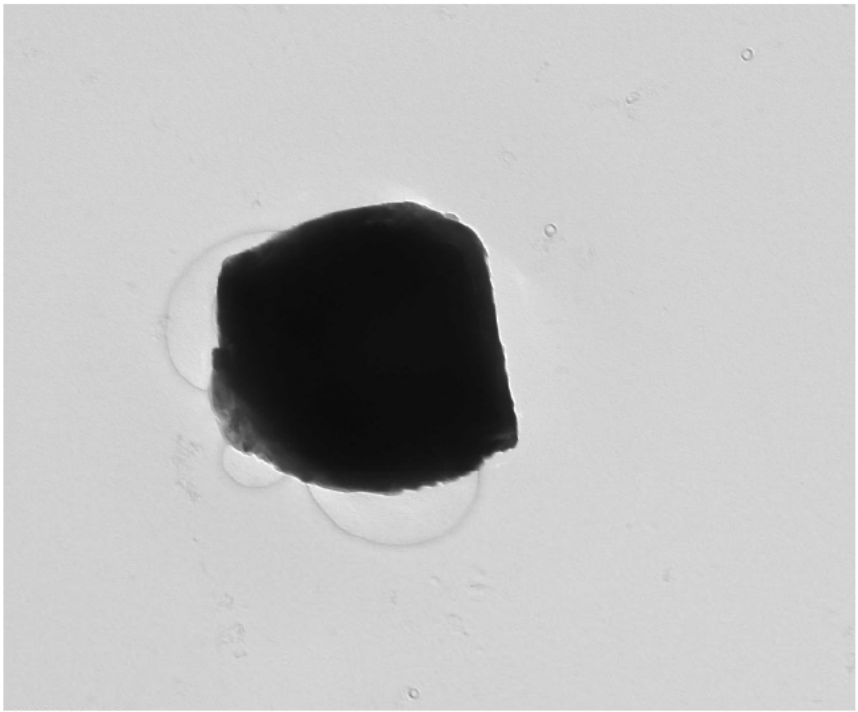
627500 FDA_144.jpg
627500-9b
Mica Particle Dif
16:39 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

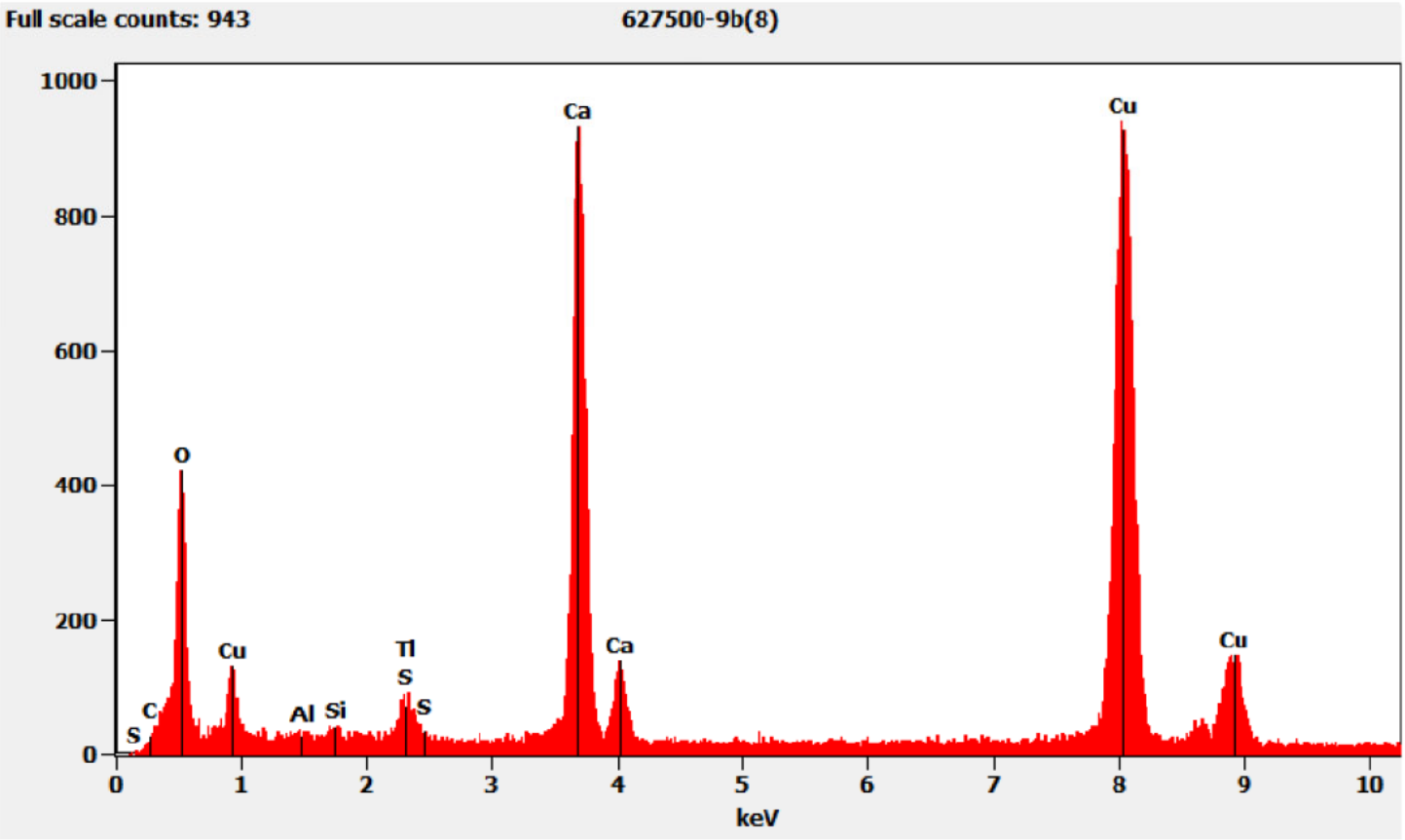
Chemistry from the Mica Particle pictured above



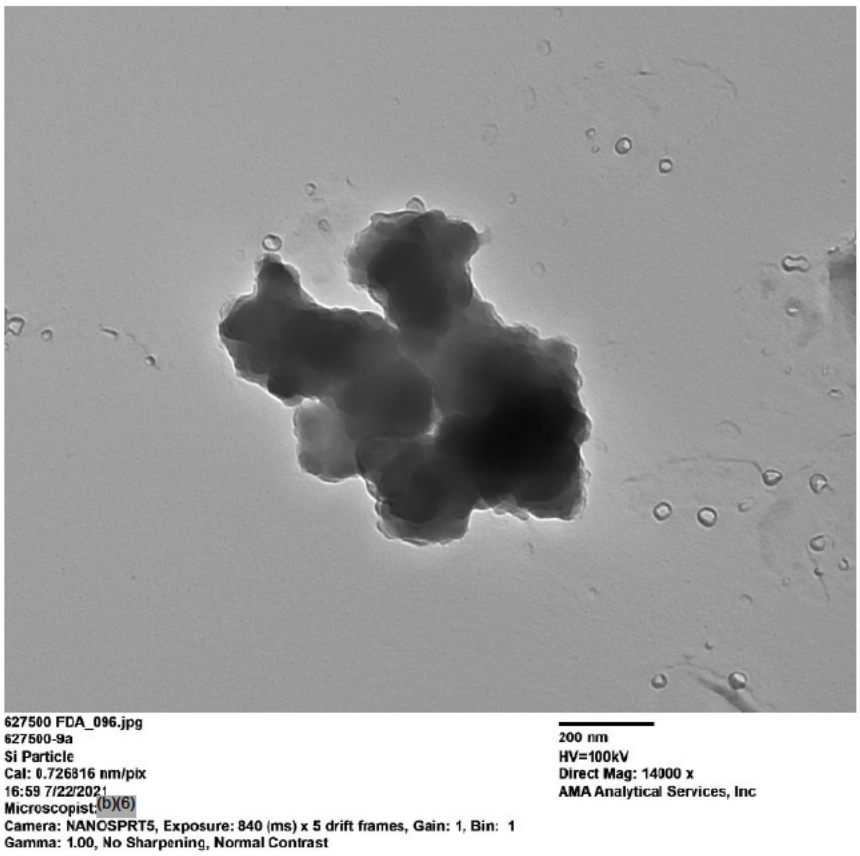
627500-9B, Calcium Particle



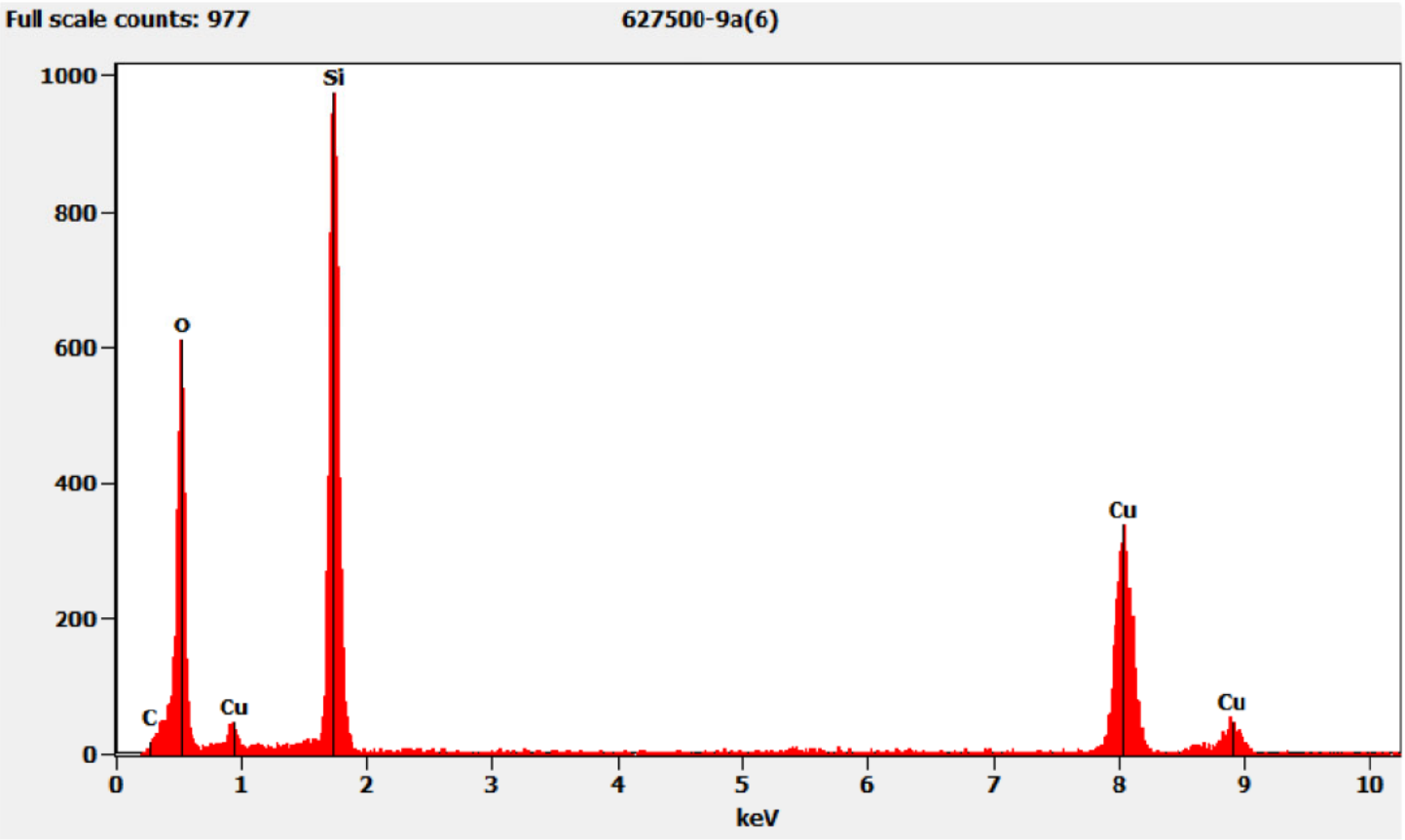
Chemistry from the Calcium Particle pictured above



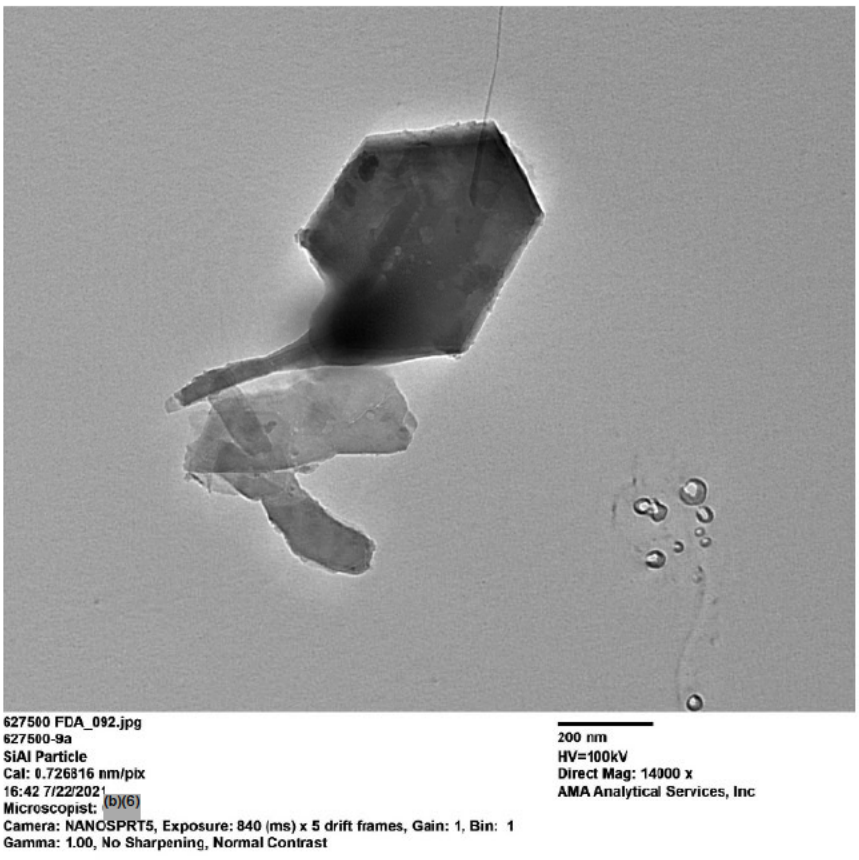
627500-9A Silica Particle



Chemistry from the Silica Particle pictured above

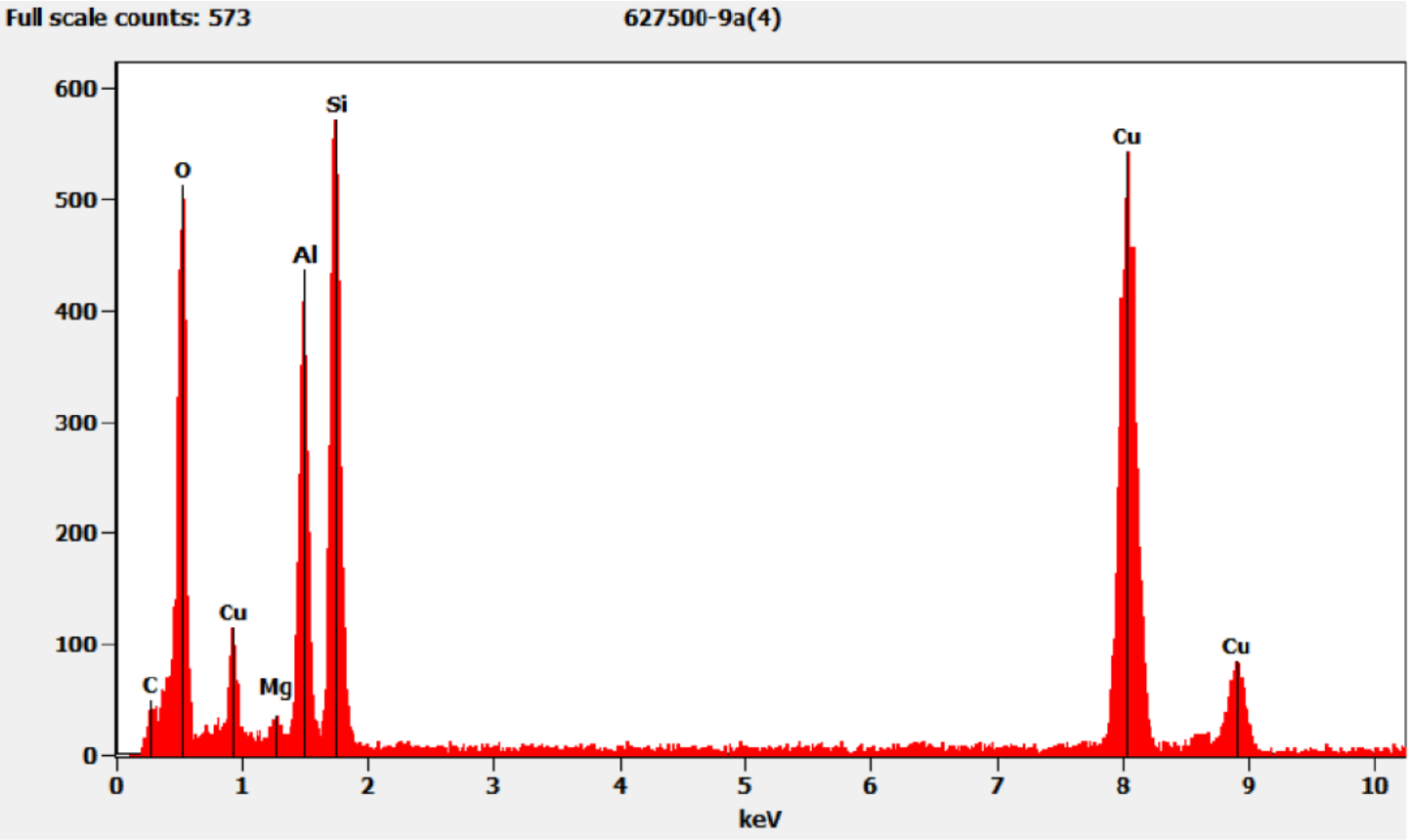


627500-9A Particle containing Silicon and Aluminum

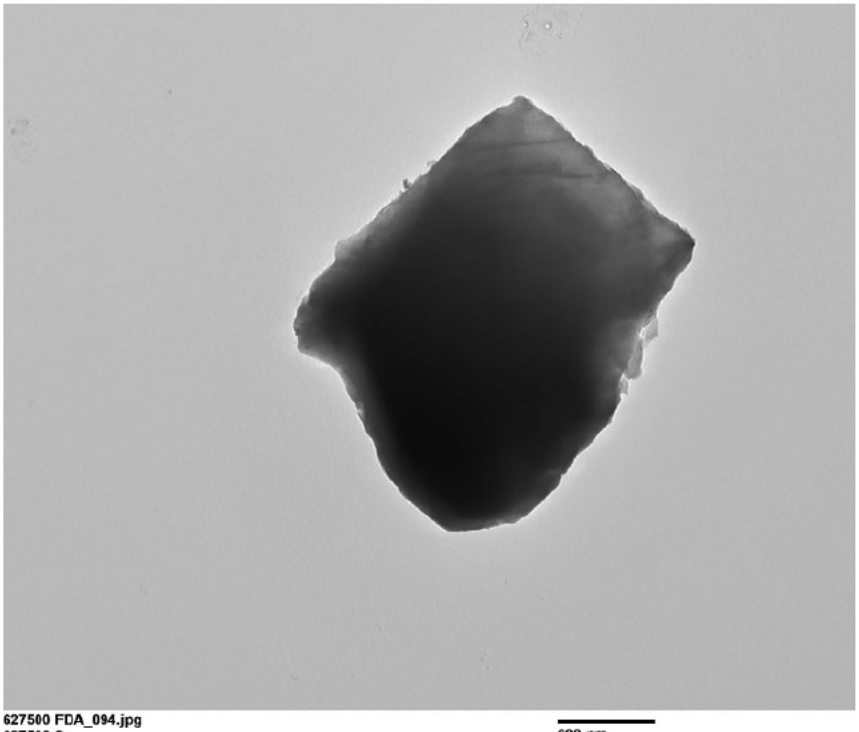


Diffraction Pattern from the Particle containing Silicon and Aluminum pictured above

Chemistry from the Particle containing Silicon and Aluminum pictured above



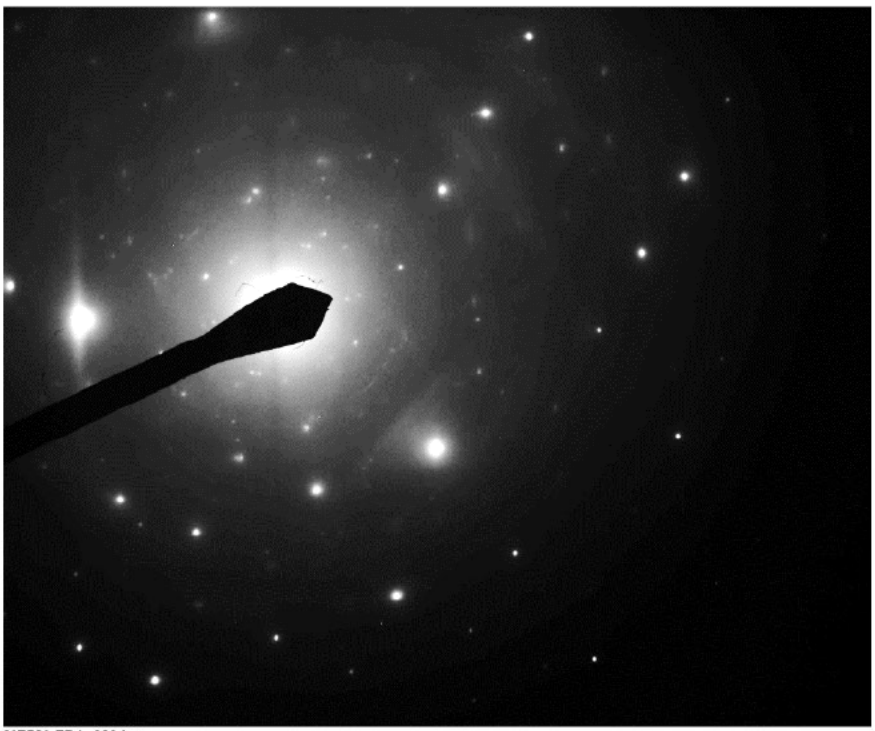
627500-9A Particle containing Magnesium, Aluminum, Silicon and Potassium



627500 FDA_094.jpg
627500-9a
SiAlKMg Particle
Cal: 0.002145 µm/pix
16:55 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

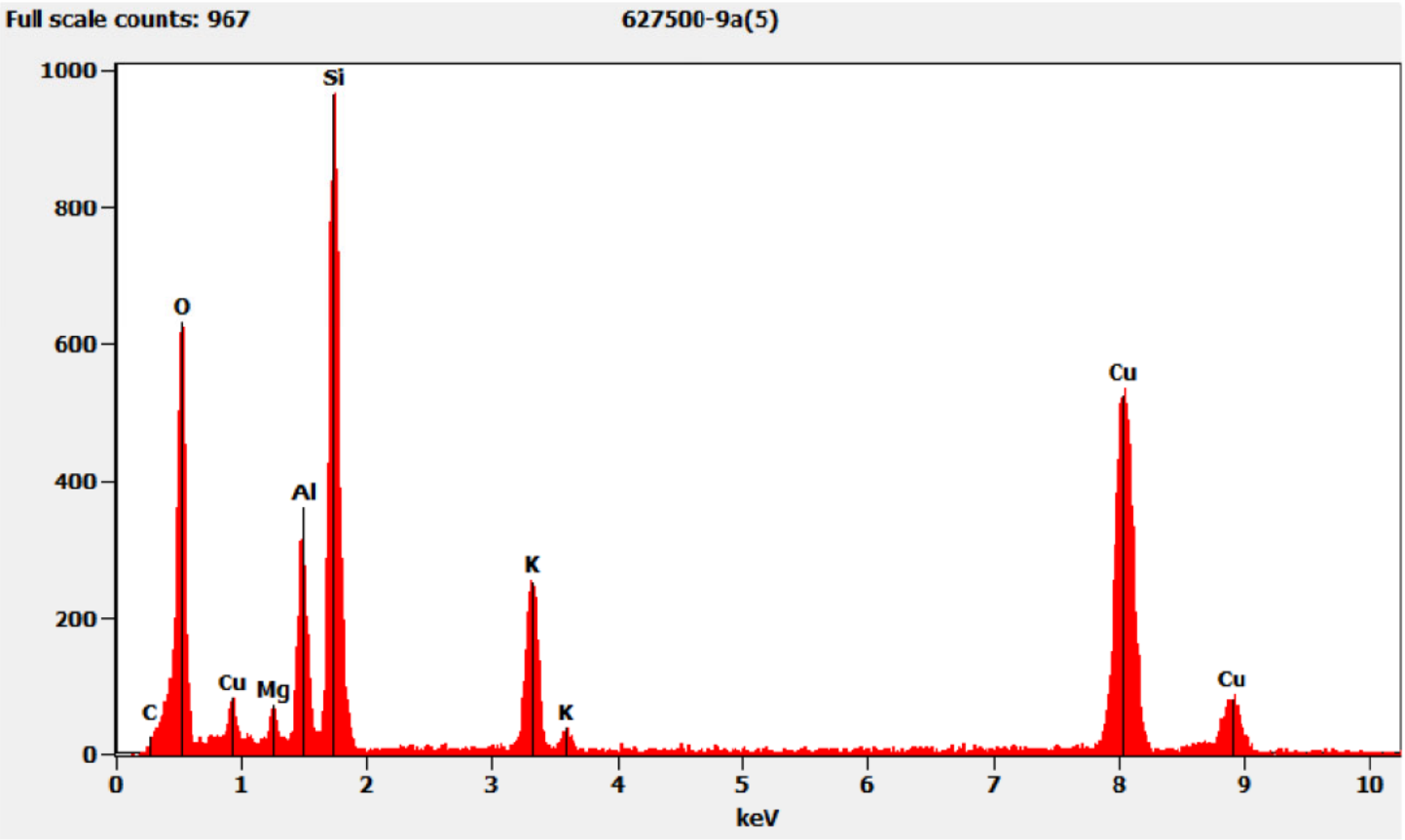
Diffraction Pattern from the Particle containing Magnesium, Aluminum, Silicon and Potassium pictured above



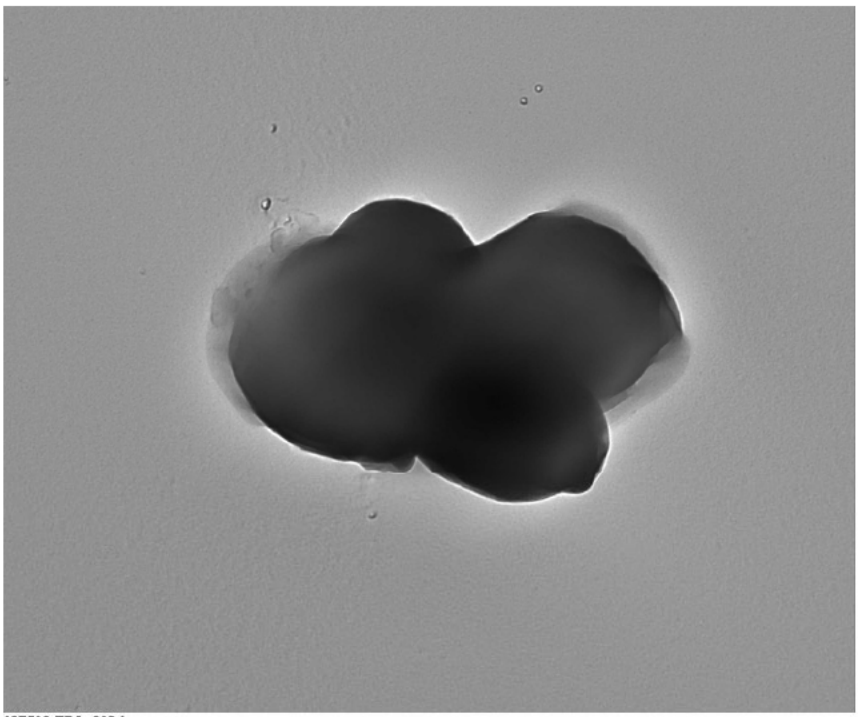
627500 FDA_093.jpg
627500-9a
SiAlKMg Particle
16:54 7/22/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 drift frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

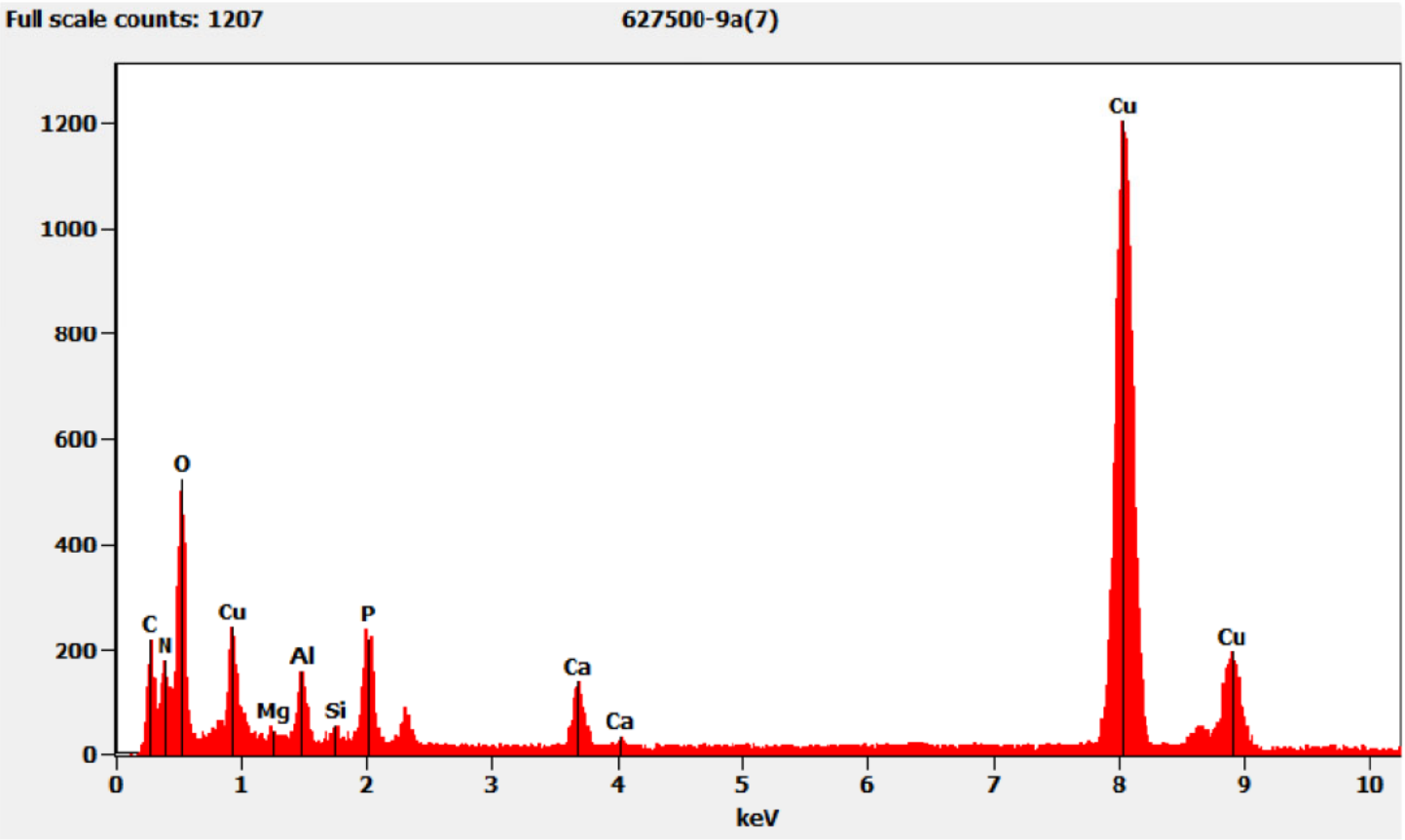
Chemistry from the Particle containing Magnesium, Aluminum, Silicon and Potassium pictured above



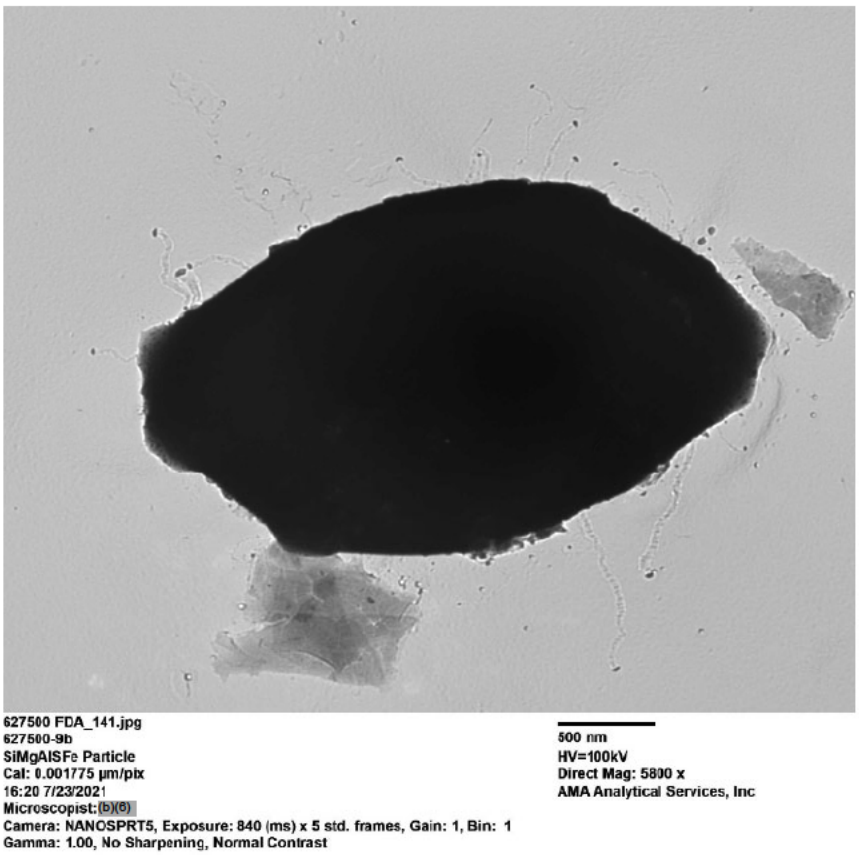
627500-9A Particle containing Magnesium, Aluminum, Silicon, Phosphorus and Calcium



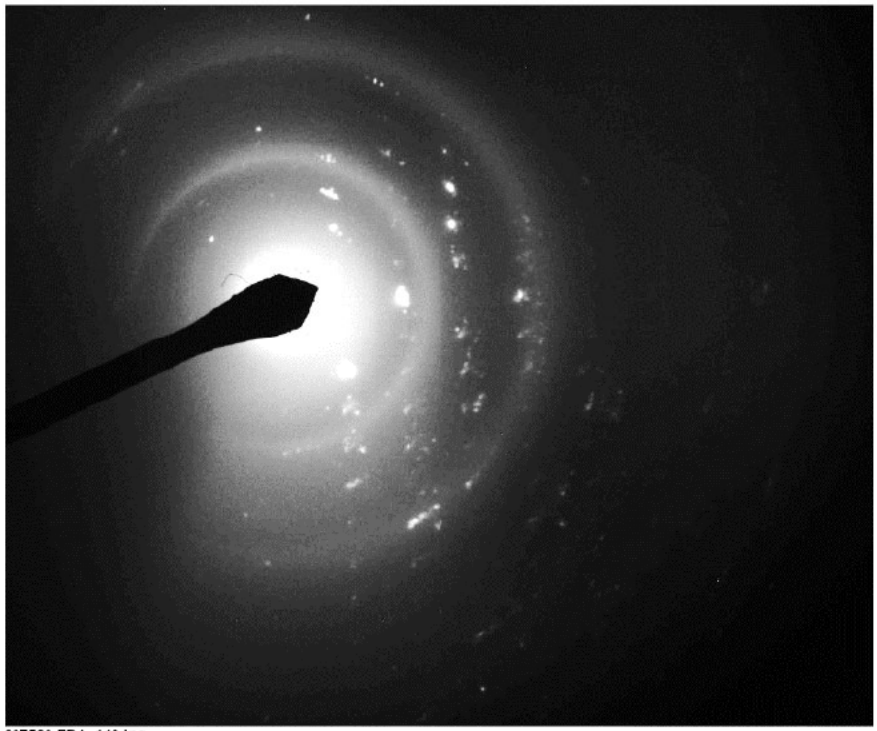
Chemistry from the Particle containing Magnesium, Aluminum, Silicon, Phosphorus and Calcium pictured above



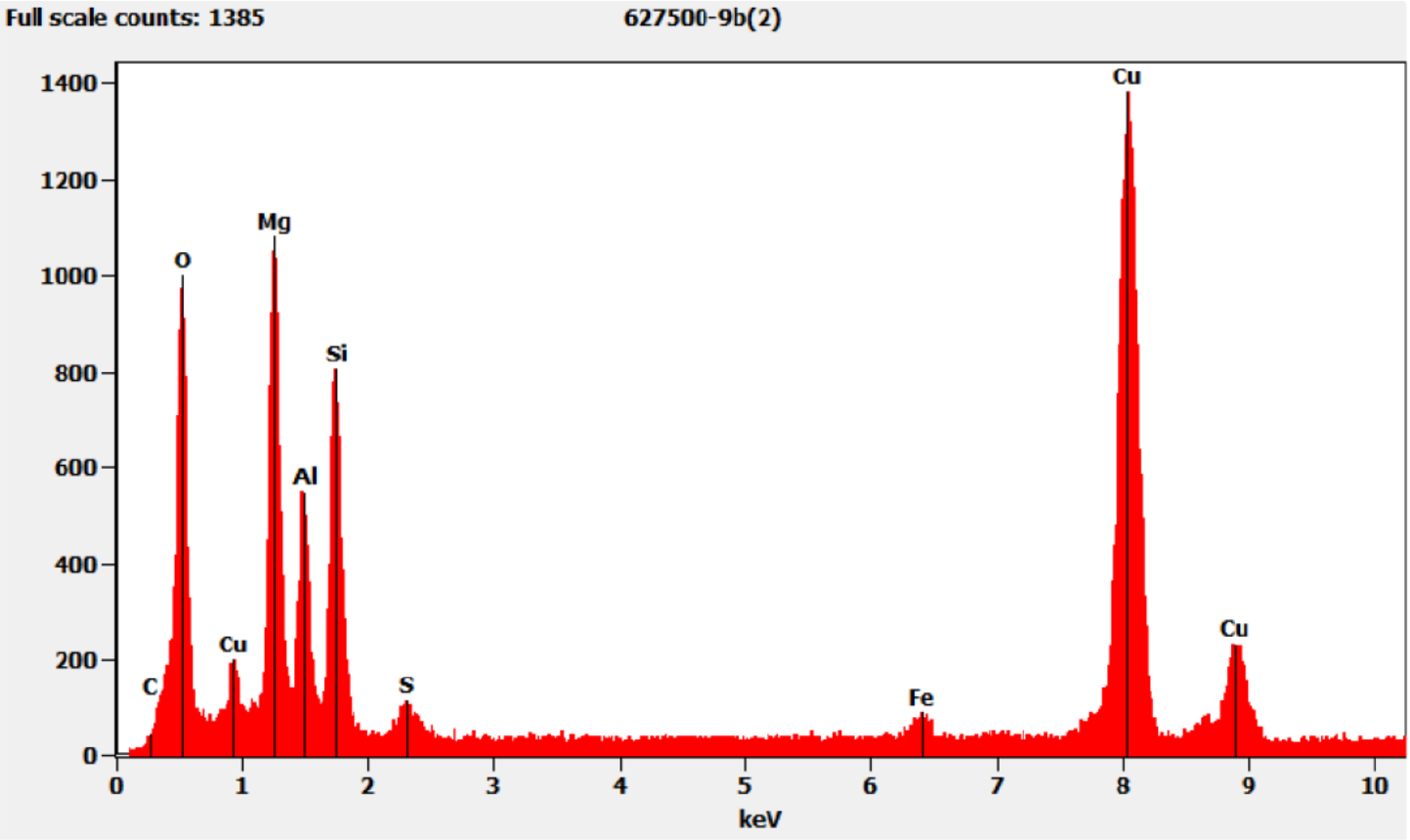
627500-9B Particle containing Magnesium, Aluminum, Silicon, Sulfur and Iron



Diffraction Pattern from the Particle containing Magnesium, Aluminum, Silicon, Sulfur and Iron pictured above



Chemistry from the Particle containing Magnesium, Aluminum, Silicon, Sulfur and Iron pictured above



627500-10A, 10B, 10C/Client Sample: 04272021-10

PLM

All three aliquots of sample 04272021-10 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-10A	No Asbestos Detected
627500-10B	No Asbestos Detected
627500-10C	No Asbestos Detected

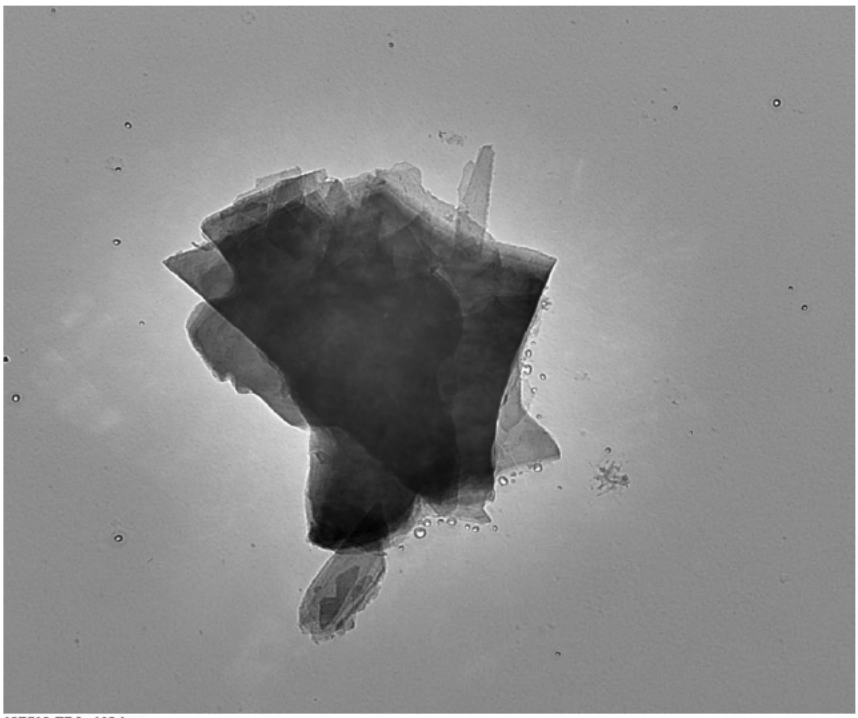
TEM

(b)(6) analyzed aliquot 10A on July 23, 2021 and aliquot 10B on July 26, 2021. Andreas Saldivar analyzed aliquot 10C on July 27, 2021. The primary particle observed was talc; mica particles and silica particles were also observed along with particles containing aluminum and silicon (and other trace elements) and a few 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.

627500-10A	No Asbestos Detected
627500-10B	No Asbestos Detected
627500-10C	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 chemistry spectra are zinc and carbon, which are from the TEM specimen holder.

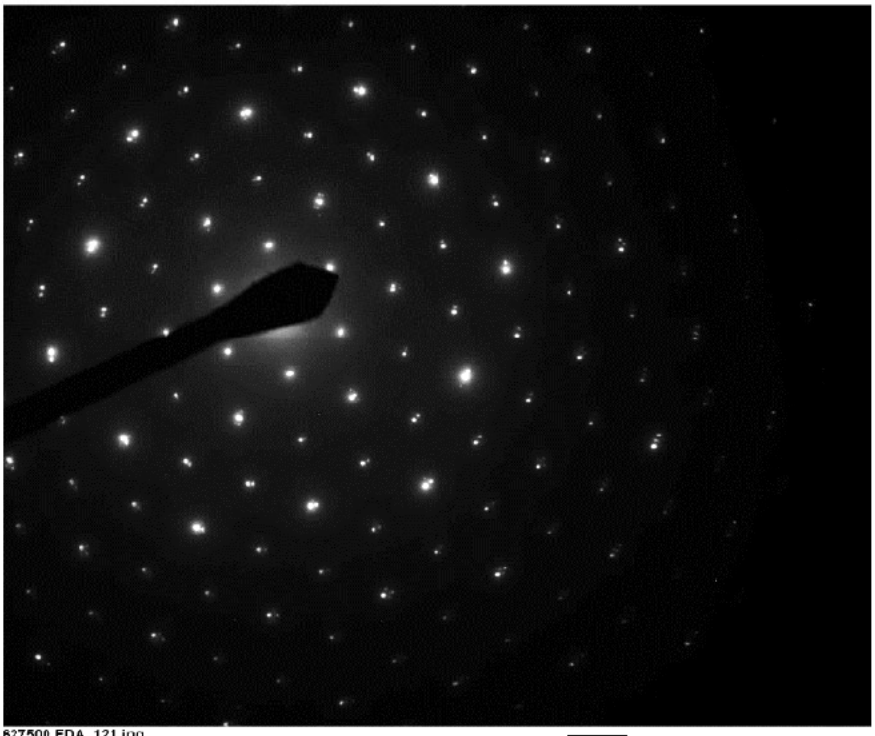
627500-10A, Talc Particle



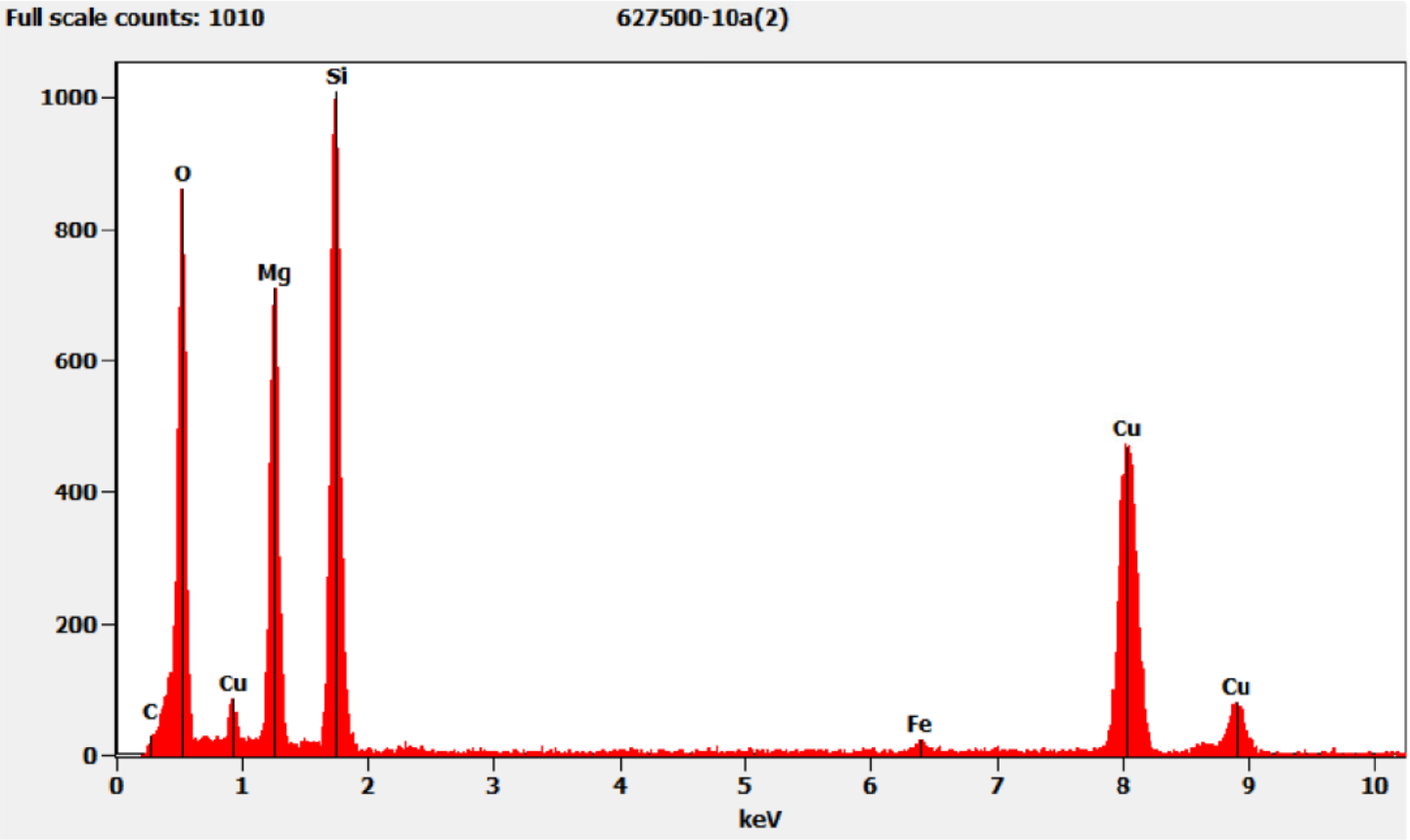
627500 FDA_122.jpg
627500-10a
Talc Particle
Cal: 0.001775 µm/pix
13:11 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

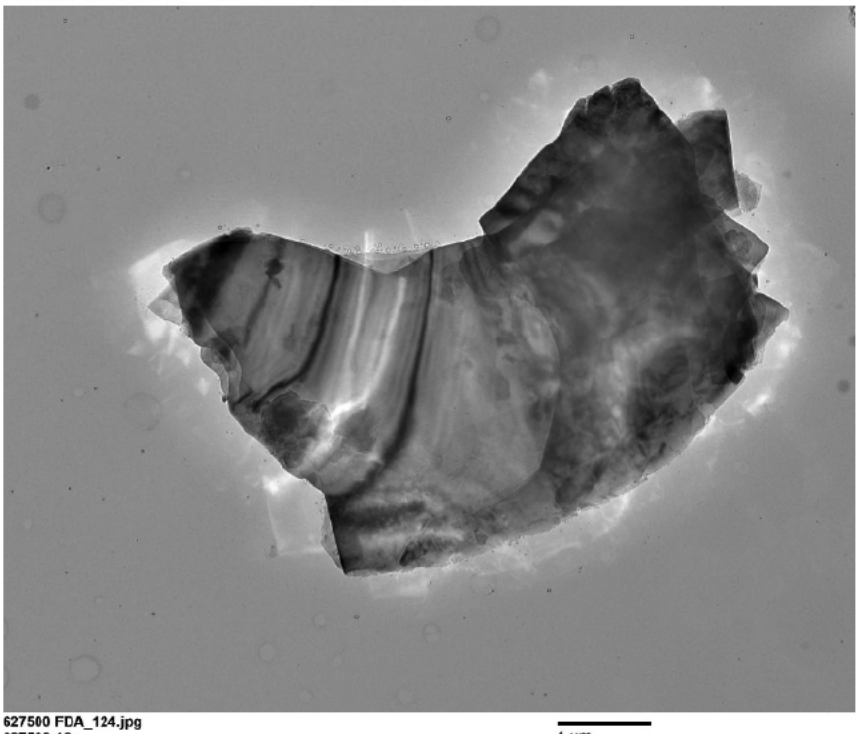
Hexagonal Diffraction Pattern from the Talc Particle pictured above



Chemistry from the Talc Particle pictured above



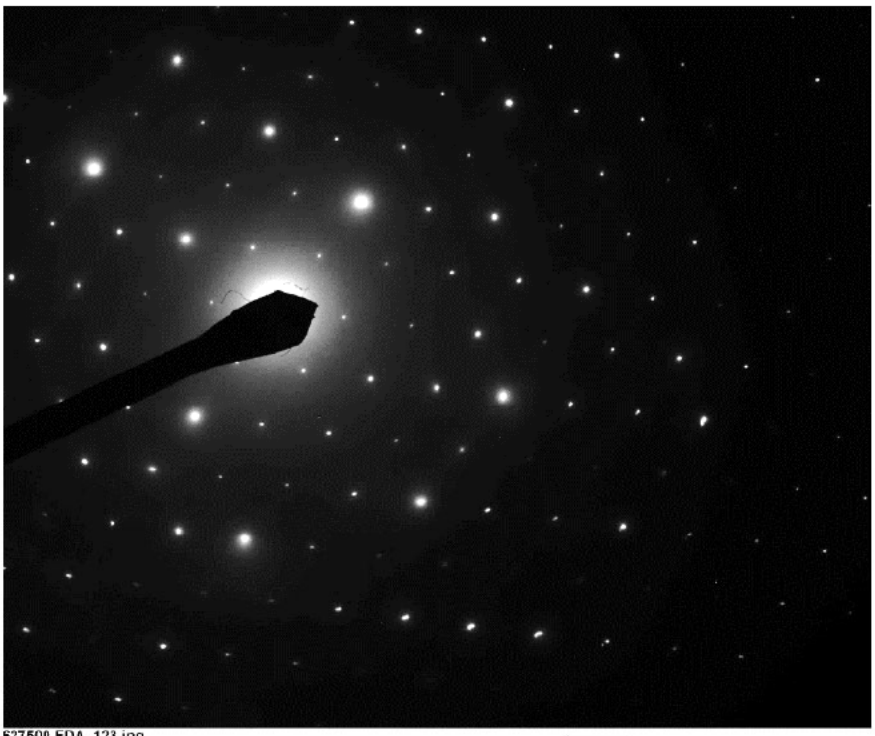
627500-10A, Mica Particle



627500 FDA_124.jpg
627500-10a
Mica Particle
Cal: 0.003702 µm/pix
13:17 7/23/2021
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

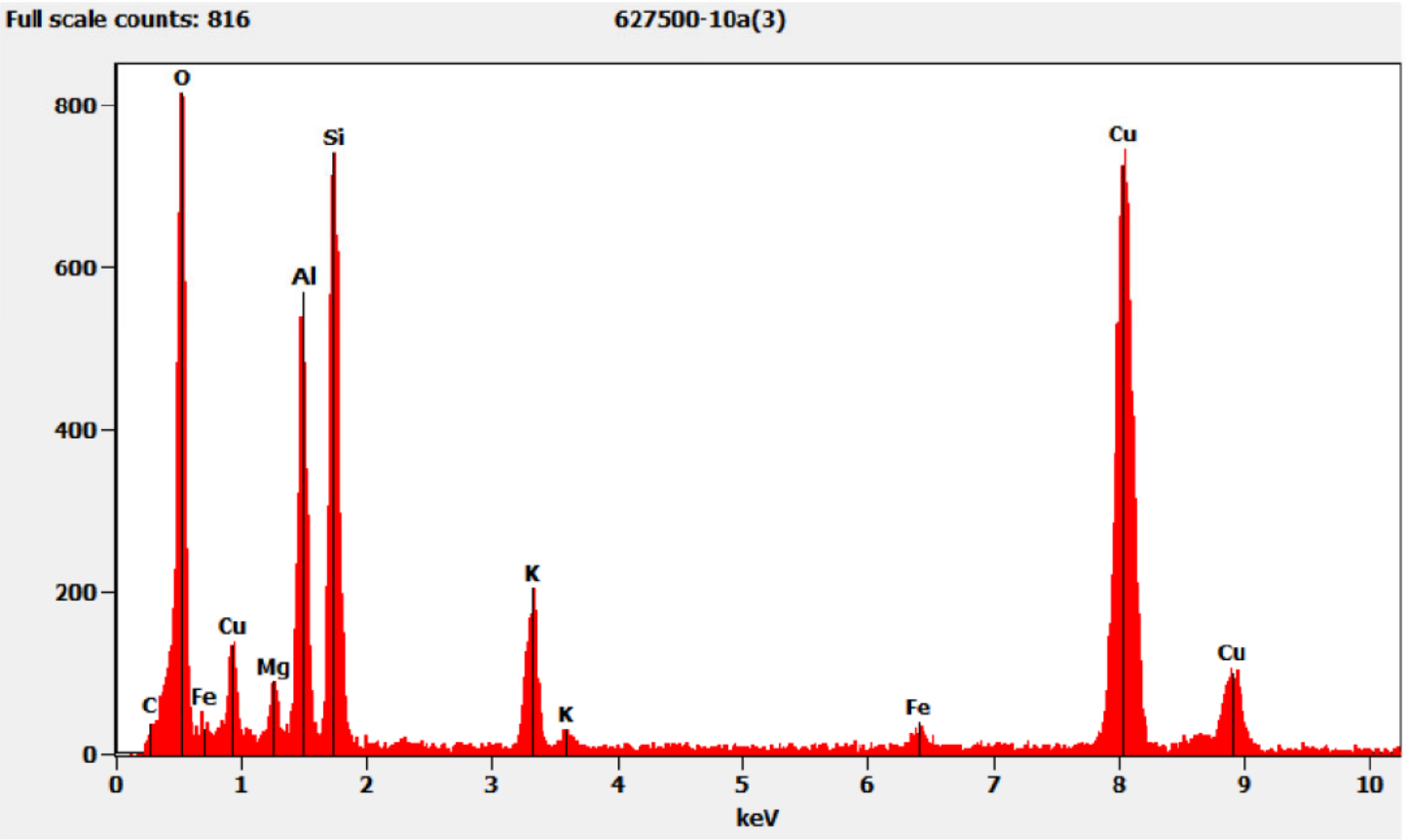
Hexagonal Diffraction Pattern from the Mica Particle pictured above



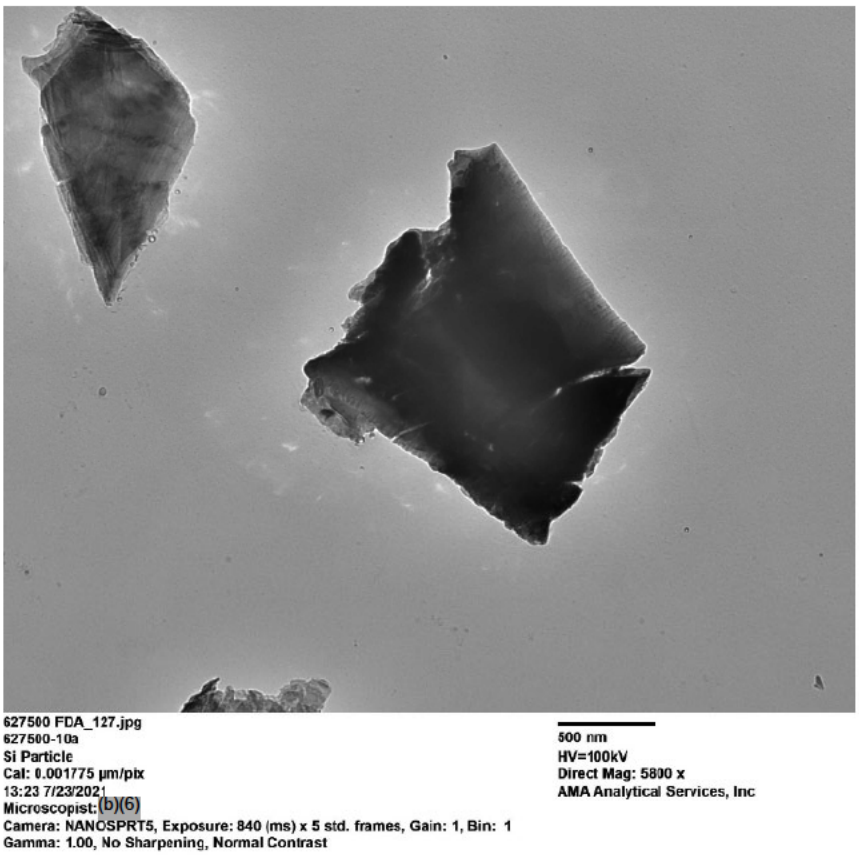
627500 FDA_123.jpg
627500-10a
Mica Particle Dif
13:16 7/23/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

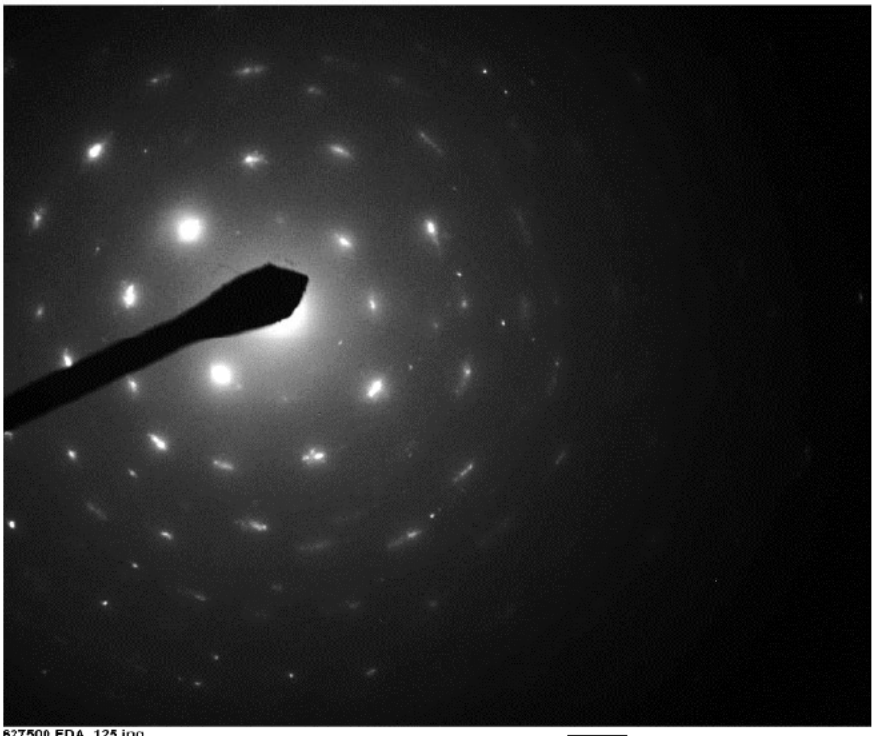
Chemistry from the Mica Particle pictured above



627500-10A, Silica Particle



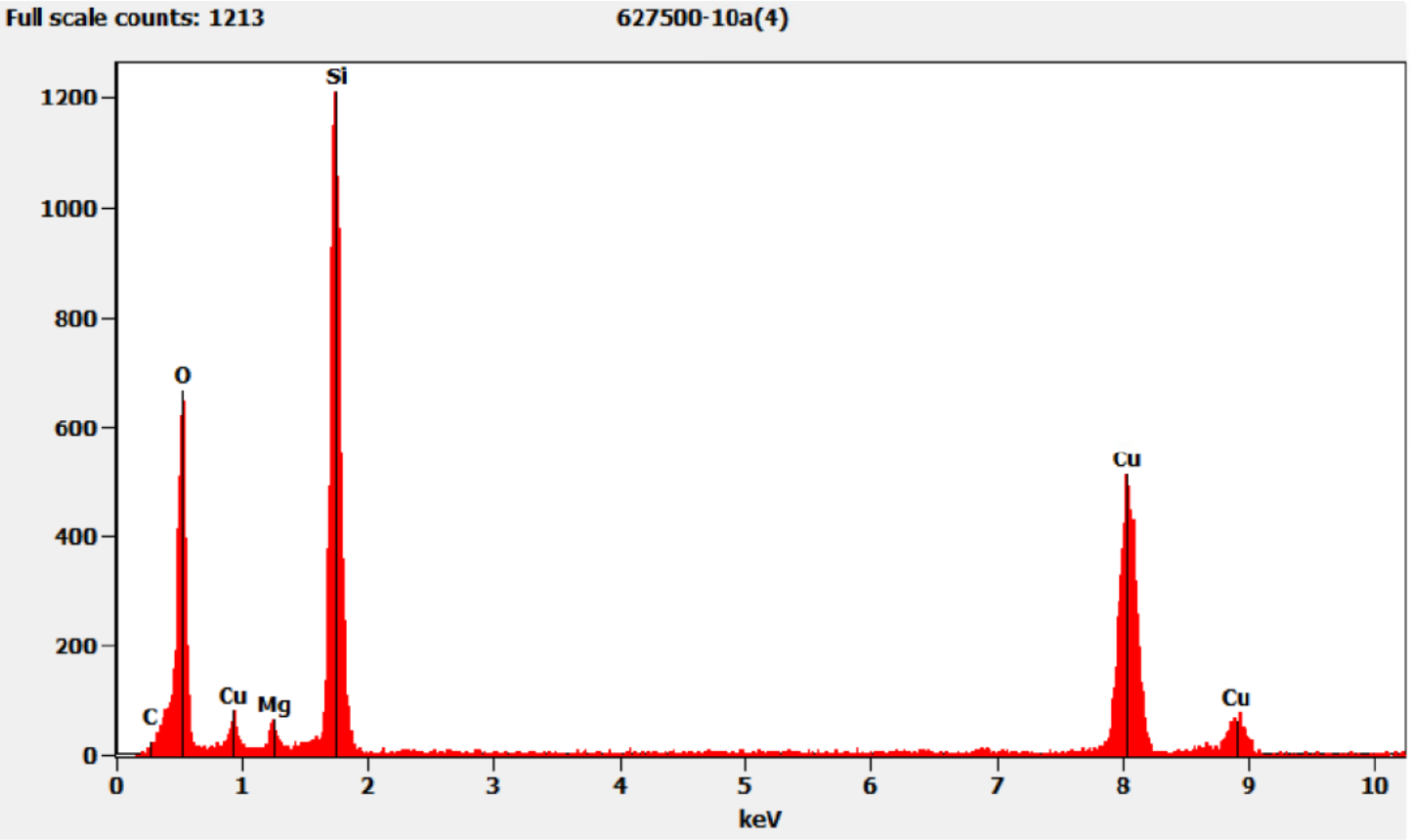
Diffraction Pattern from Silica Particle pictured above



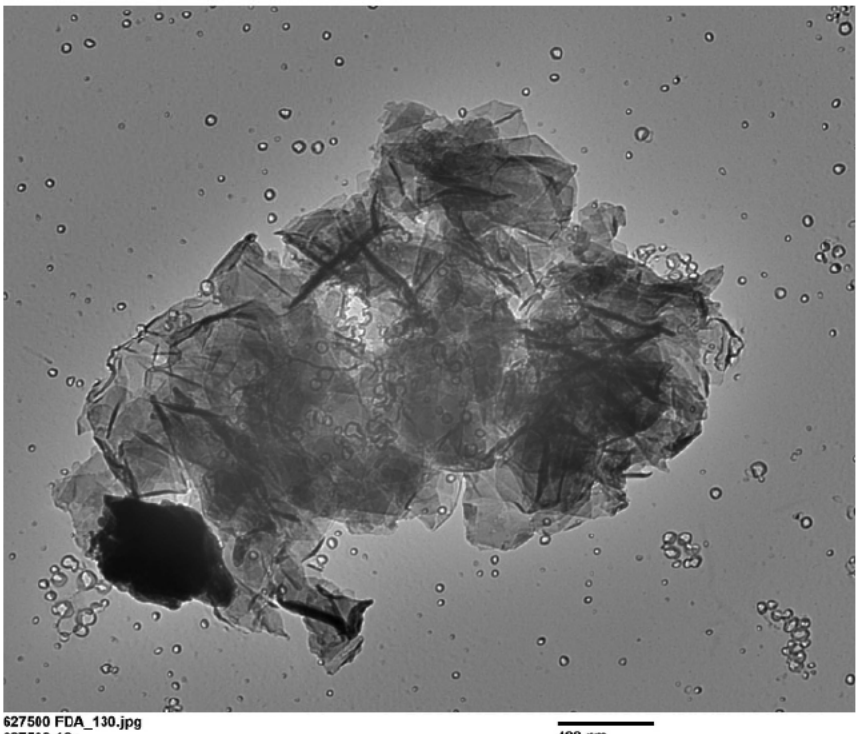
627500 FDA_125.jpg
627500-10a
Si Particle Dif
13:22 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Silica Particle pictured above



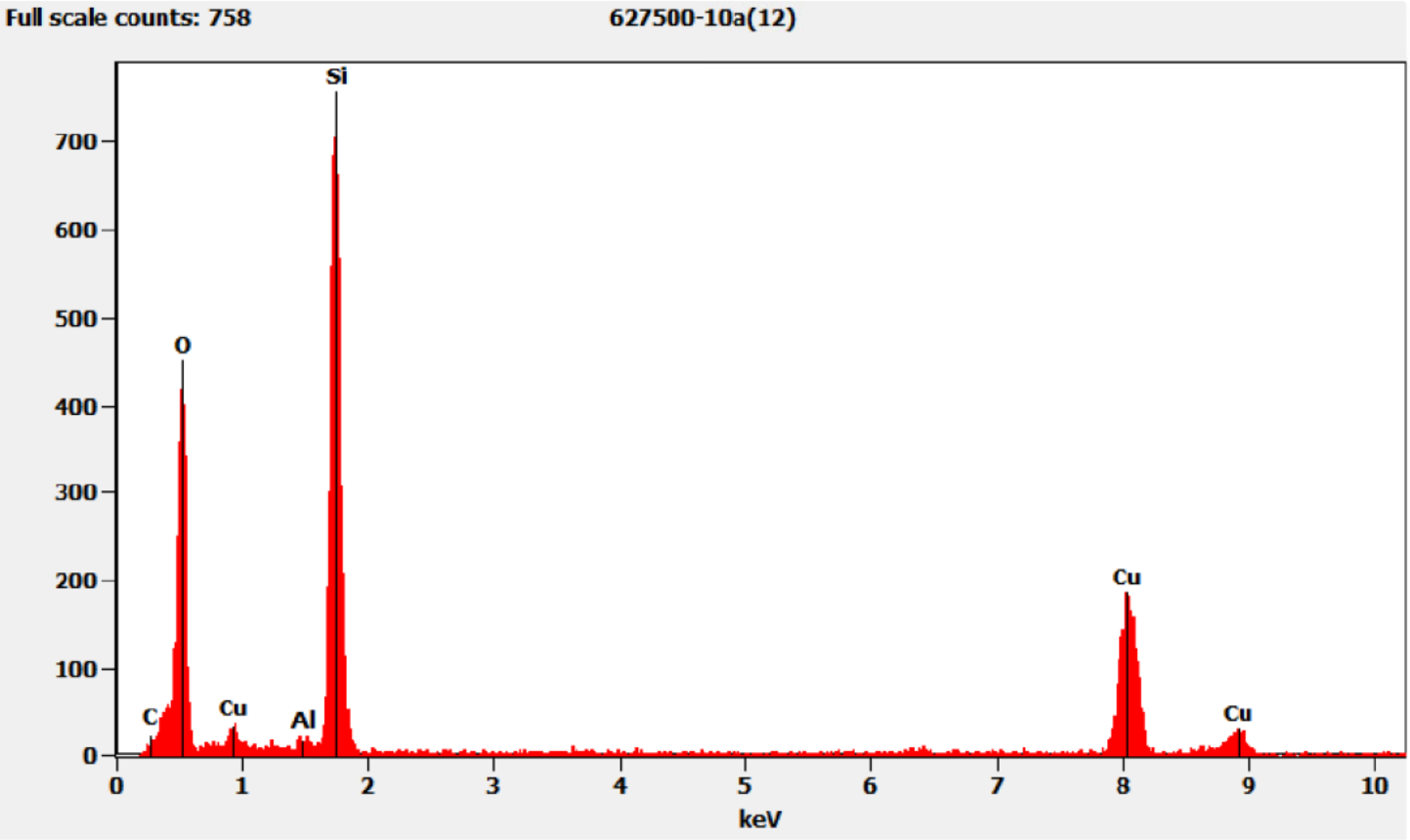
627500-10A, Silica Particle



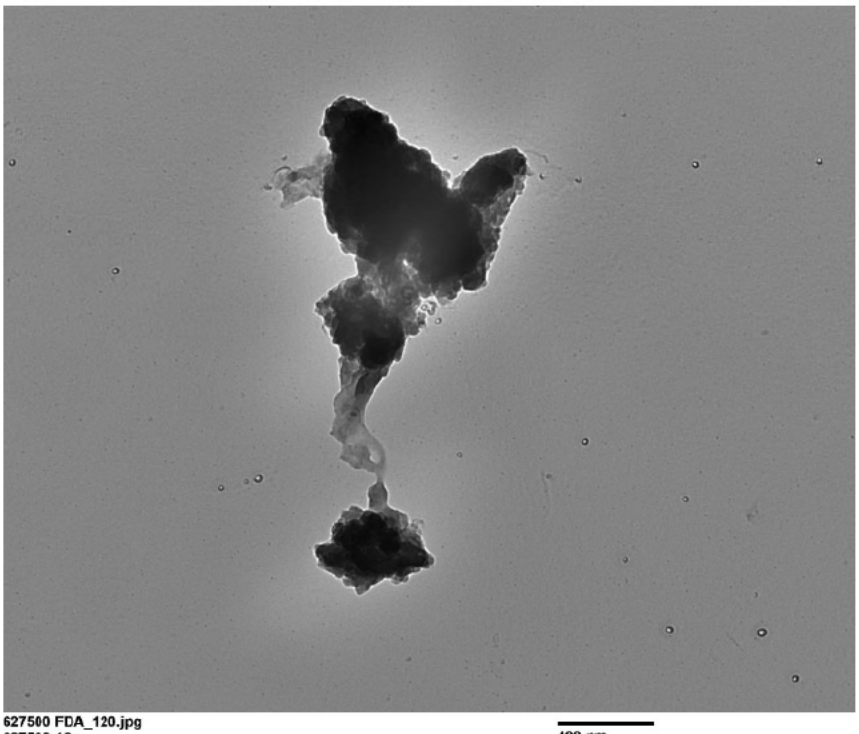
627500 FDA_130.jpg
627500-10a
Si Particle
Cal: 0.001430 µm/pix
14:06 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPR15, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

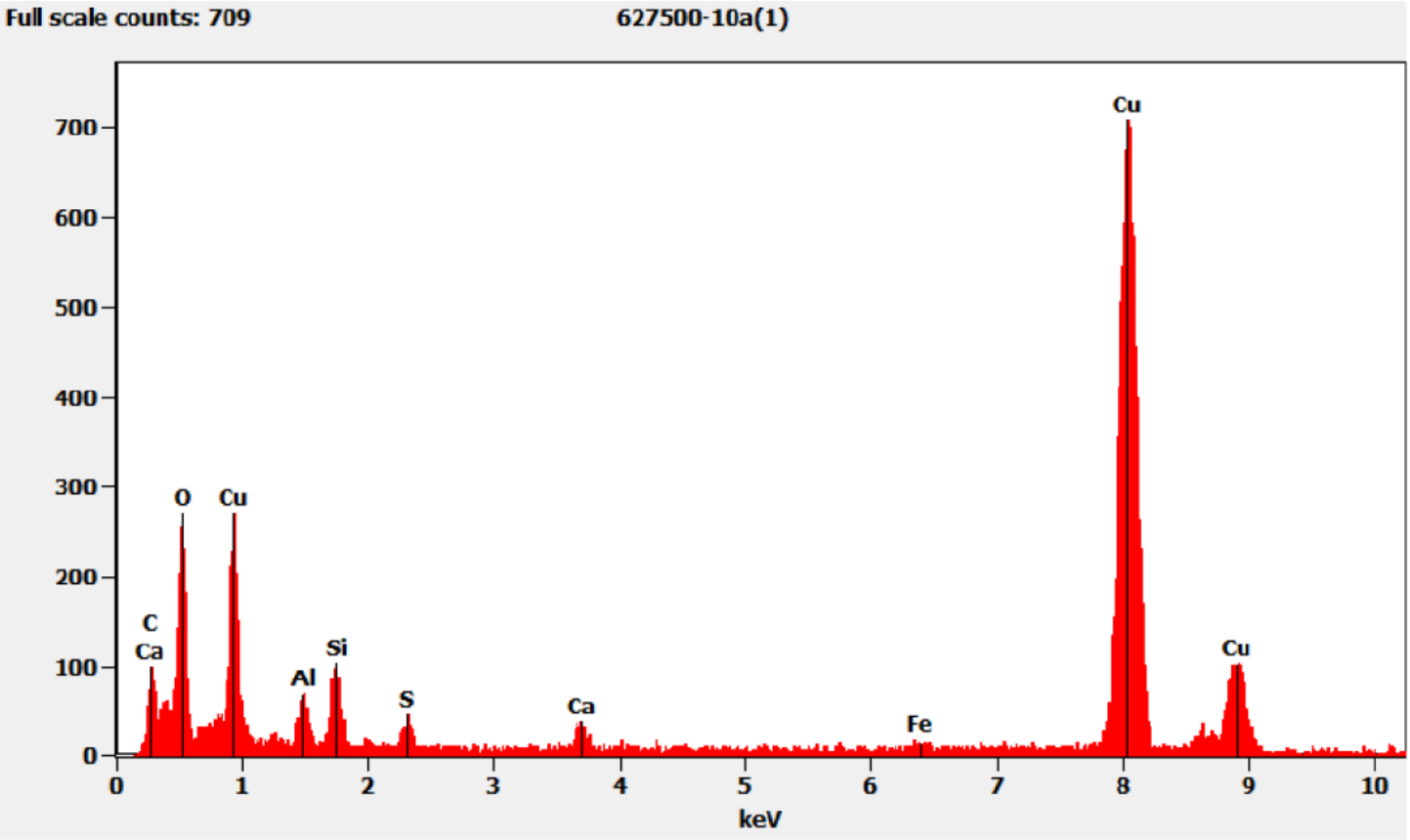
Chemistry from the Silica Particle pictured above



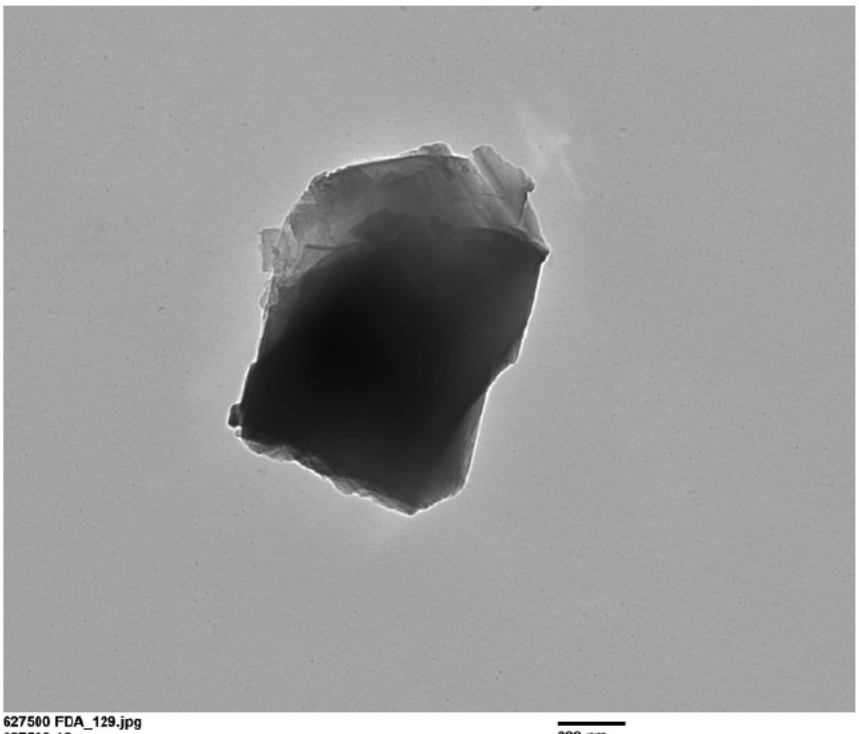
627500-10A, Particle containing Aluminum, Silicon, Sulfur and Calcium



Chemistry from the Particle containing Aluminum, Silicon, Sulfur and Calcium pictured above



627500-10A, Particle containing Magnesium, Aluminum and Silicon



627500 FDA_129.jpg
627500-10a
NaMgAlSi Particle
Cal: 0.001030 µm/pix
13:27 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

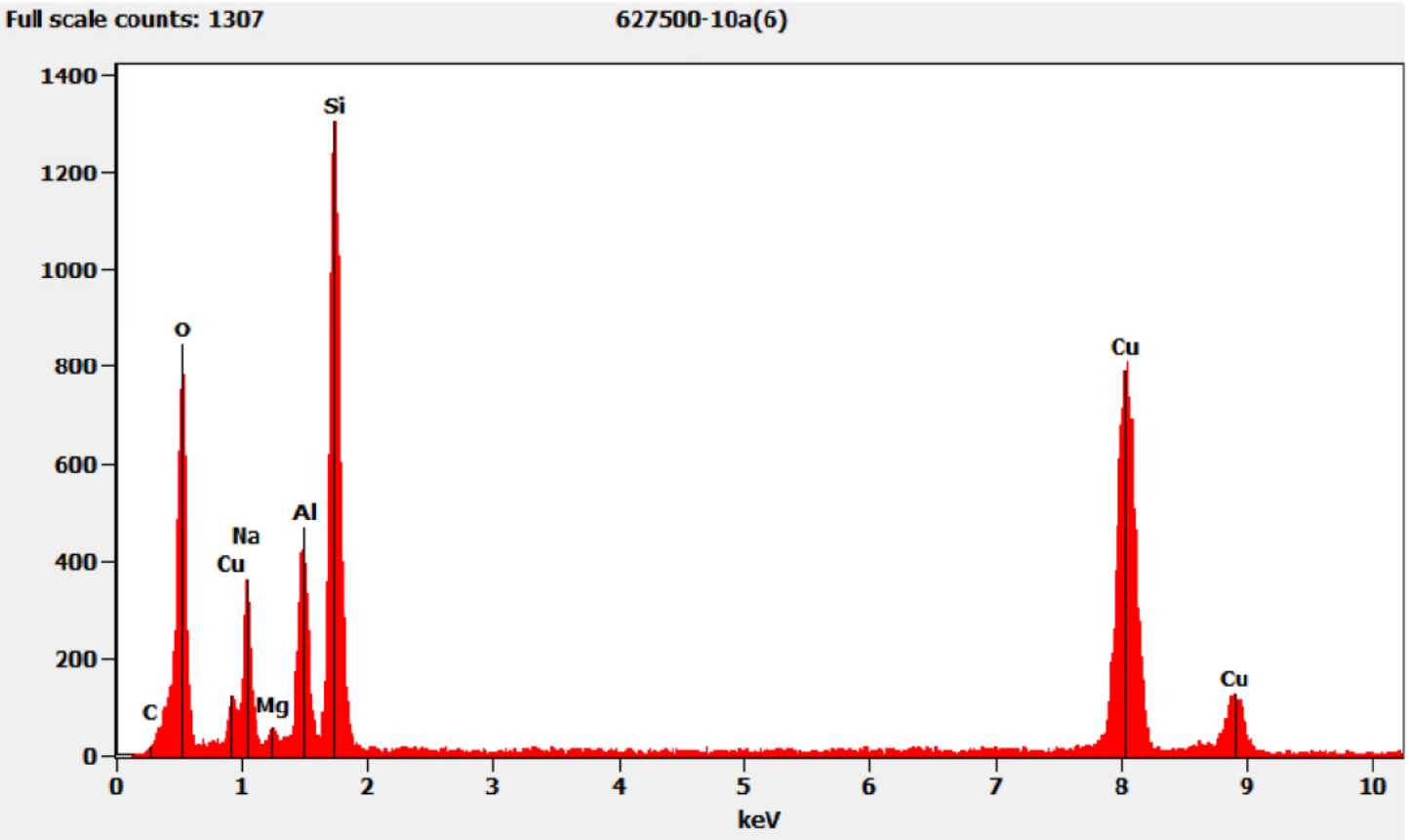
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Diffraction Pattern from the Particle containing Magnesium, Aluminum and Silicon pictured above

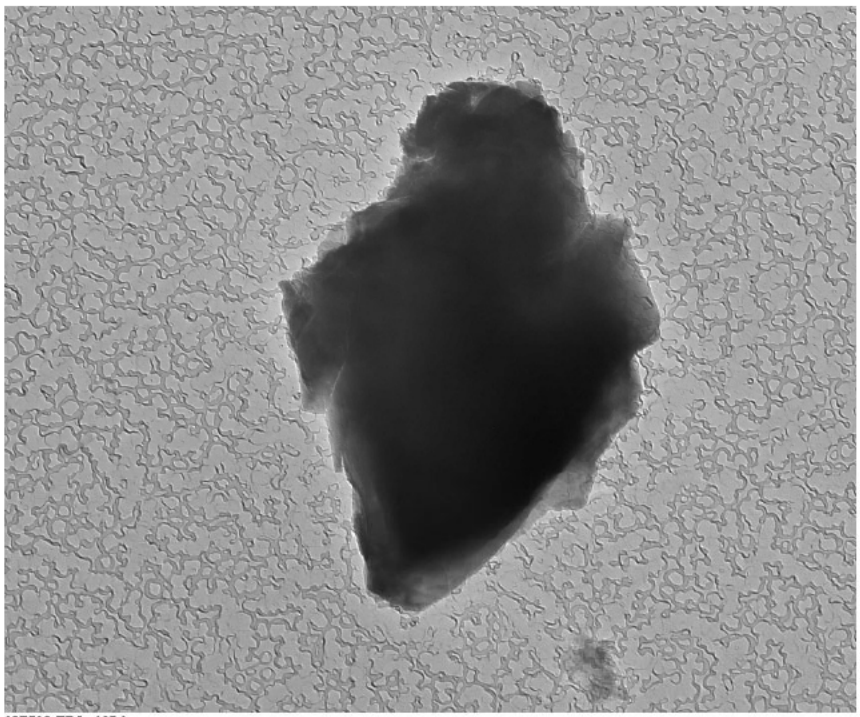
627500 FDA_128.jpg
627500-10a
NaMgAlSi Particle Dif
13:27 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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



627500-10B, Particle containing Aluminum and Silicon

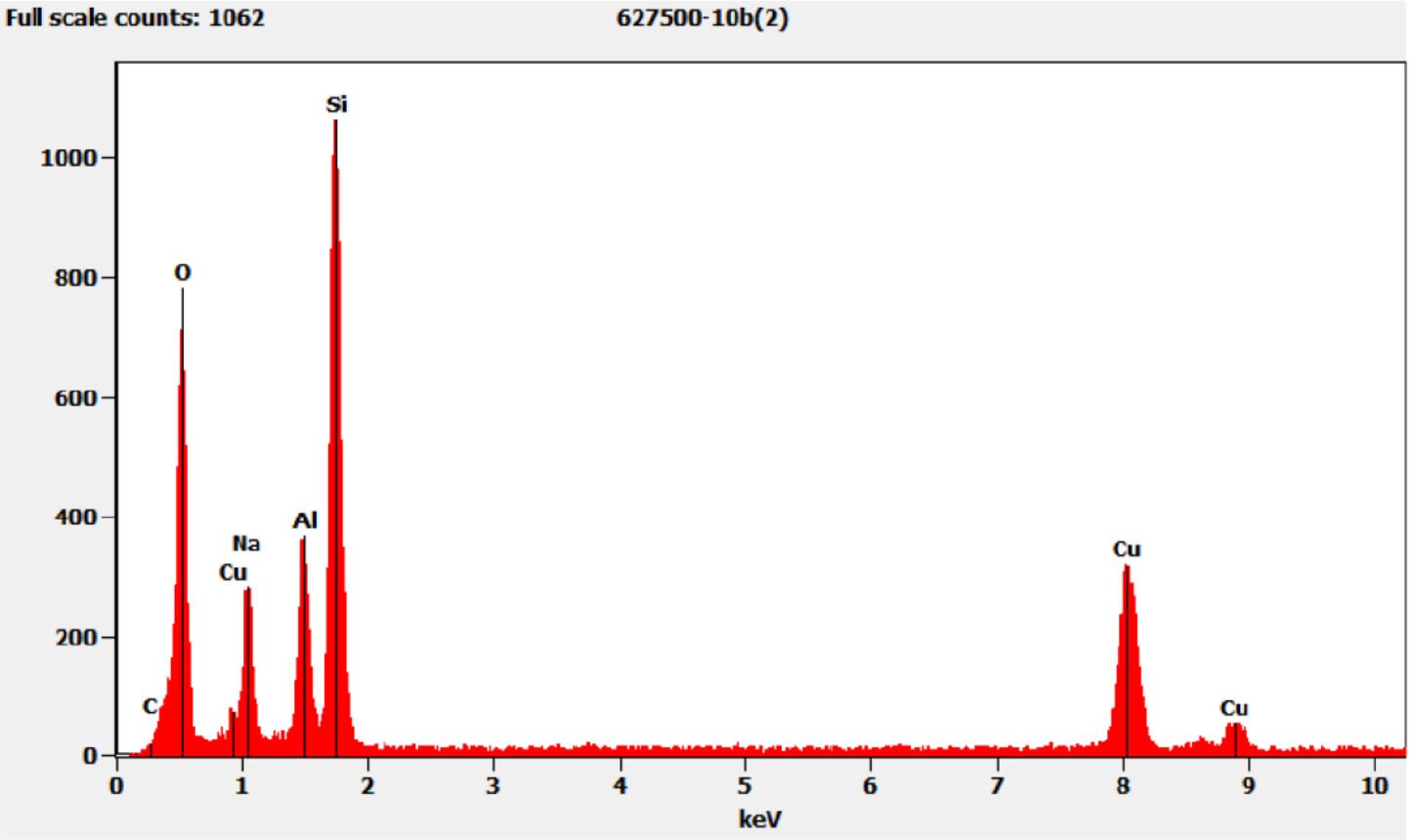


Diffraction Pattern from the Particle containing Aluminum and Silicon pictured above

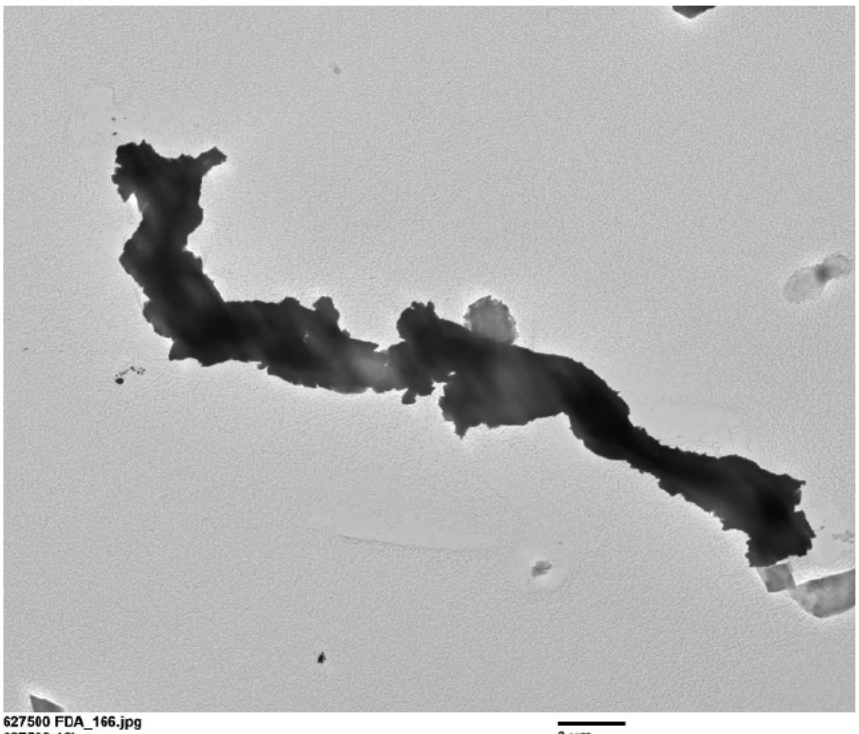
627500 FDA_164.jpg
627500-10b
SiNaAl Particle Dif
18:13 7/26/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Particle containing Aluminum and Silicon pictured above



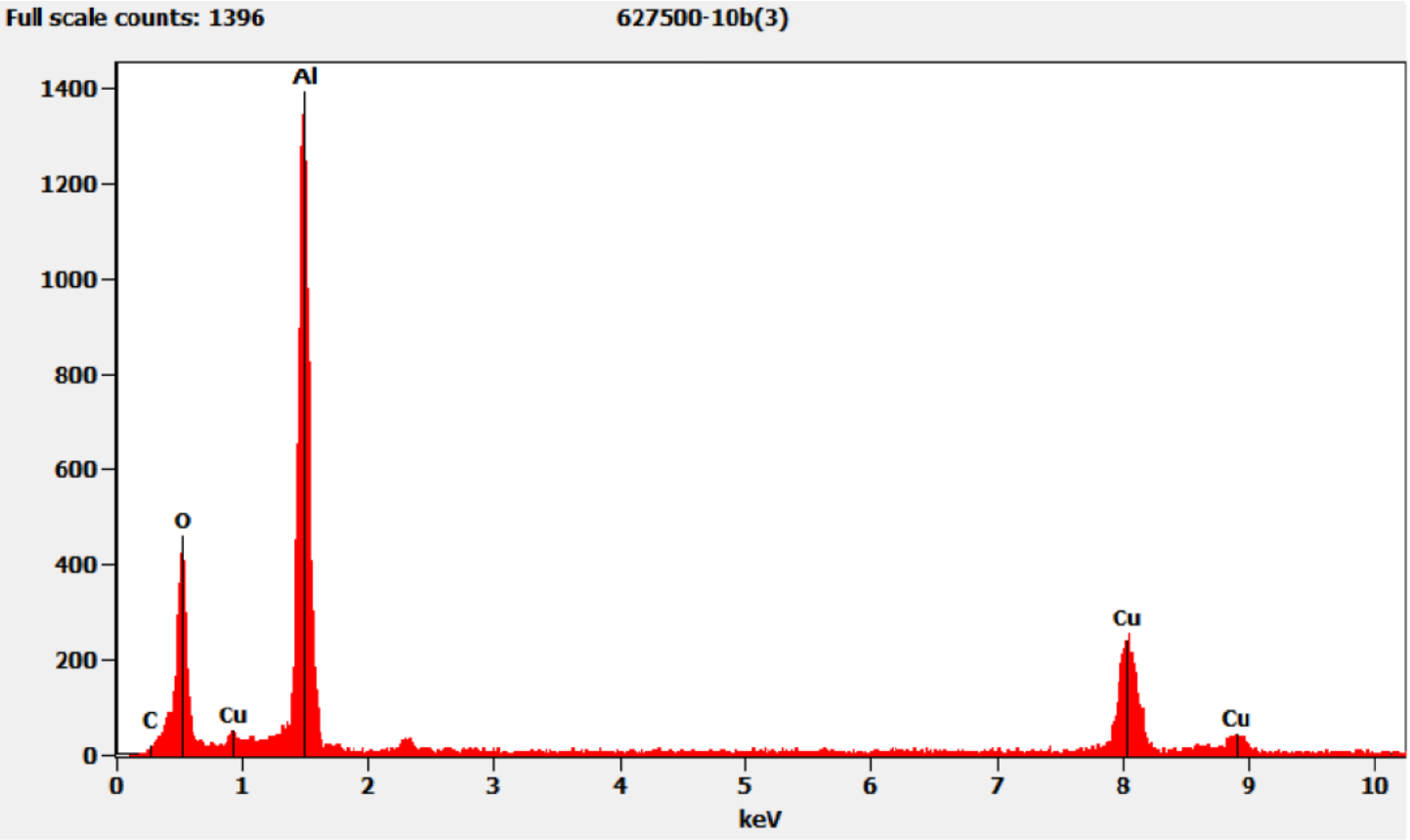
627500-10B, Aluminum Particle



627500 FDA_166.jpg
627500-10b
Al Particle
Cal: 0.010296 µm/pix
18:16 7/26/2021
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

Chemistry from the Aluminum Particle pictured above



627500-11A, 11B, 11C/Client Sample: 04272021-11

PLM

All three aliquots of sample 04272021-11 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-11A	No Asbestos Detected
627500-11B	No Asbestos Detected
627500-11C	No Asbestos Detected

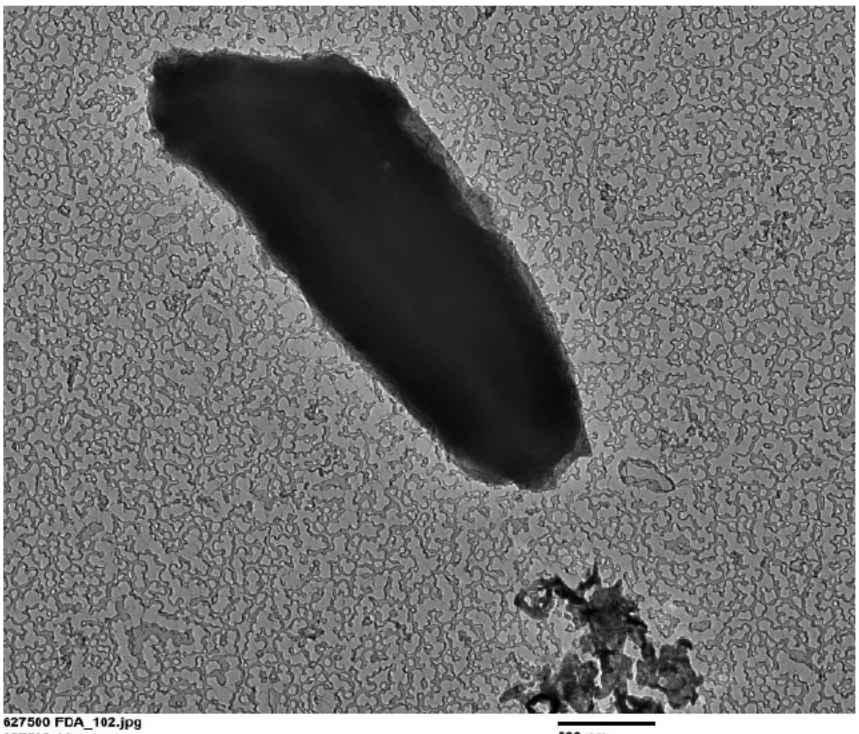
TEM

(b)(6) analyzed aliquot 11A on July 23, 2021 and aliquots 11B and 11C on July 27, 2021. The primary particle observed was talc; mica, titanium and iron particles were also observed along with a few silica spheres, aluminum particles, particles containing magnesium, aluminum and silicon (and other trace elements), talc fibers/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.

627500-11A	No Asbestos Detected
627500-11B	No Asbestos Detected
627500-11C	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 chemistry spectra are zinc and carbon, which are from the TEM specimen holder.

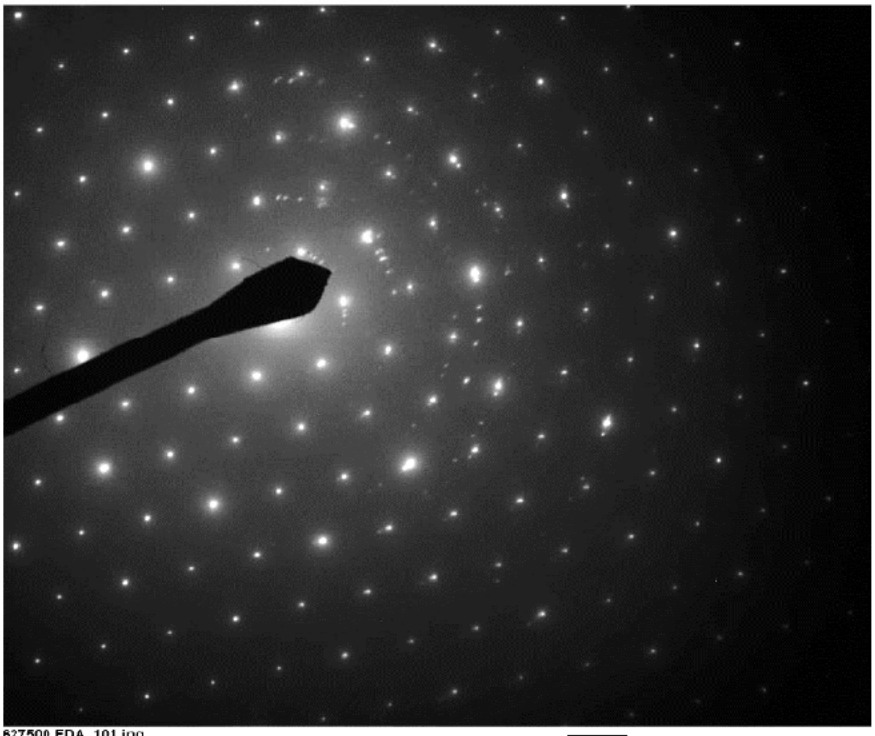
627500-11A, Talc Particle



627500 FDA_102.jpg
627500-11a
Talc Particle
Cal: 0.001775 µm/pix
10:55 7/23/2021
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

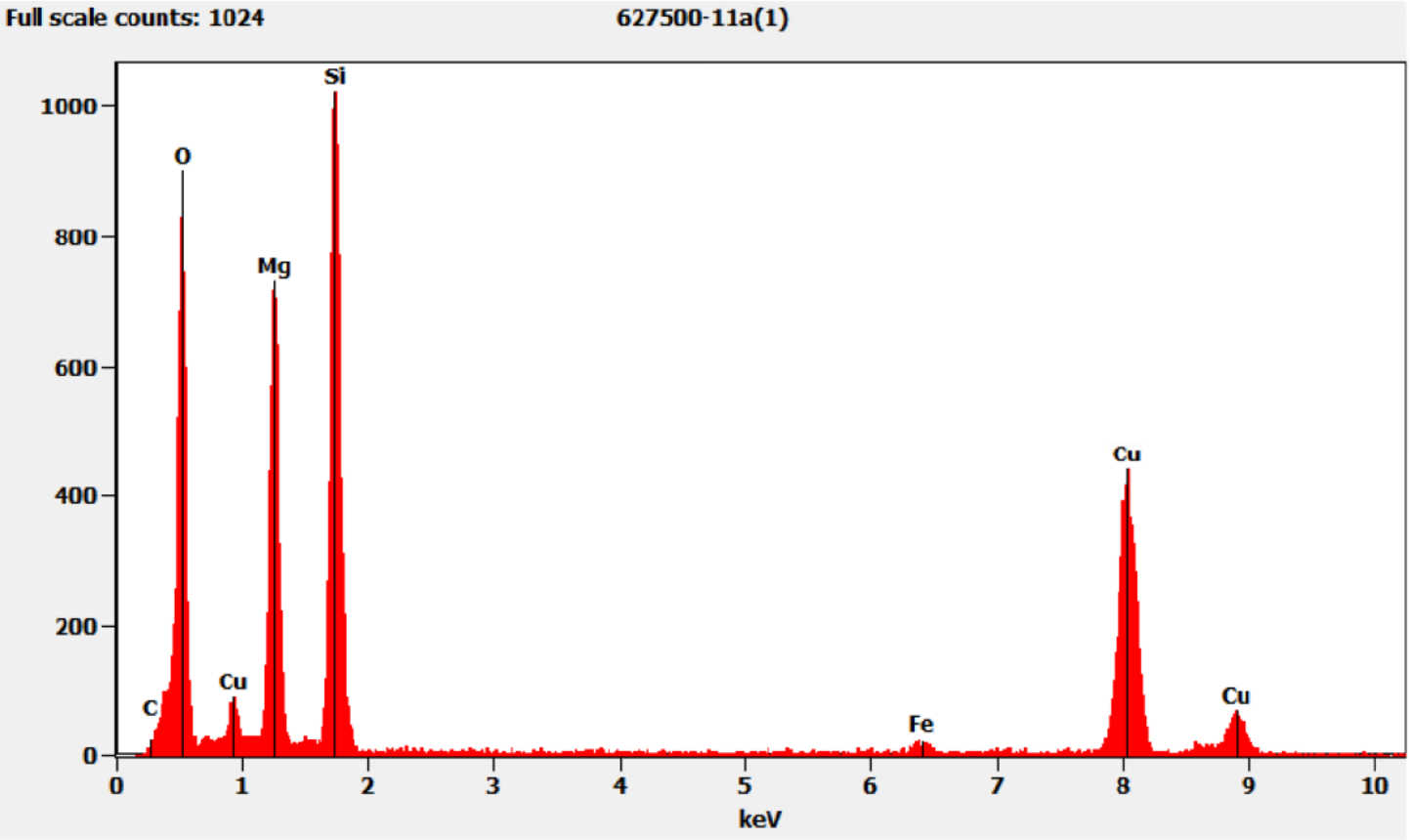
Hexagonal Diffraction Pattern from the Talc Particle pictured above



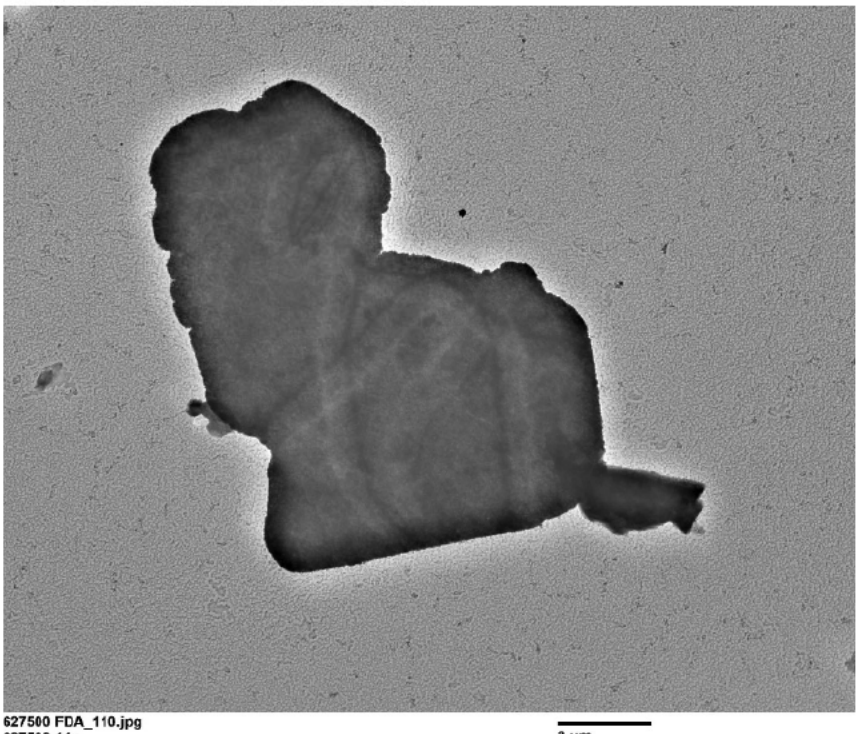
627500 FDA_101.jpg
627500-11a
Talc Particle Dil
10:52 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



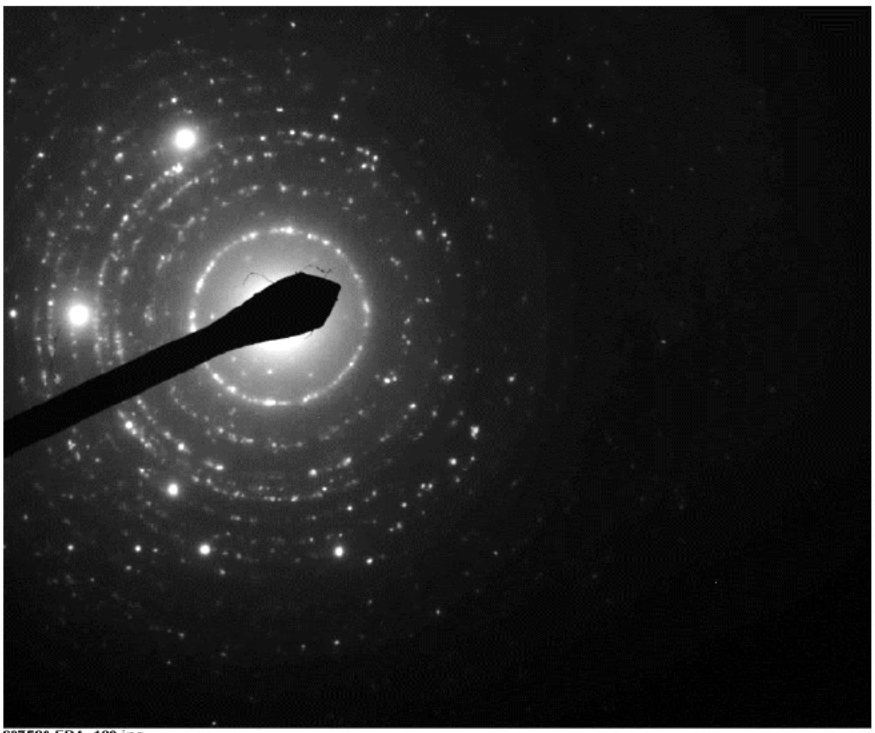
627500-11A, Mica Particle with Titanium



627500 FDA_110.jpg
627500-11a
Mica w/Ti
Cal: 0.007355 µm/pix
11:21 7/23/2021
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

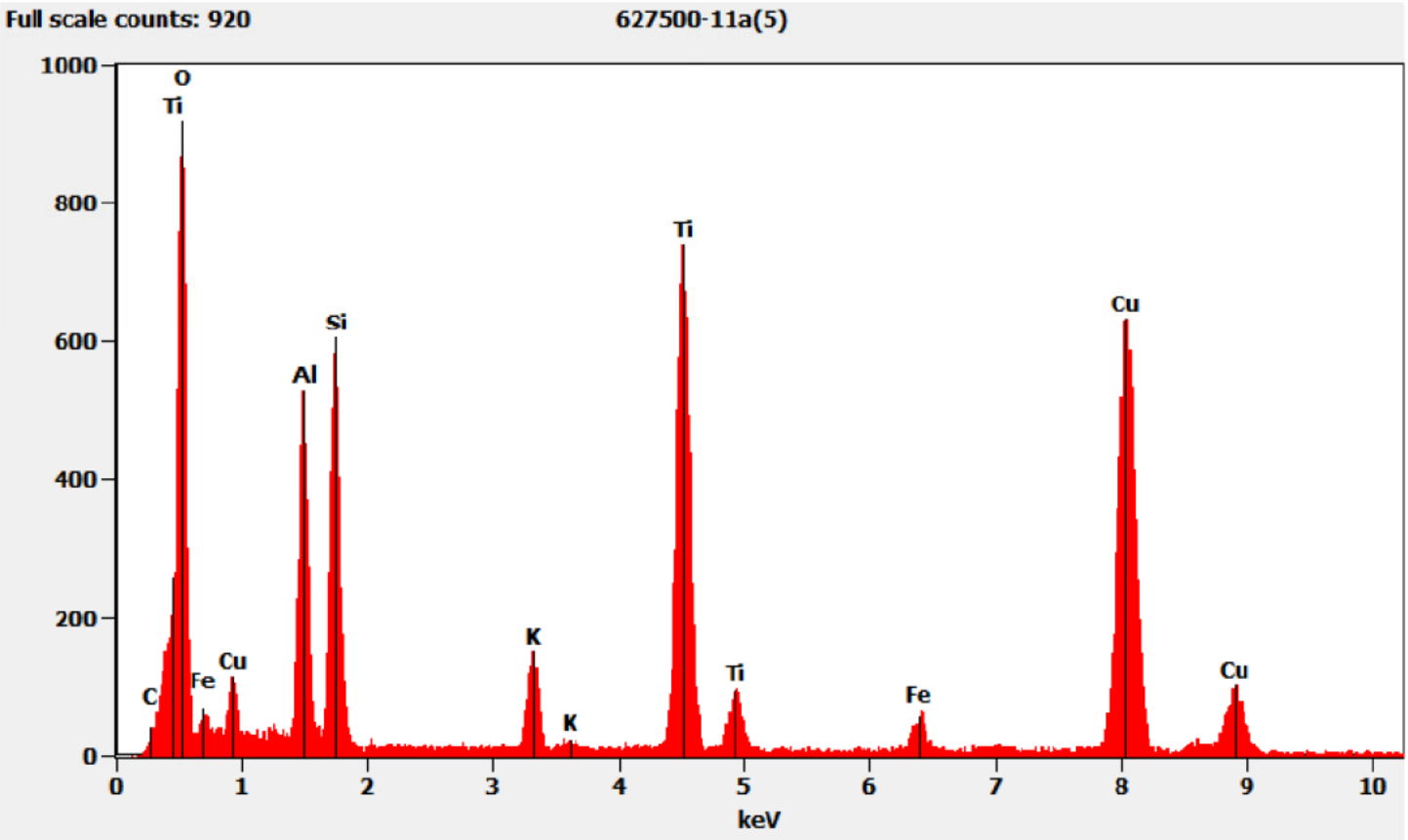
Diffraction Pattern from the Mica Particle with Titanium pictured above



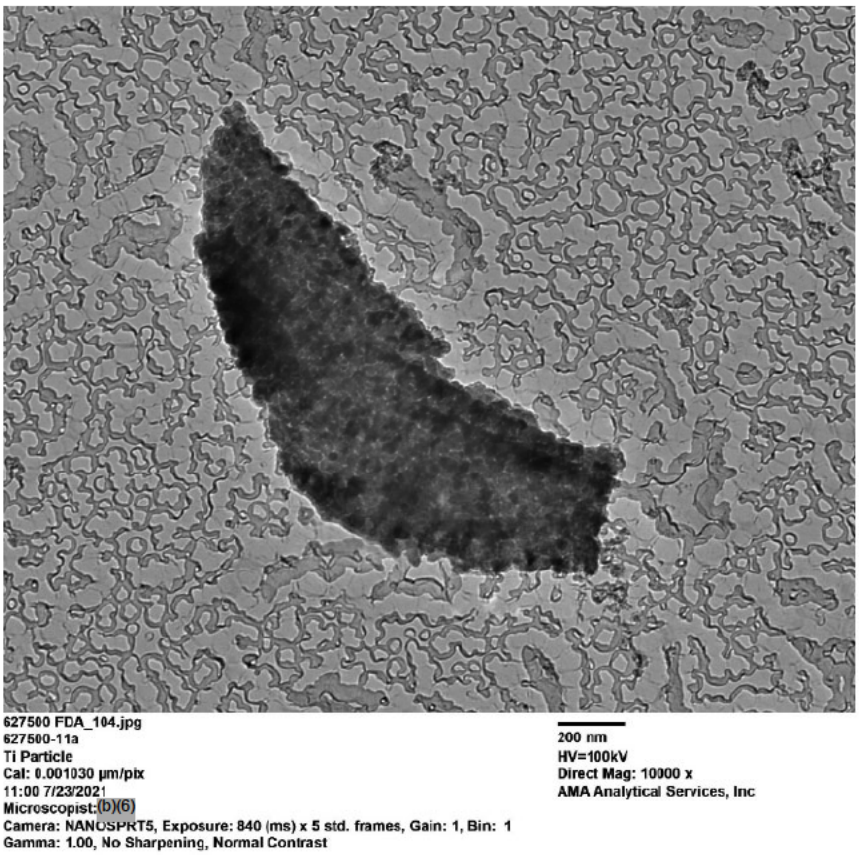
627500 FDA_109.jpg
627500-11a
Mica w/Ti Dif
11:20 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

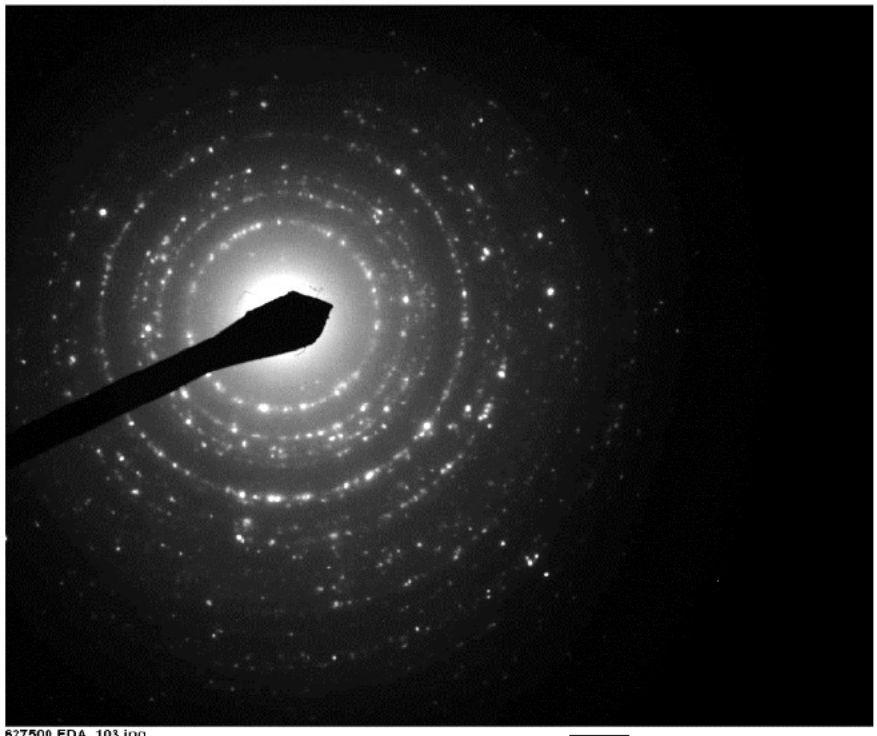
Chemistry from the Mica Particle with Titanium pictured above



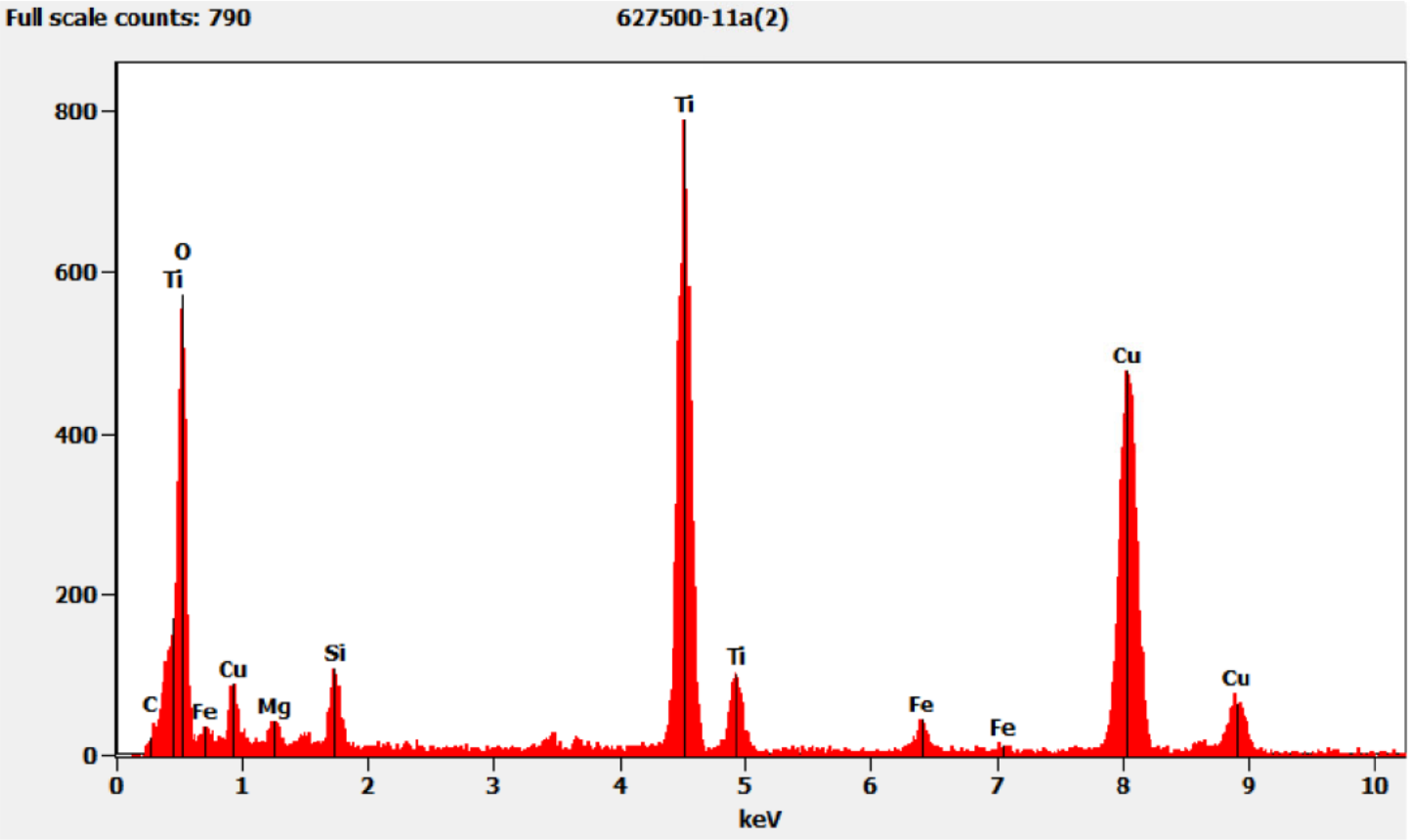
627500-11A, Titanium Particle



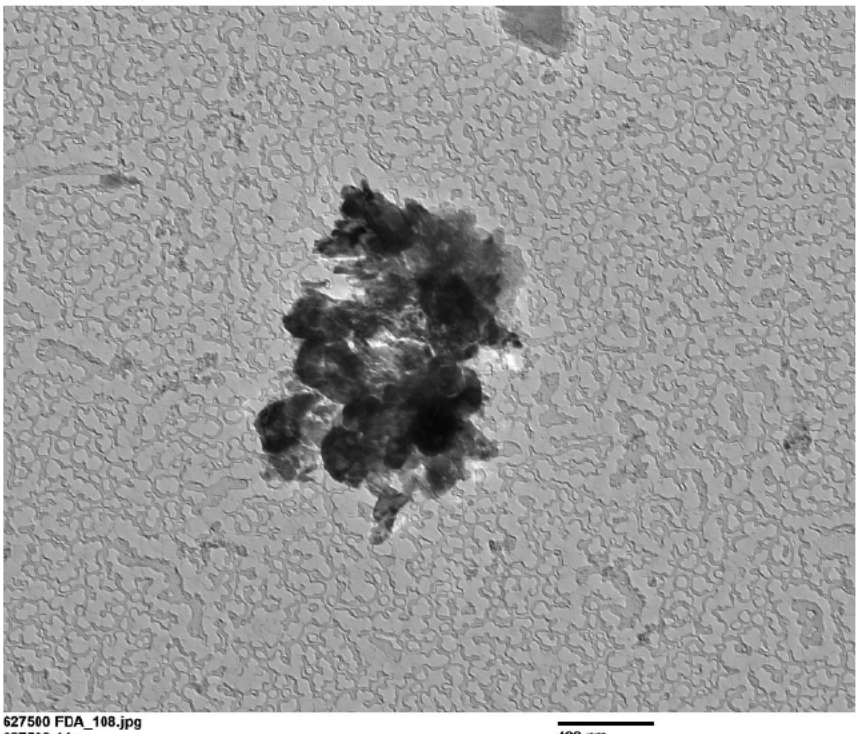
Diffraction Pattern from the Titanium Particle pictured above



Chemistry from the Titanium Particle pictured above



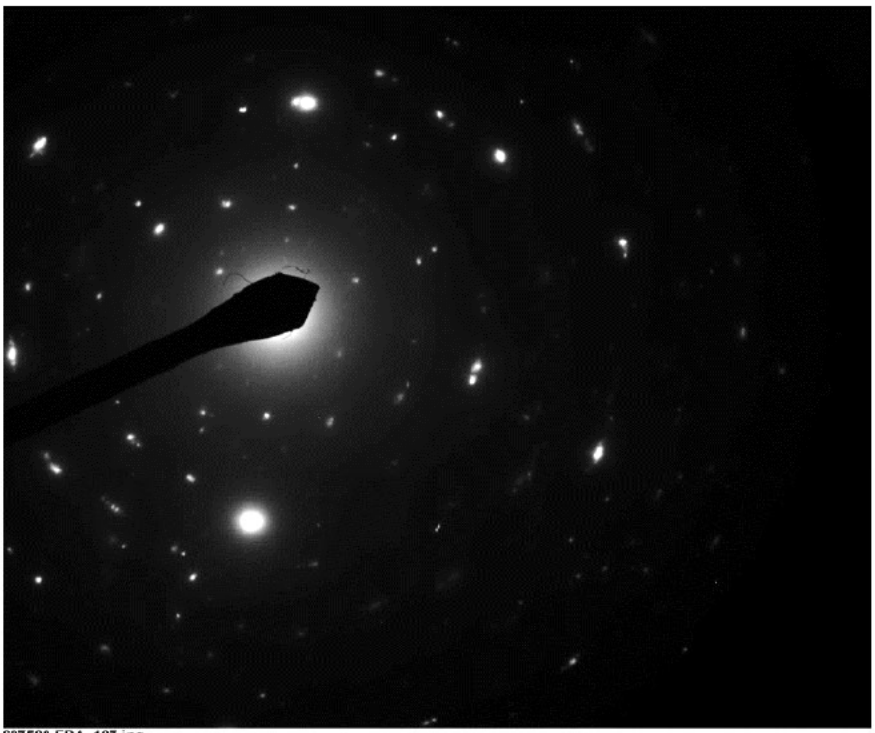
627500-11A, Iron Particles



627500 FDA_108.jpg
627500-11a
Fe Particles
Cal: 0.001430 µm/pix
11:15 7/23/2021
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

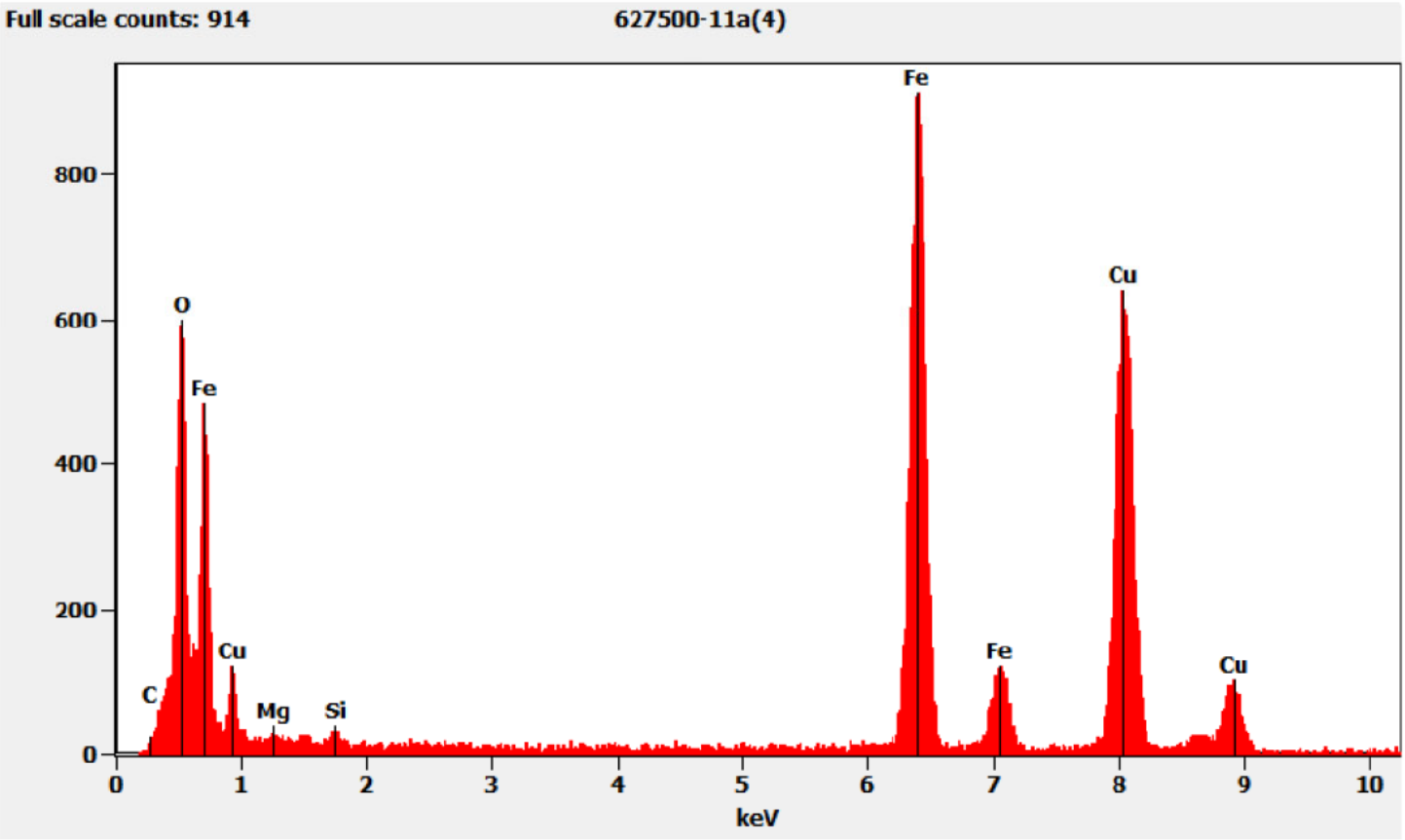
Diffraction Pattern from Iron Particles pictured above



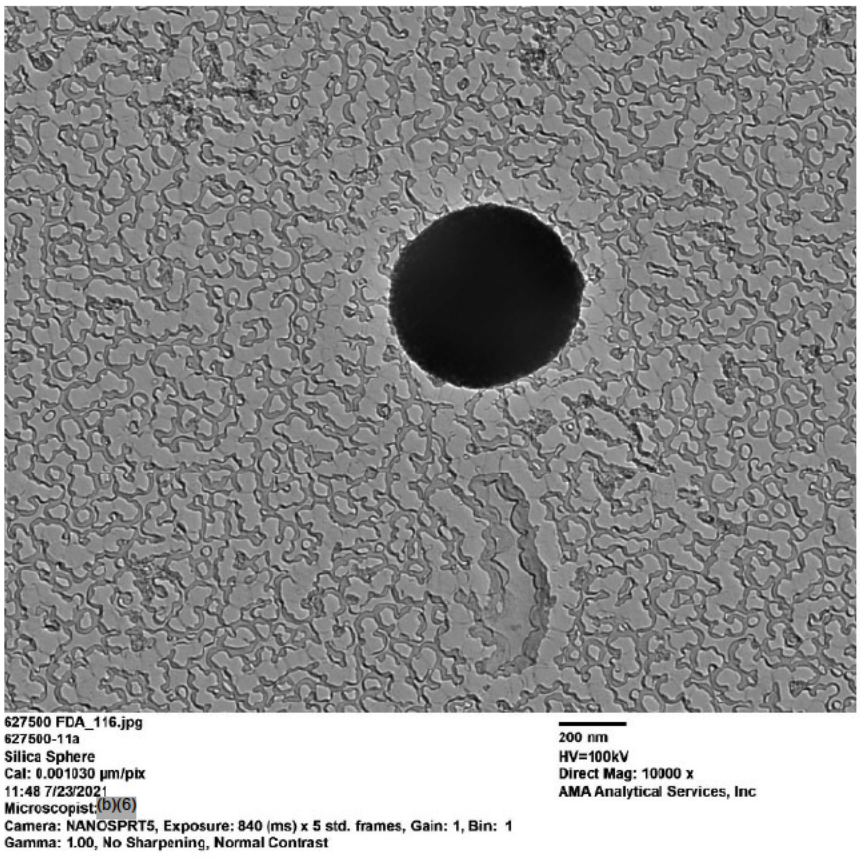
627500 FDA_107.jpg
627500-11a
Fe Particles Dif
11:13 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

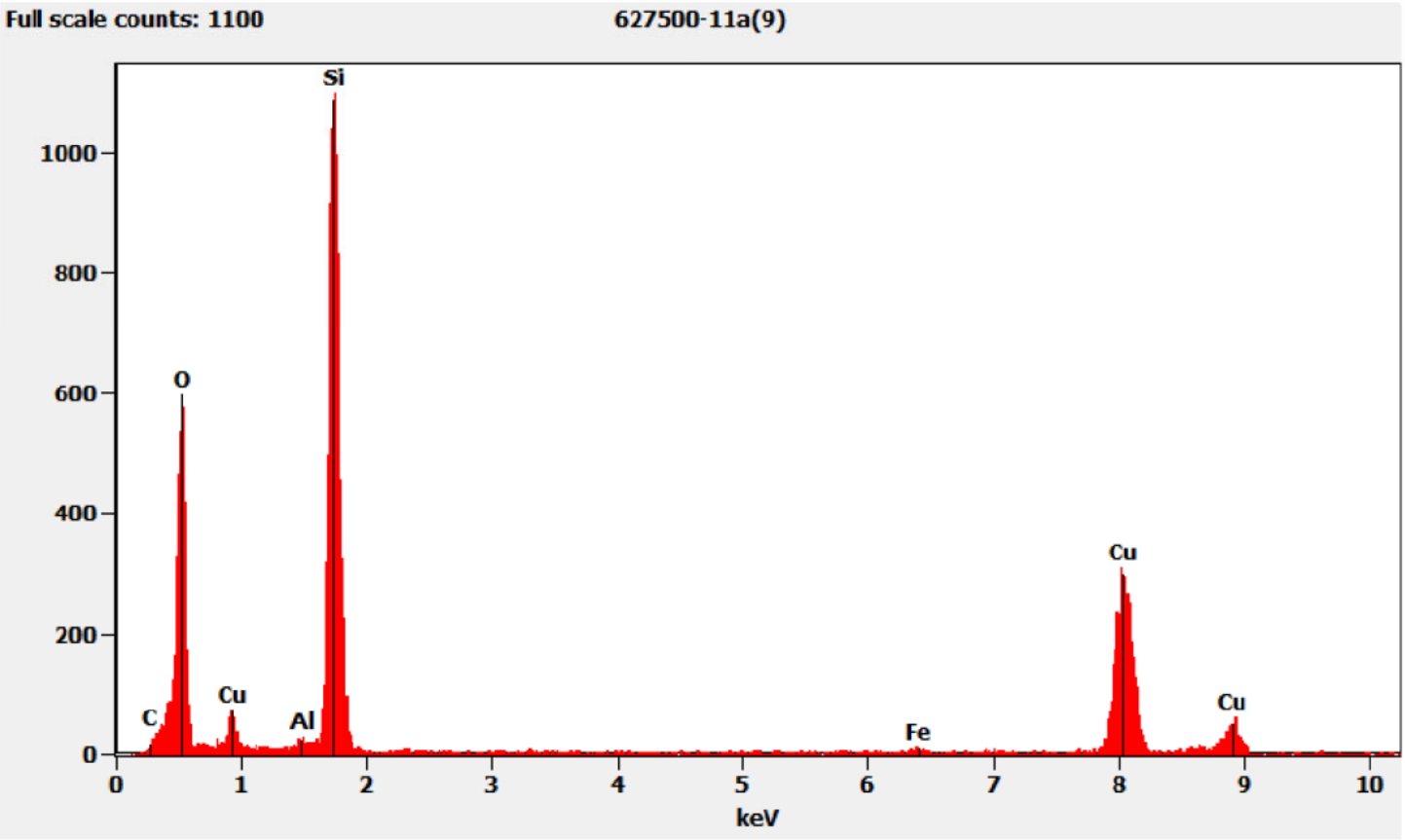
Chemistry from the Iron Particles pictured above



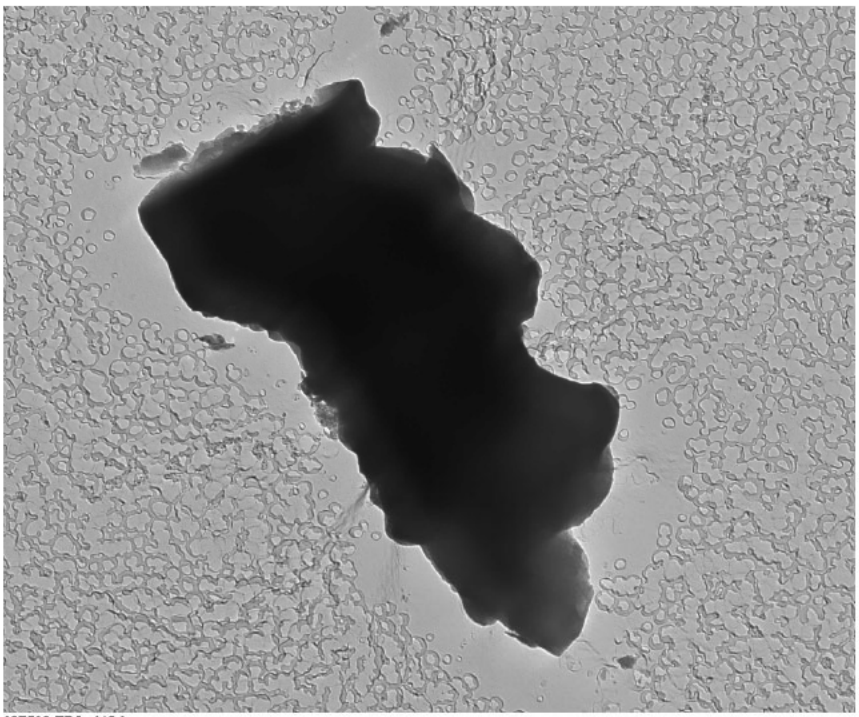
627500-11A, Silica Sphere



Chemistry from the Silica Sphere pictured above



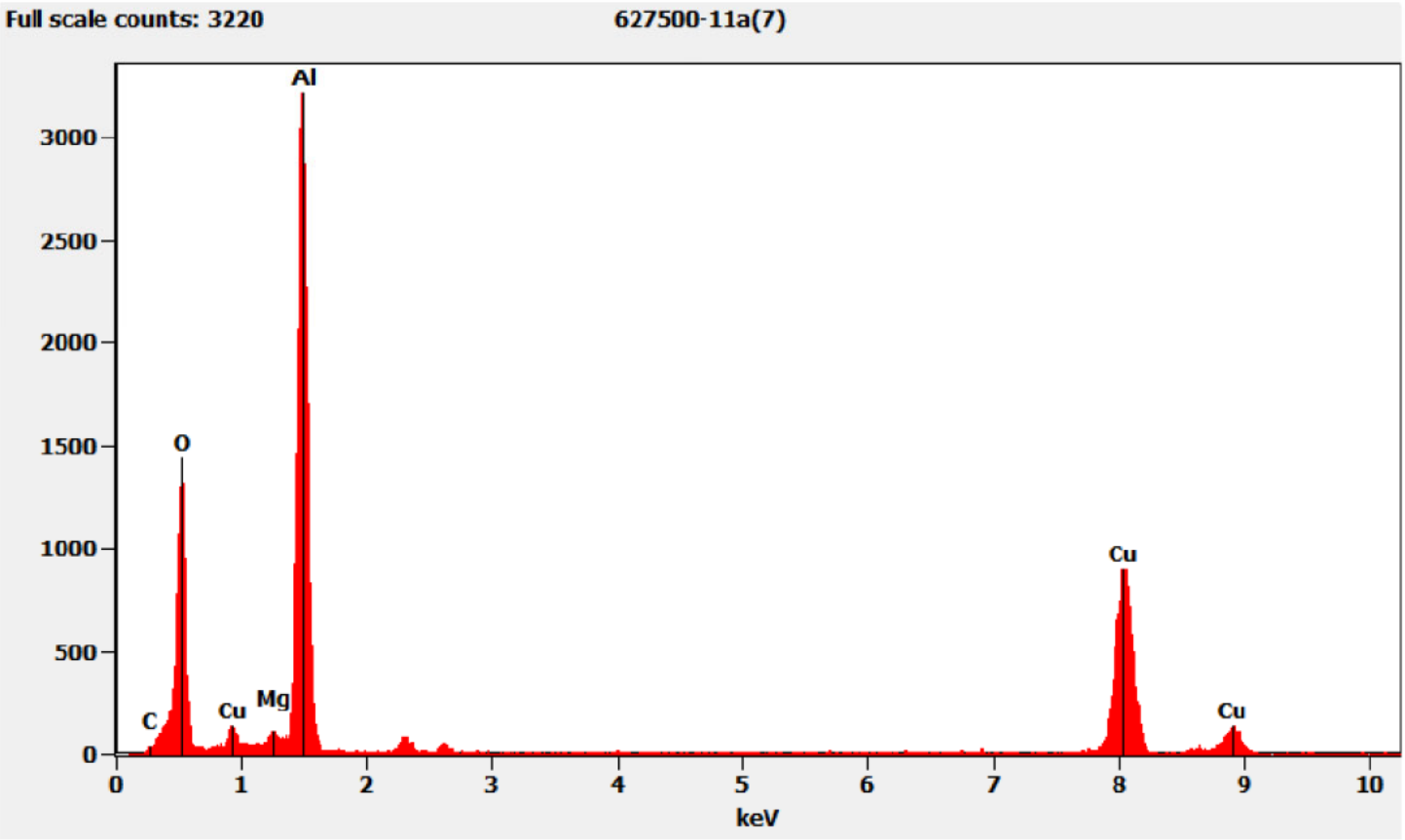
627500-11A, Aluminum Particle



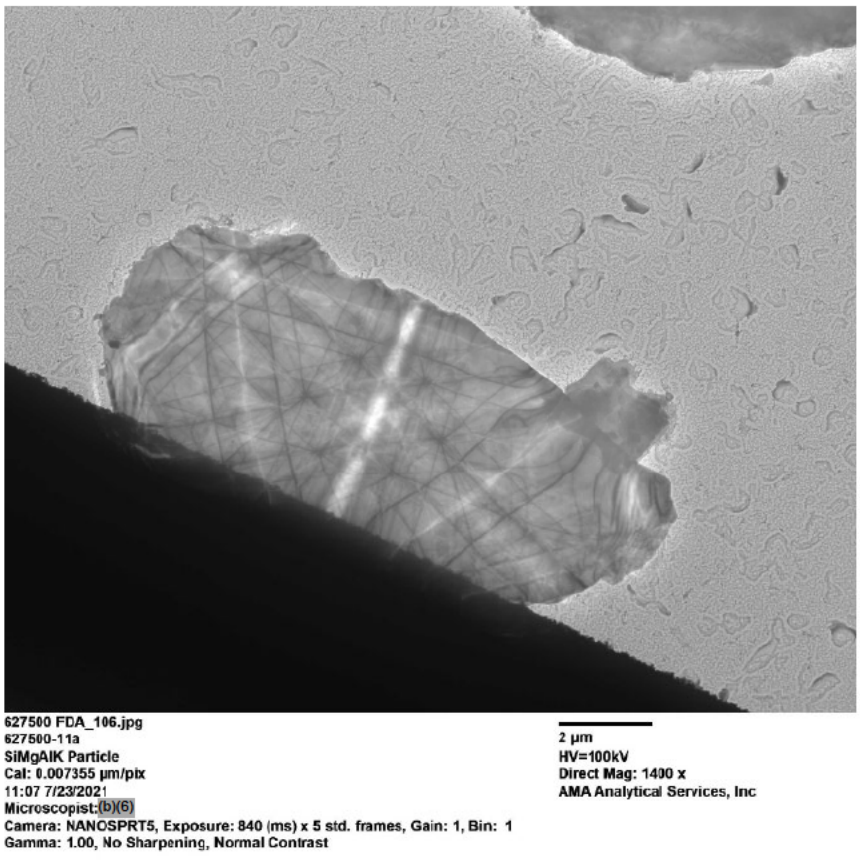
627500 FDA_112.jpg
627500-11a
Al Particle
Cal: 0.001030 µm/pix
11:36 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

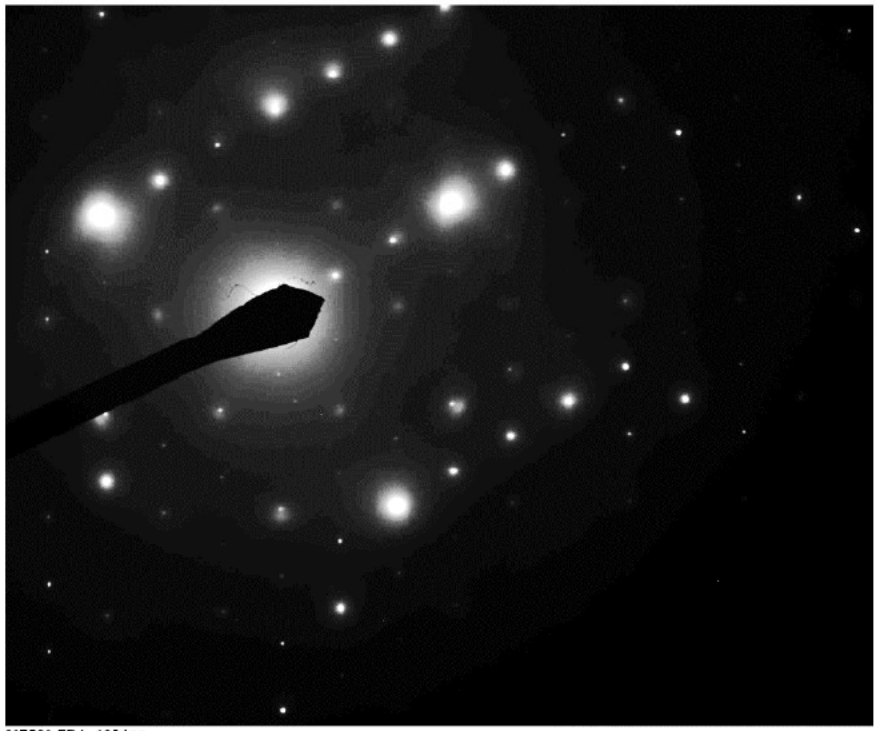
Chemistry from the Aluminum Particle pictured above



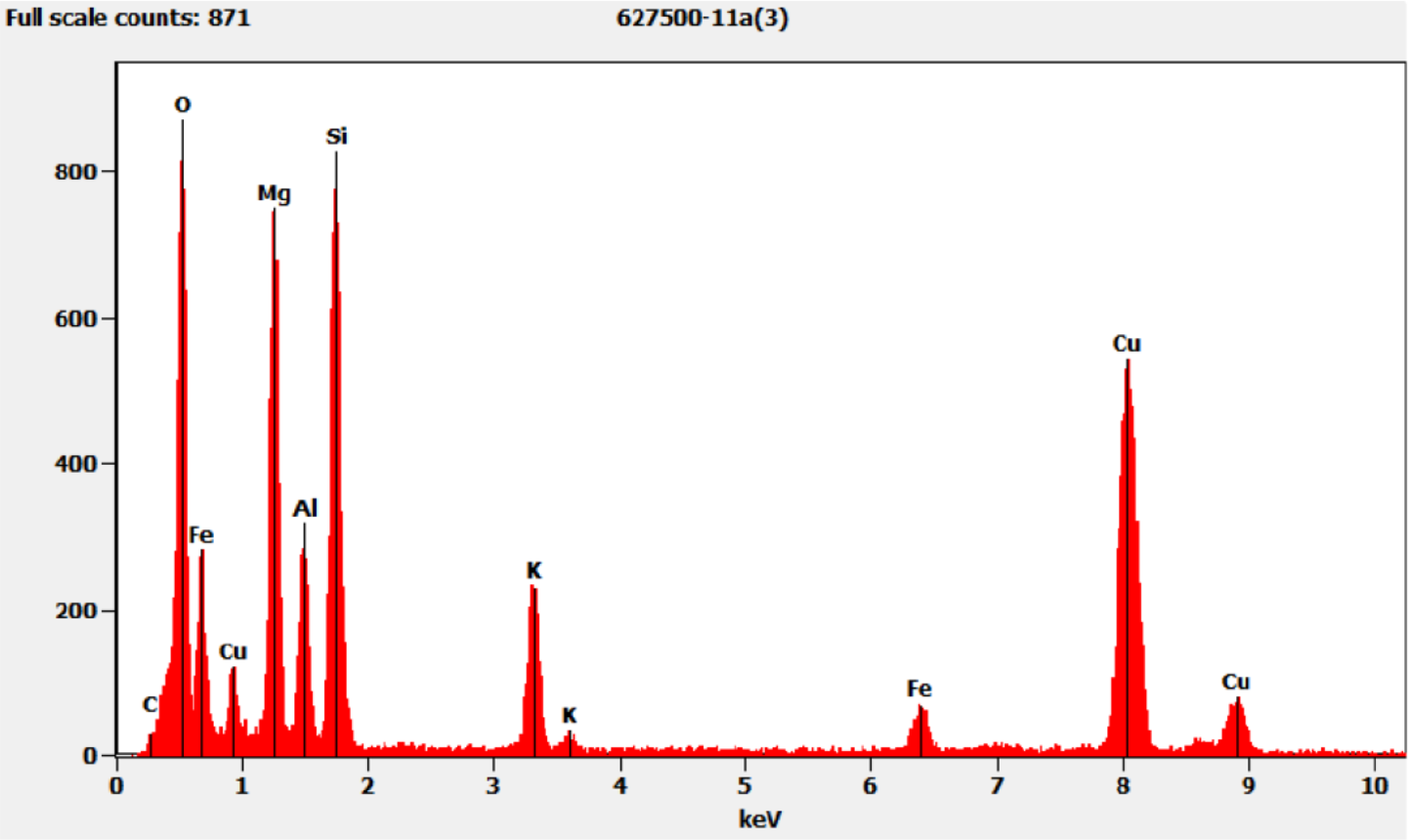
627500-11A, Particle containing Magnesium, Aluminum, Silicon, Potassium and Iron



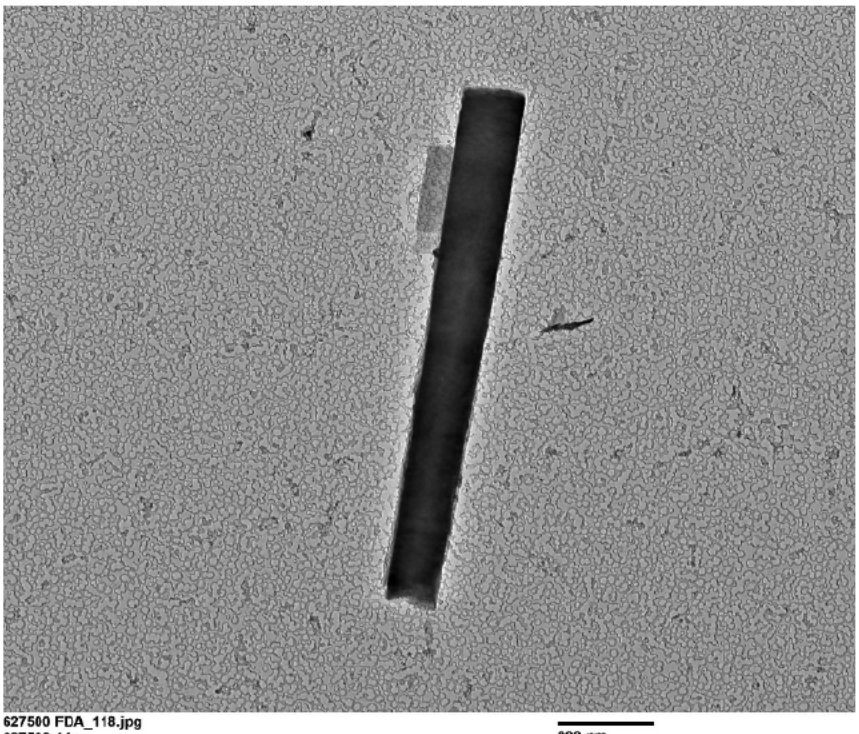
Diffraction Pattern from the Particle containing Magnesium, Aluminum, Silicon, Potassium and Iron pictured above



Chemistry from the Particle containing Magnesium, Aluminum, Silicon, Potassium and Iron pictured above



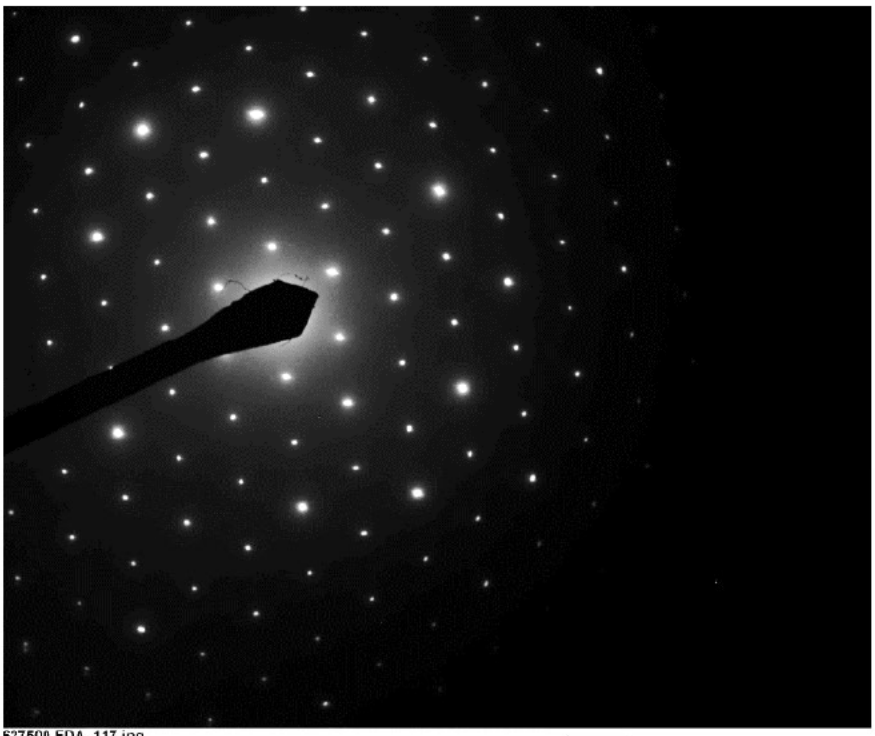
627500-11A, Talc Fiber



627500 FDA_118.jpg
627500-11a
Talc Fiber
Cal: 0.002860 µm/pix
12:17 7/23/2021
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

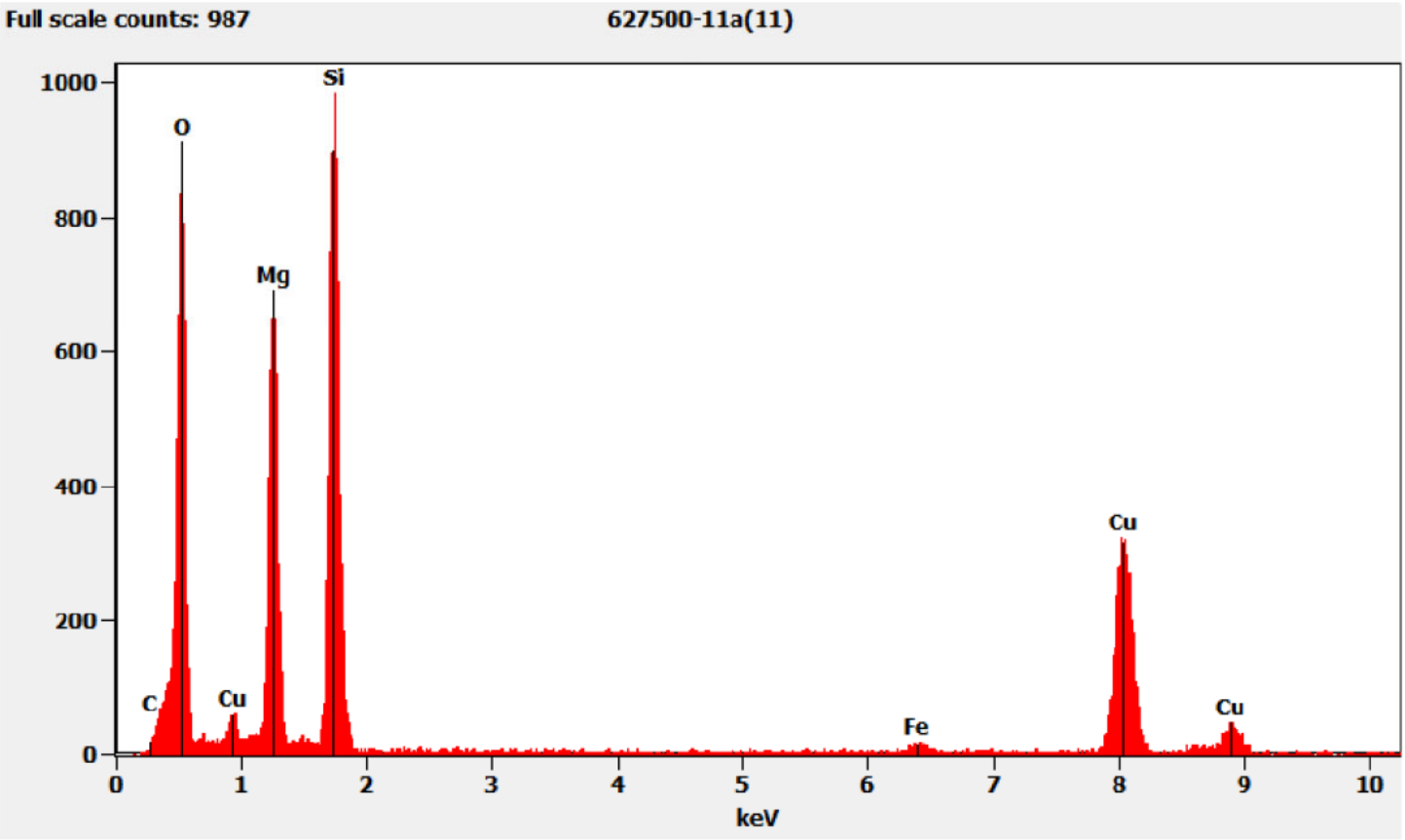
Hexagonal Diffraction Pattern from the Talc Fiber pictured above



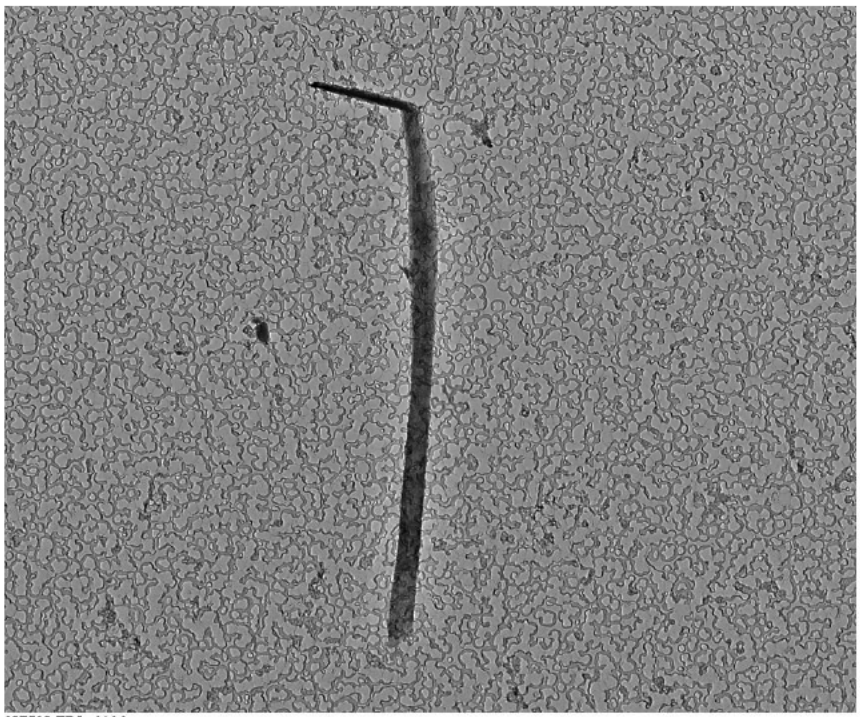
627500 FDA_117.jpg
627500-11a
Talc Fiber Dif
12:14 7/23/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



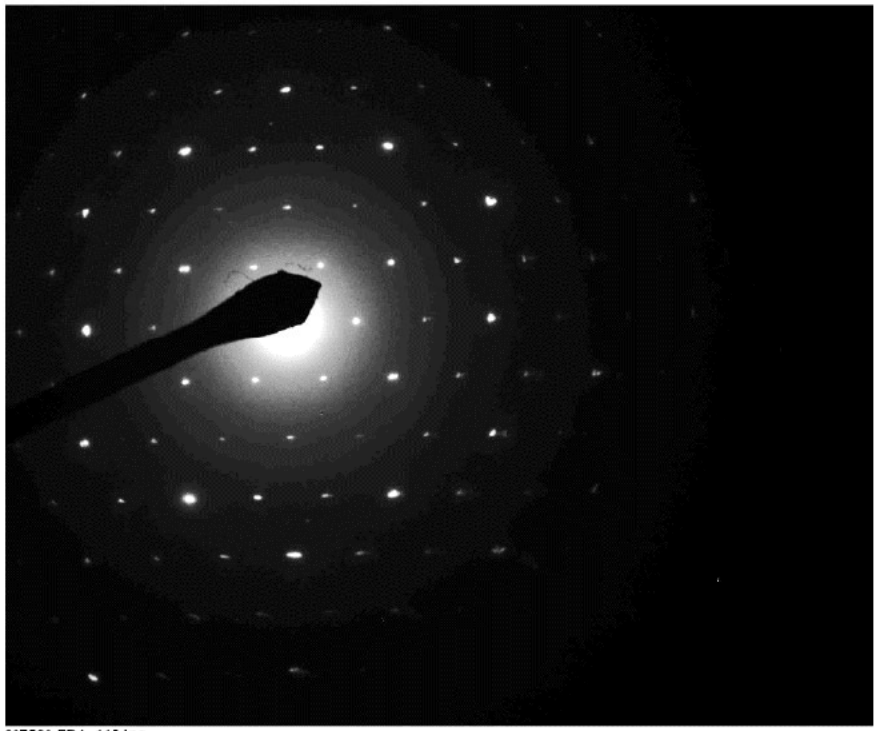
627500-11A, Talc Ribbon



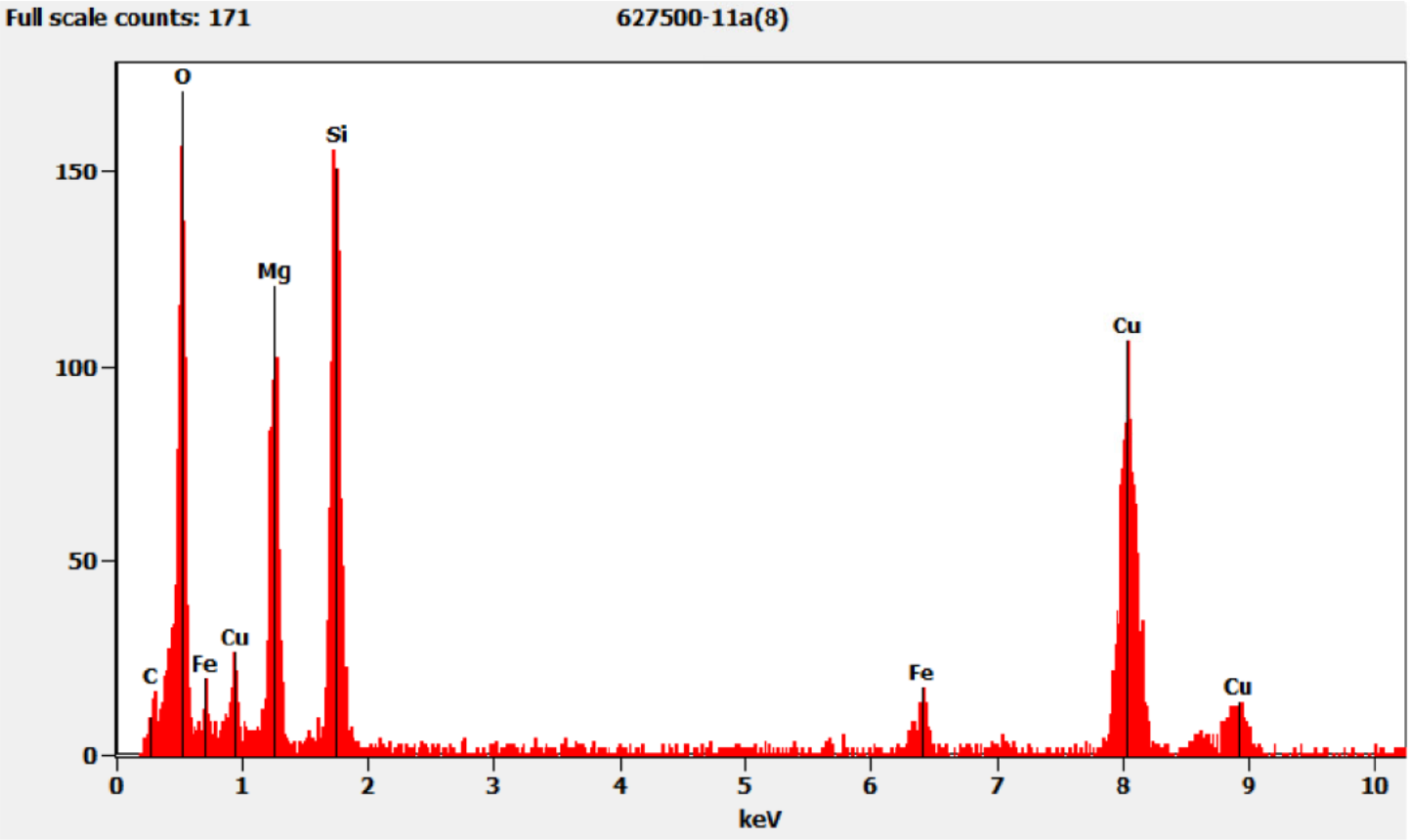
627500 FDA_114.jpg
627500-11a
Talc Ribbon
Cal: 0.001775 µm/pix
11:43 7/23/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

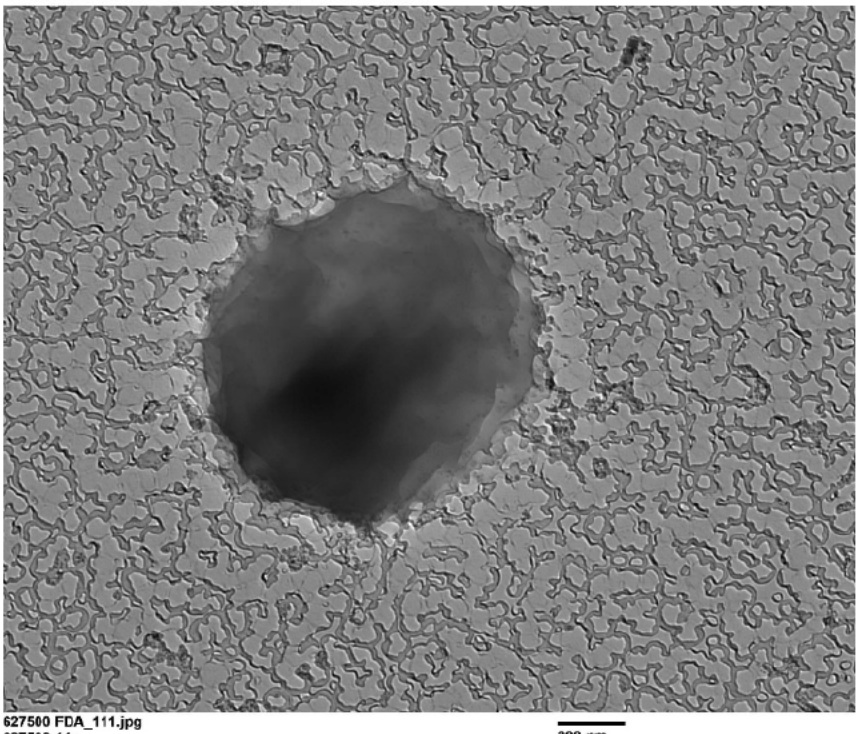
Diffraction Pattern from the Talc Ribbon pictured above



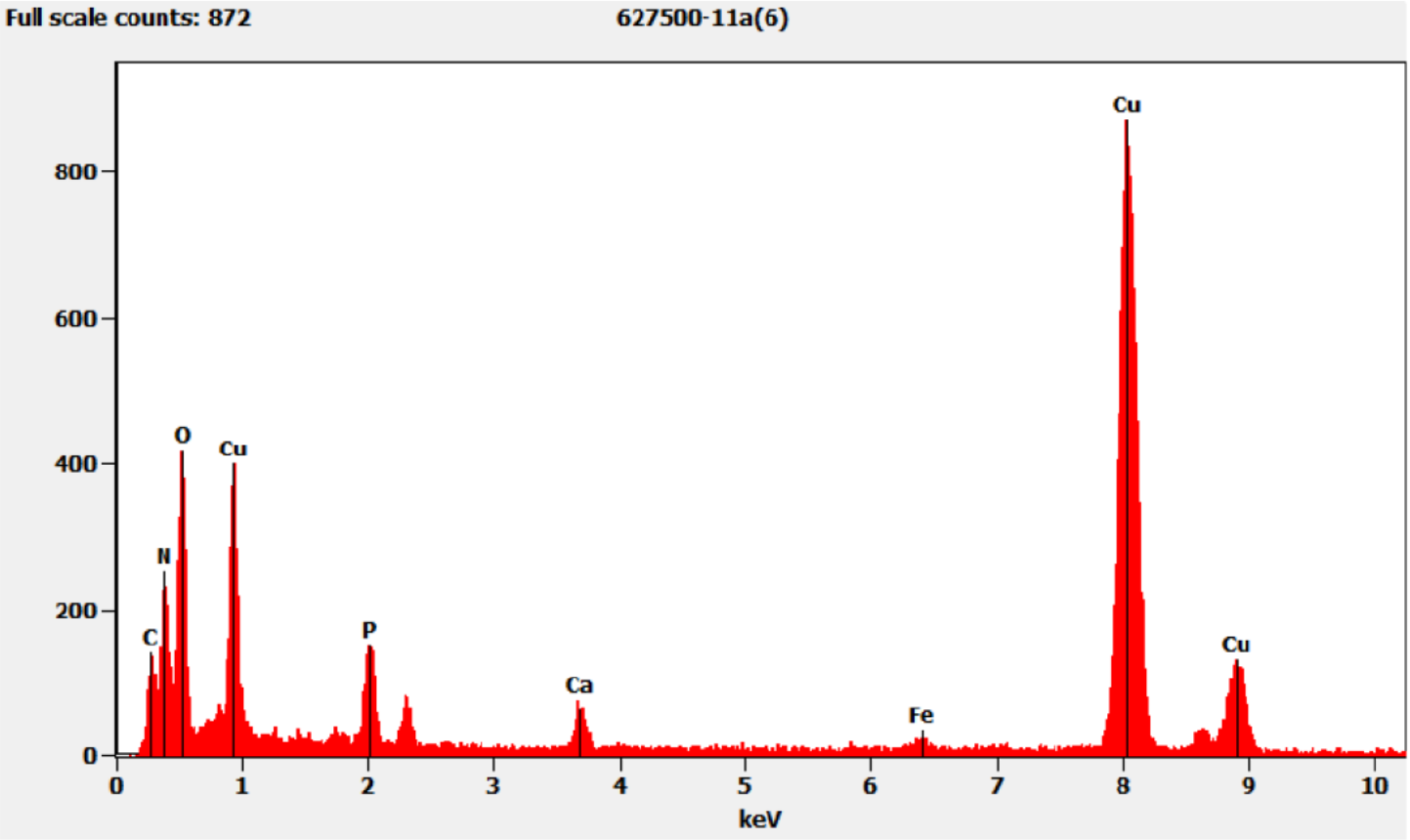
Chemistry from the Talc Ribbon pictured above



627500-11A, Particle containing Phosphorus and Calcium



Chemistry from the Particle containing Phosphorus and Calcium pictured above



627500-12A, 12B, 12C/Client Sample: 04272021-12

PLM

All three aliquots of sample 04272021-12 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-12A	No Asbestos Detected
627500-12B	No Asbestos Detected
627500-12C	No Asbestos Detected

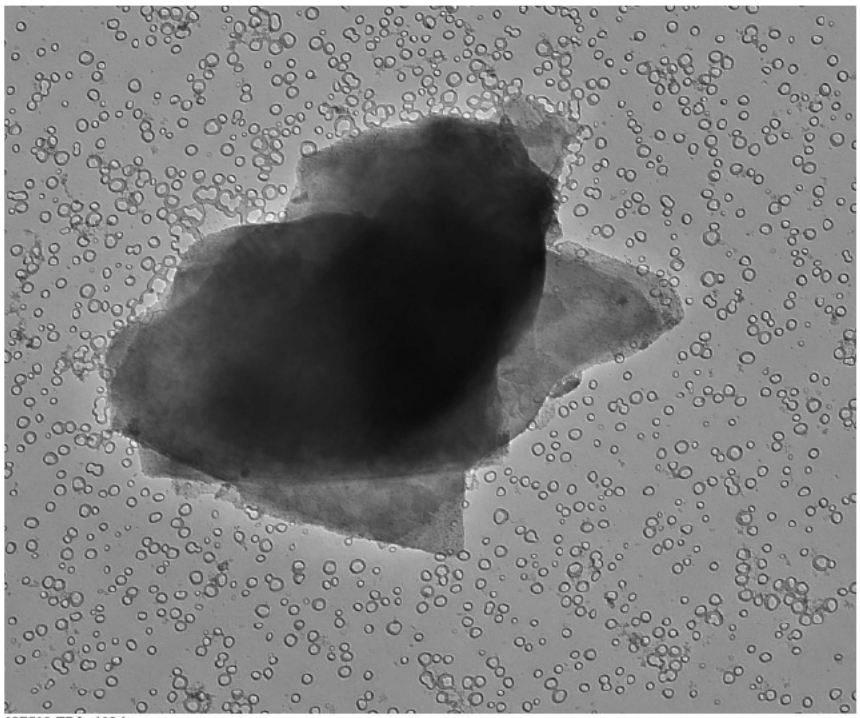
TEM

(b)(6) analyzed aliquot 12A on July 23, 2021. Andreas Saldivar analyzed aliquots 12B and 12C on July 27, 2021. The primary particles observed were talc and mica; iron particles were also observed along with a few 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.

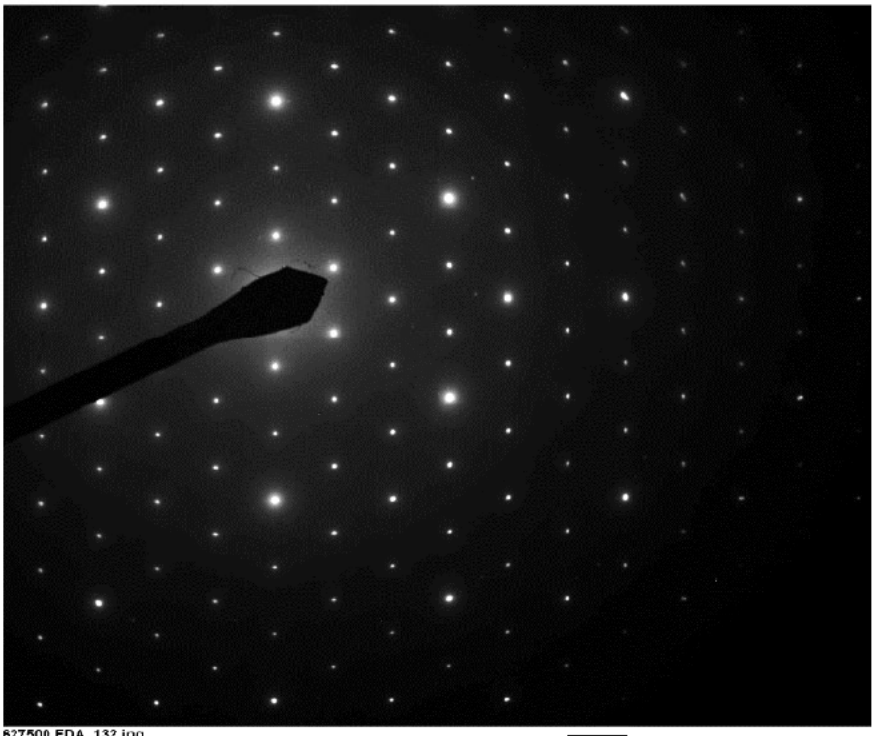
627500-12A	No Asbestos Detected
627500-12B	No Asbestos Detected
627500-12C	No Asbestos Detected

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 chemistry spectra are zinc and carbon, which are from the TEM specimen holder.

627500-12A, Talc Particle



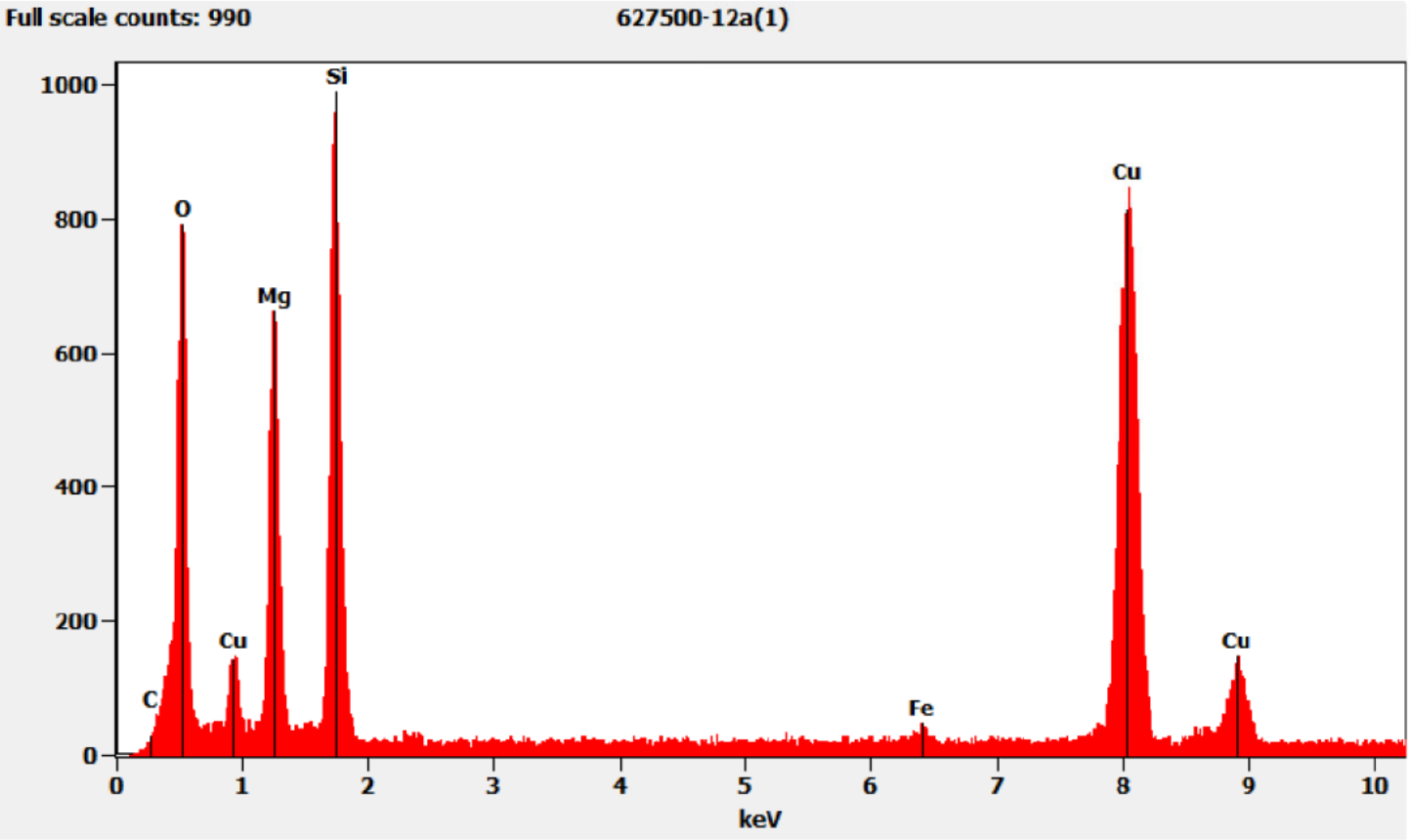
Hexagonal Diffraction Pattern from the Talc Particle pictured above



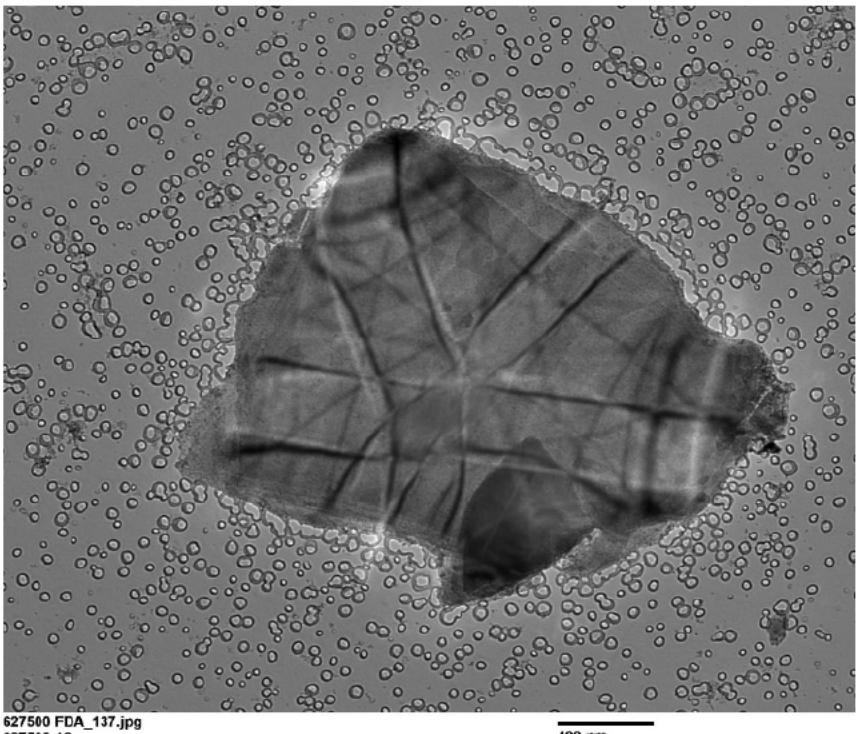
627500 FDA_132.jpg
627500-12a
Talc Particle Dil
14:45 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above



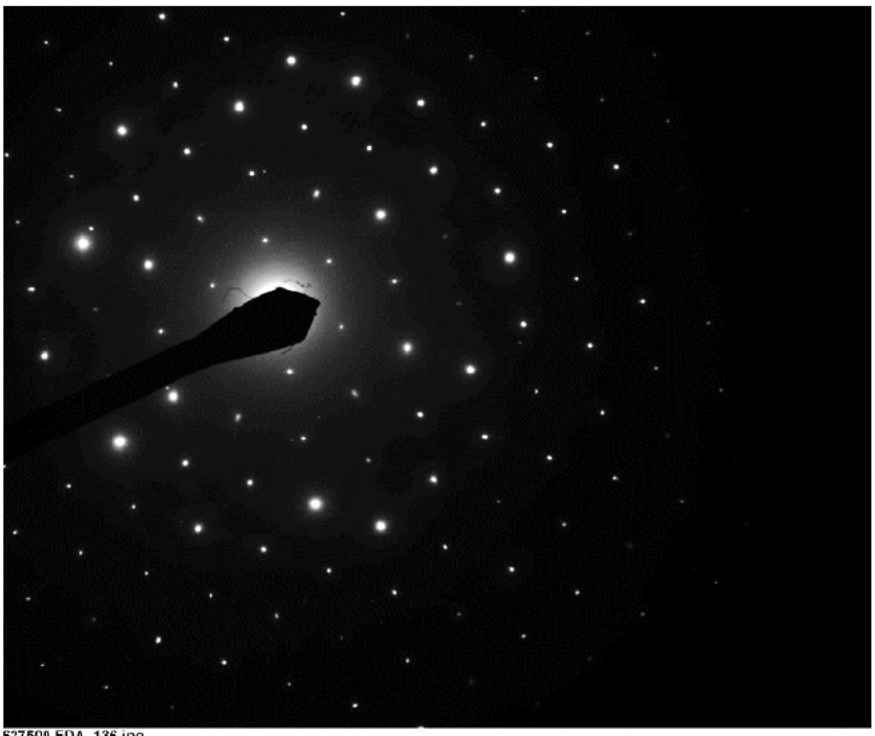
627500-12A, Mica Particle with Iron



627500 FDA_137.jpg
627500-12a
Mica w/Fe Particle
Cal: 0.001430 µm/pix
14:59 7/23/2021
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

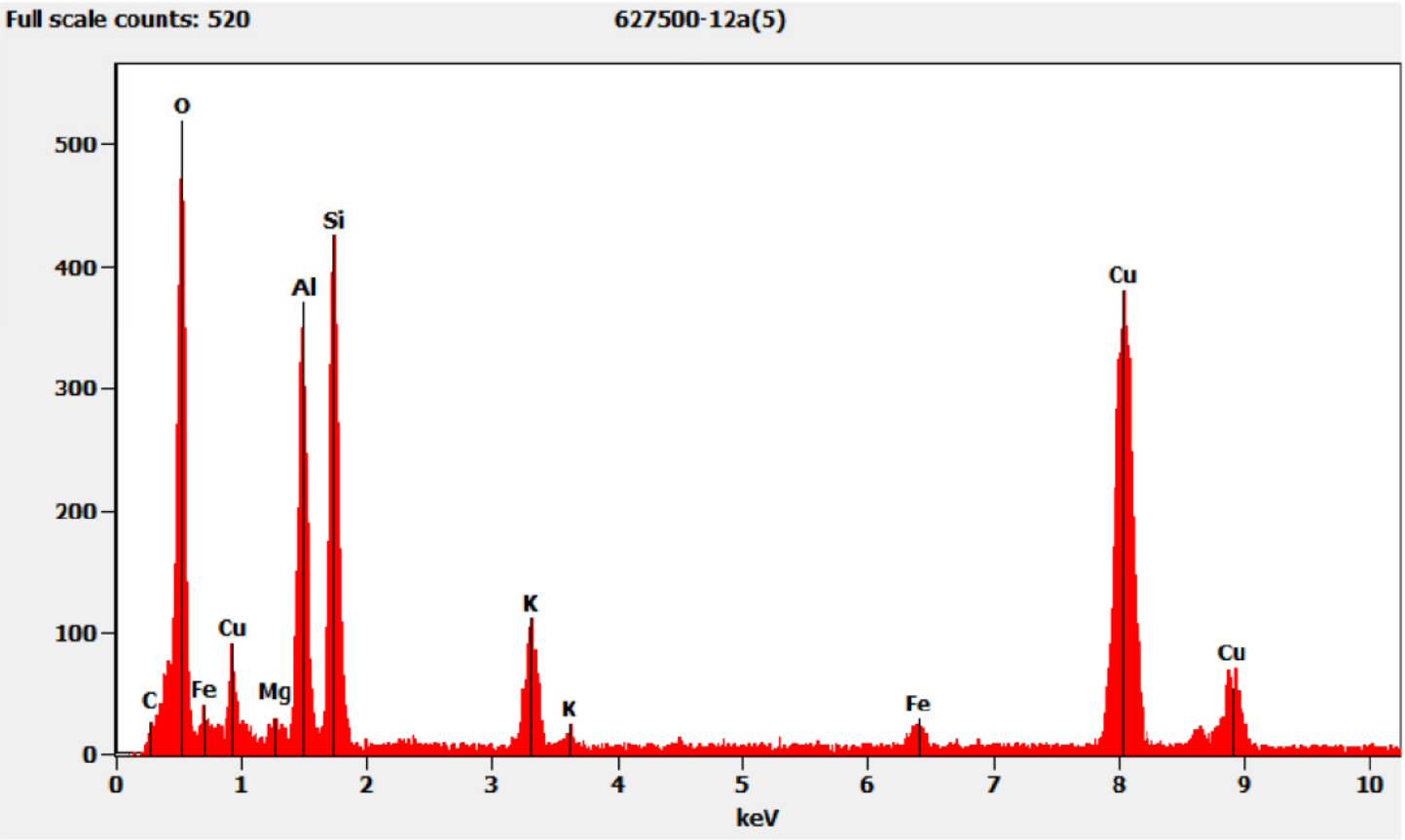
Hexagonal Diffraction Pattern from the Mica Particle with Iron pictured above



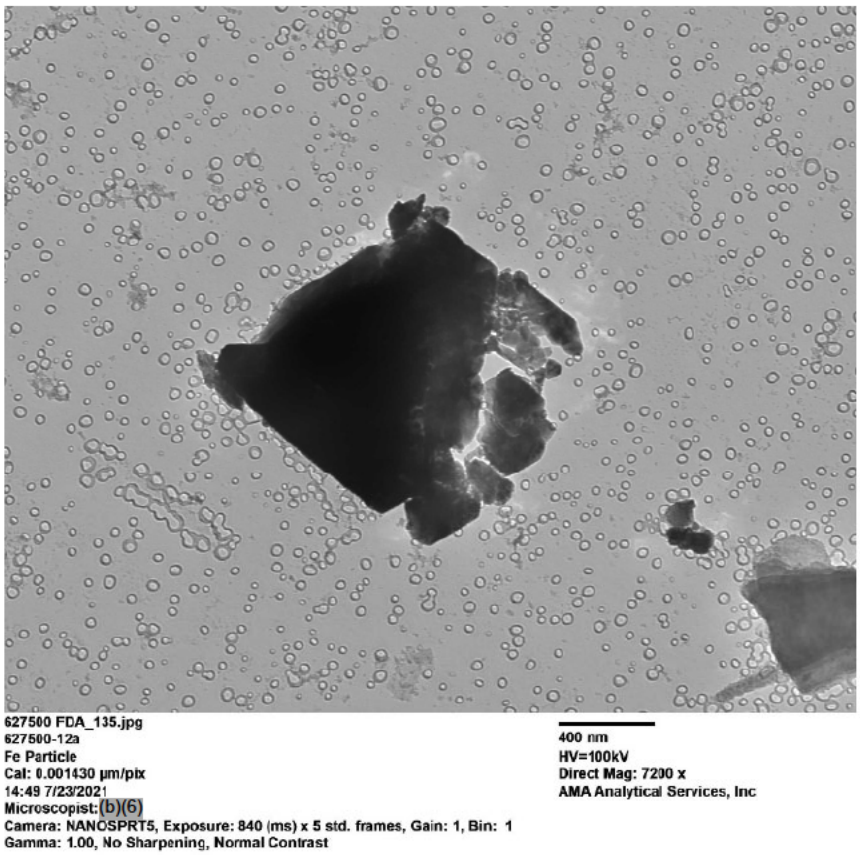
627500 FDA_136.jpg
627500-12a
Mica w/Fe Particle Dif
14:58 7/23/2021
Microscopist (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Mica Particle with Iron pictured above



627500-12A, Iron Particle

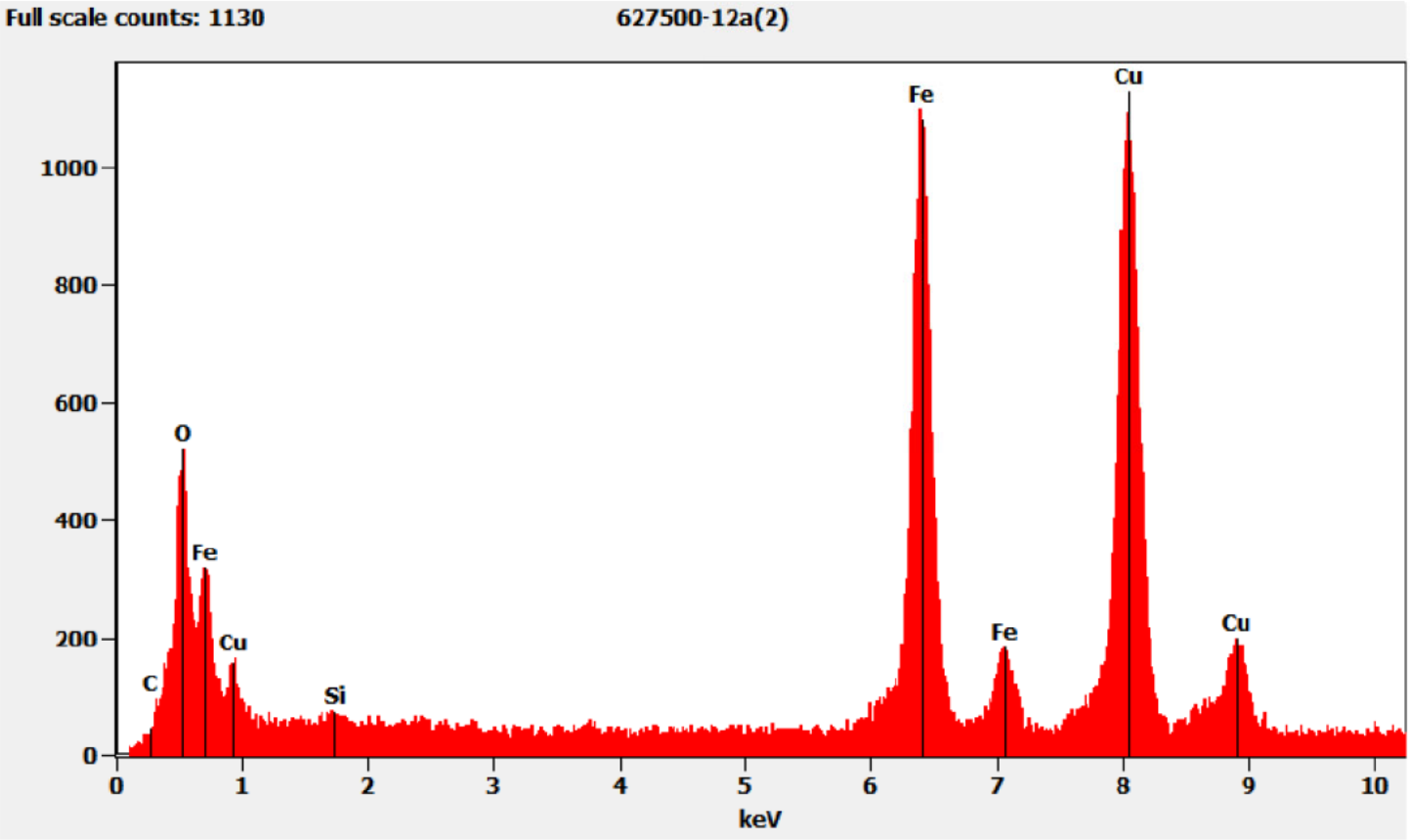


Diffraction Pattern from Iron Particle pictured above

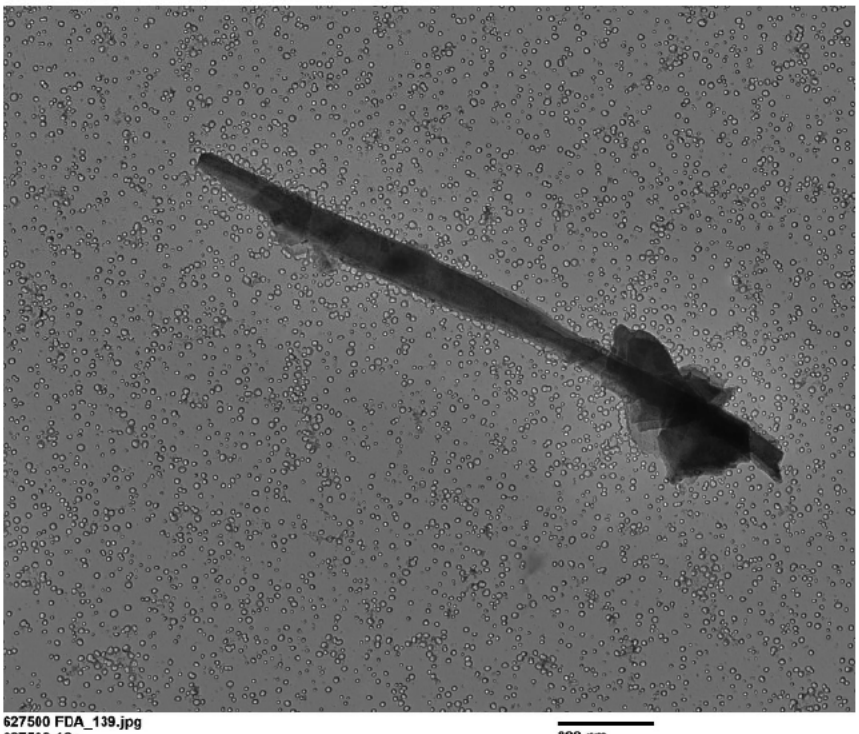
627500 FDA_134.jpg
627500-12a
Fe Particle Dif
14:48 7/23/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Iron Particle pictured above



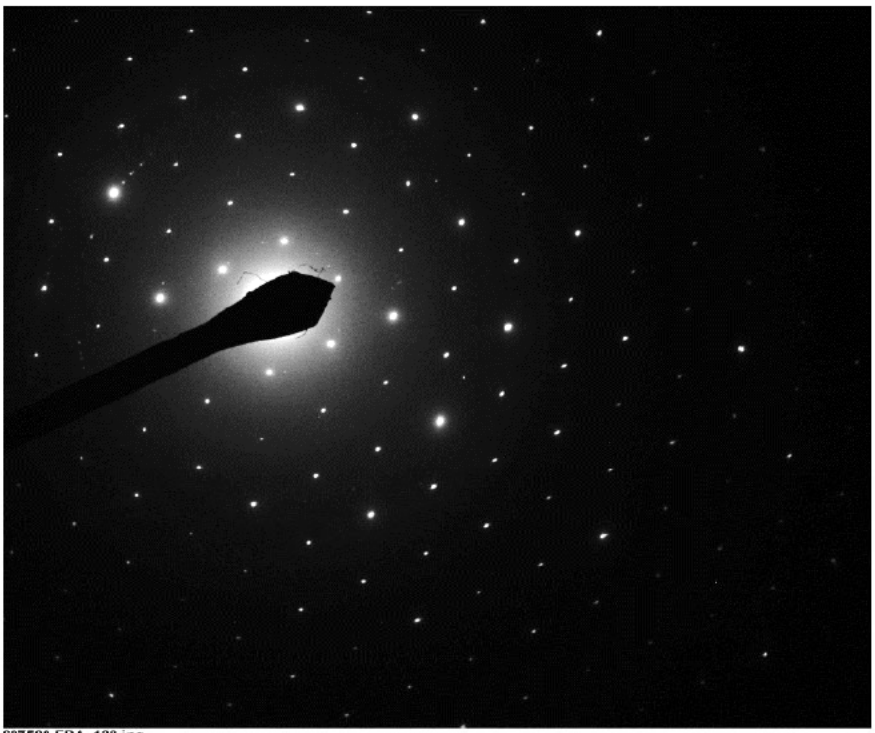
627500-12A, Talc Fiber



627500 FDA_139.jpg
627500-12a
Talc Fiber
Cal: 0.002860 µm/pix
15:22 7/23/2021
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

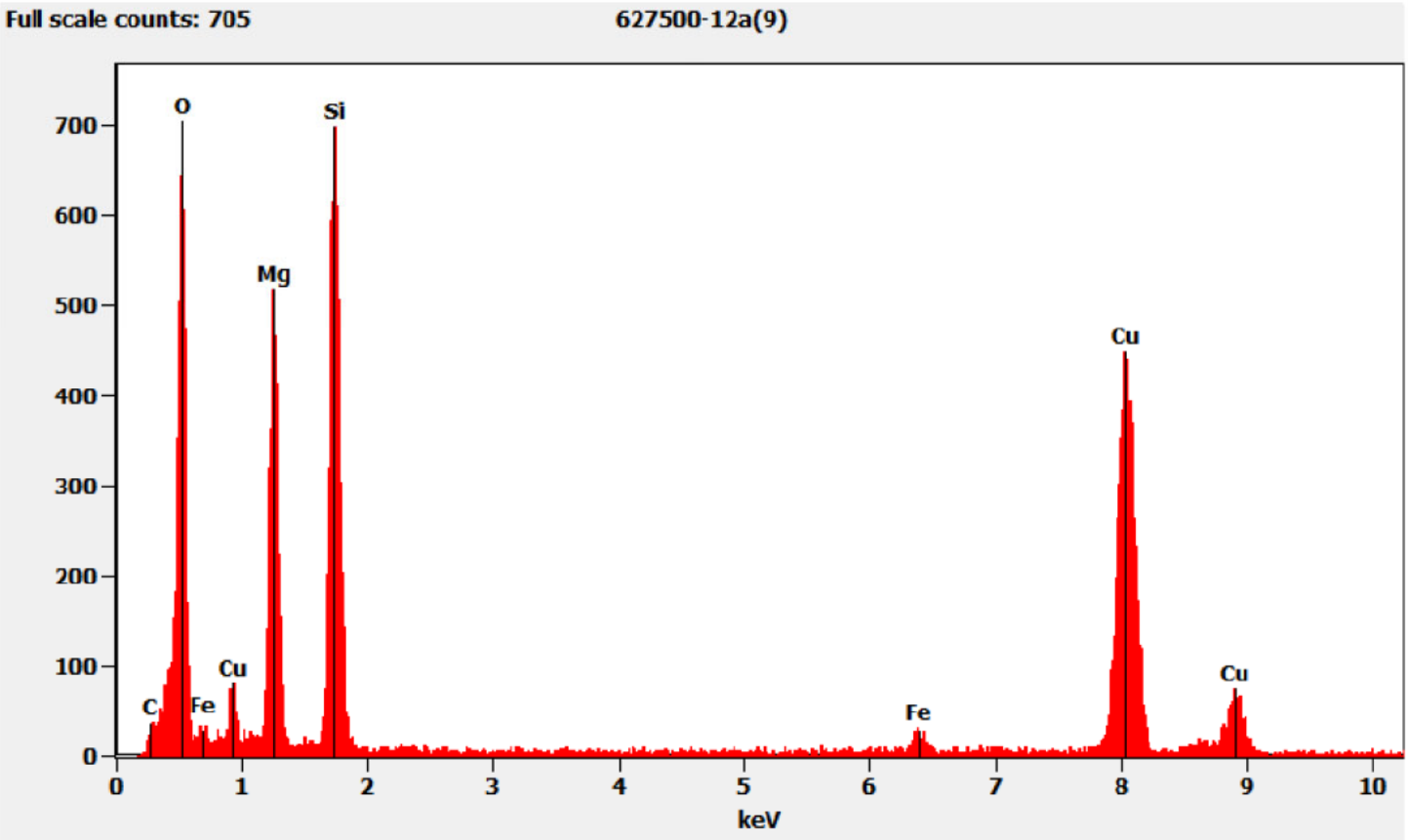
Hexagonal Diffraction Pattern from Talc Fiber pictured above



627500 FDA_138.jpg
627500-12a
Talc Fiber Dif
15:20 7/23/2021
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



627500-13A, 13B, 13C/Client Sample: 04272021-13

PLM

All three aliquots of sample 04272021-13 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-13A	No Asbestos Detected
627500-13B	No Asbestos Detected
627500-13C	No Asbestos Detected

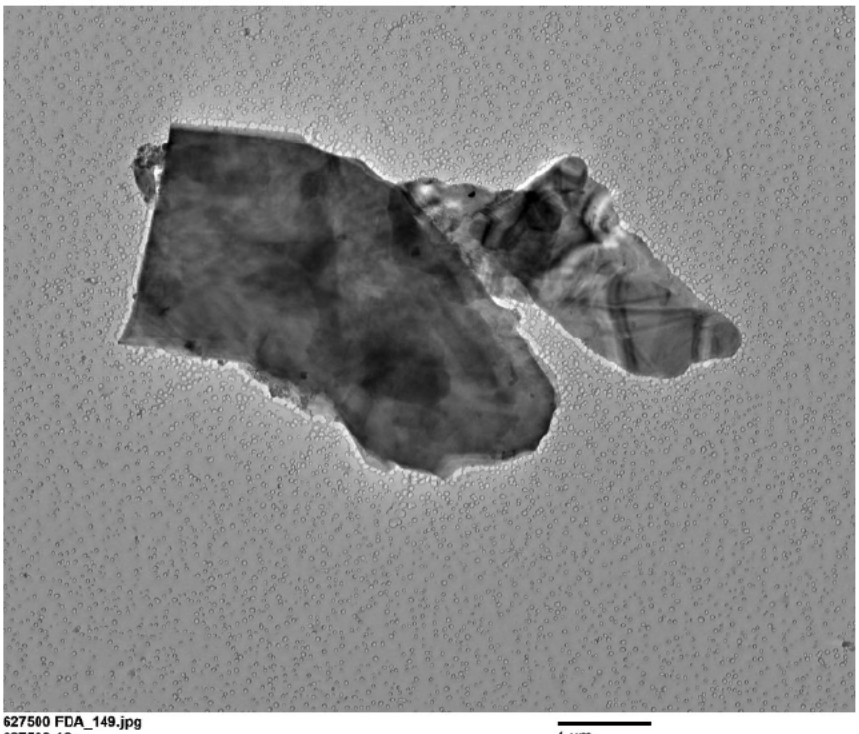
TEM

(b)(6) analyzed aliquot 13A on July 26, 2021 and aliquots 13B and 13C on July 27, 2021. The primary particle observed was talc; particles containing magnesium, aluminum, silicon and potassium and silica particles were also observed along with a titanium particles, copper particles, silica spheres, talc fibers/ribbons and particles containing silicon, phosphorus and sulfur. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-13A	No Asbestos Detected
627500-13B	No Asbestos Detected
627500-13C	No Asbestos Detected

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

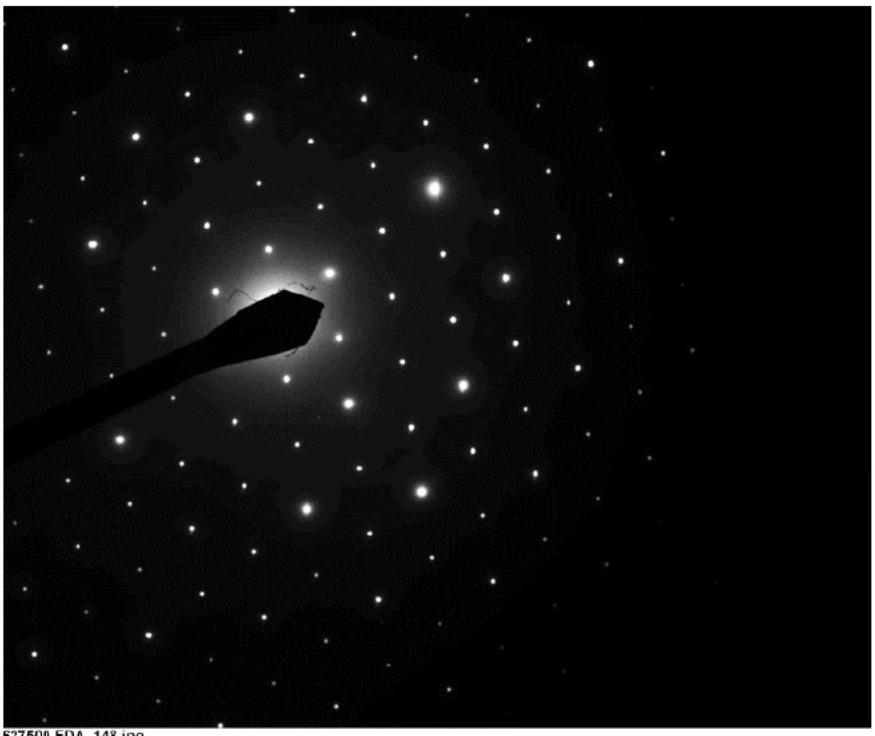
627500-13A, Talc Particle



627500 FDA_149.jpg
627500-13a
Talc Particle
Cal: 0.003702 µm/pix
15:33 7/26/2021
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

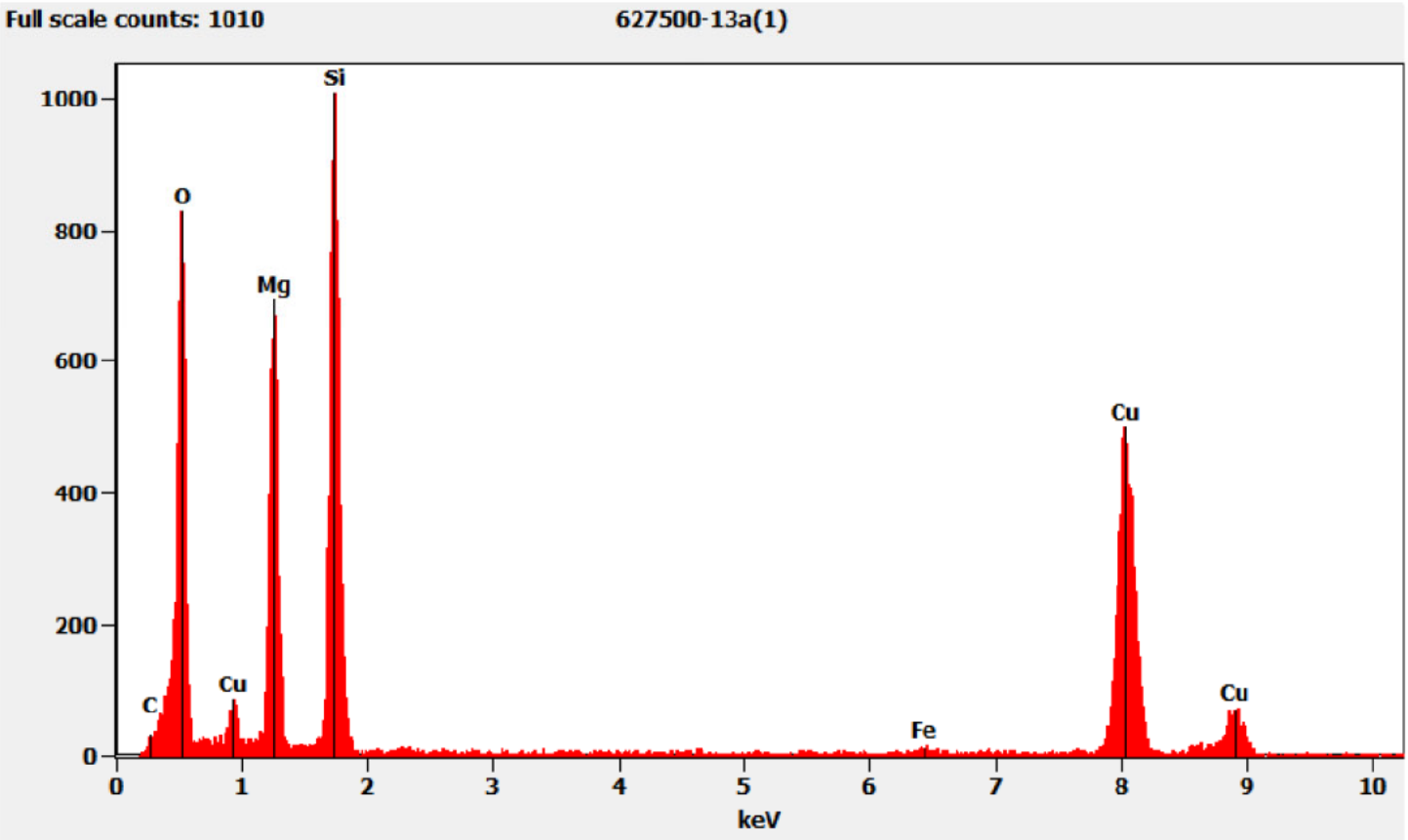
Hexagonal Diffraction Pattern from the Talc Particle pictured above



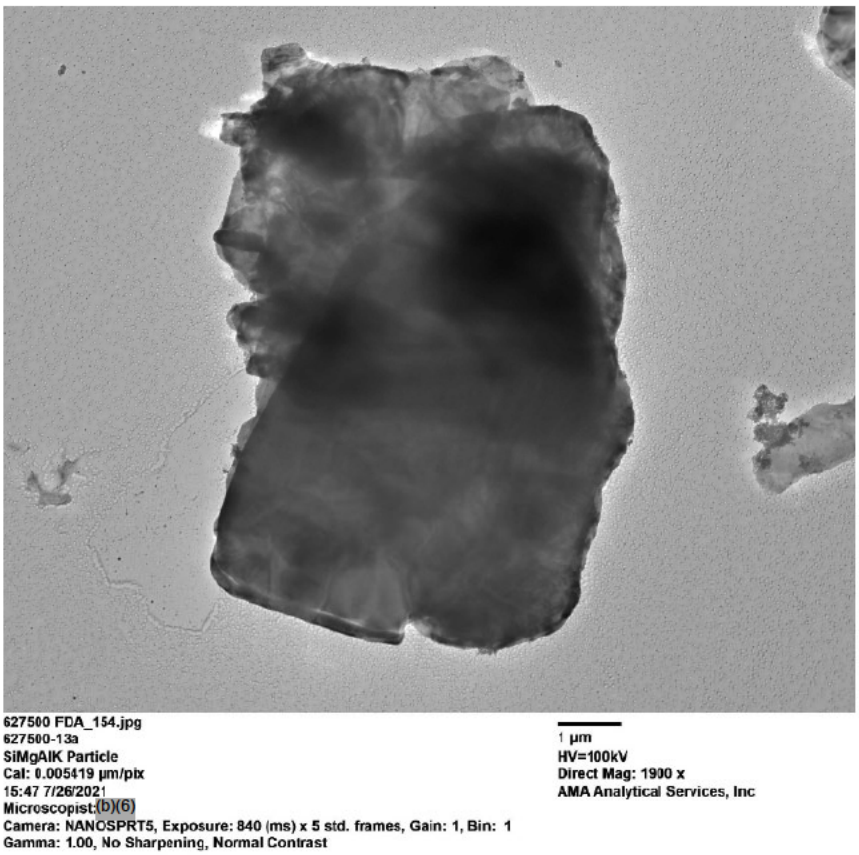
627500 FDA_148.jpg
627500-13a
Talc Particle Dif
15:32 7/26/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Particle pictured above

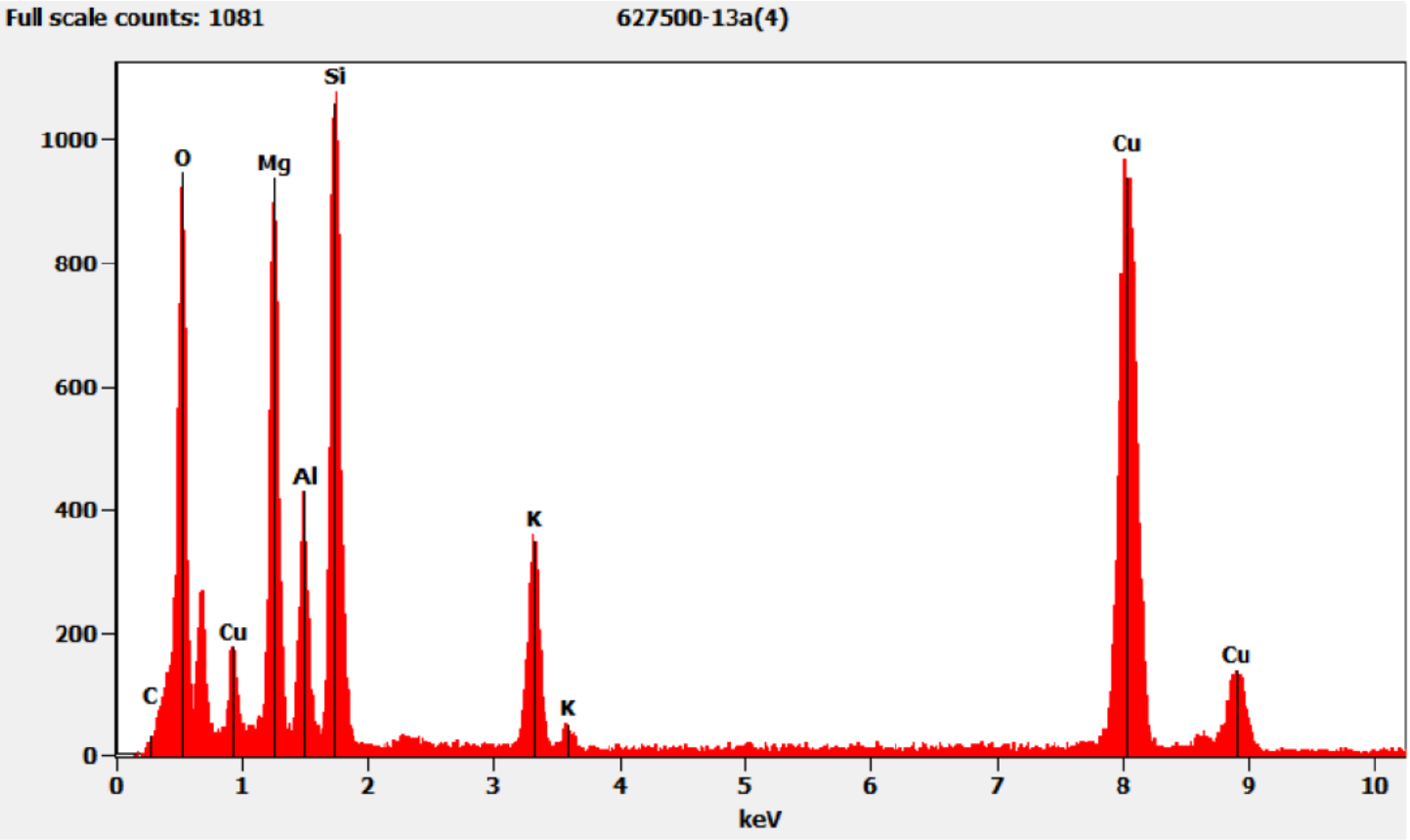


627500-13A, Particle containing Magnesium, Aluminum, Silicon and Potassium

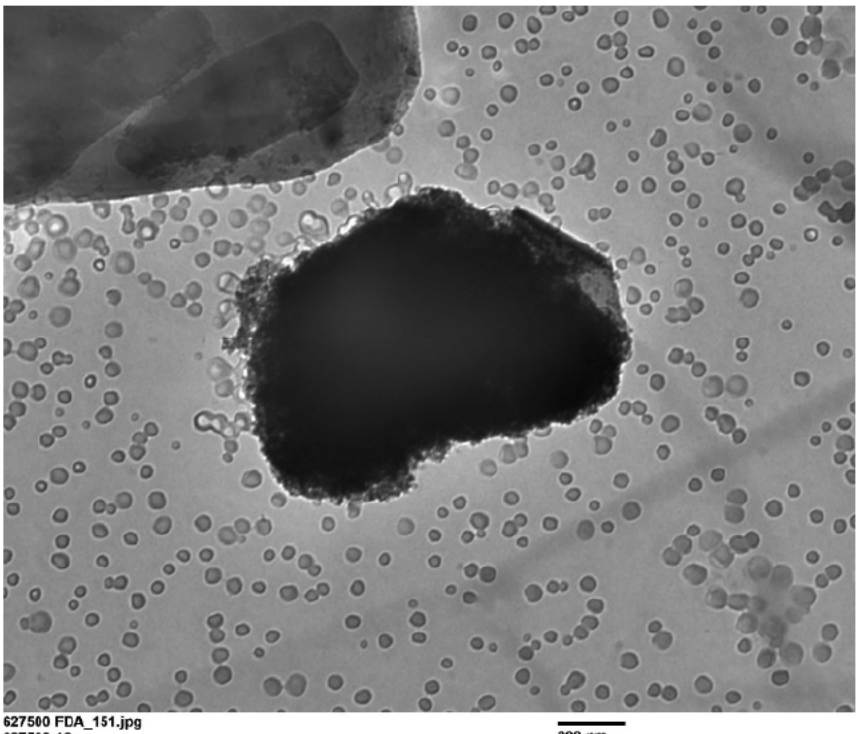


Diffraction Pattern from the Particle containing Magnesium, Aluminum, Silicon and Potassium pictured above

Chemistry from the Particle containing Magnesium, Aluminum, Silicon and Potassium pictured above



627500-13A, Silica Particle



627500 FDA_151.jpg
627500-13a
Si Particle
Cal: 0.001030 µm/pix
15:37 7/26/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

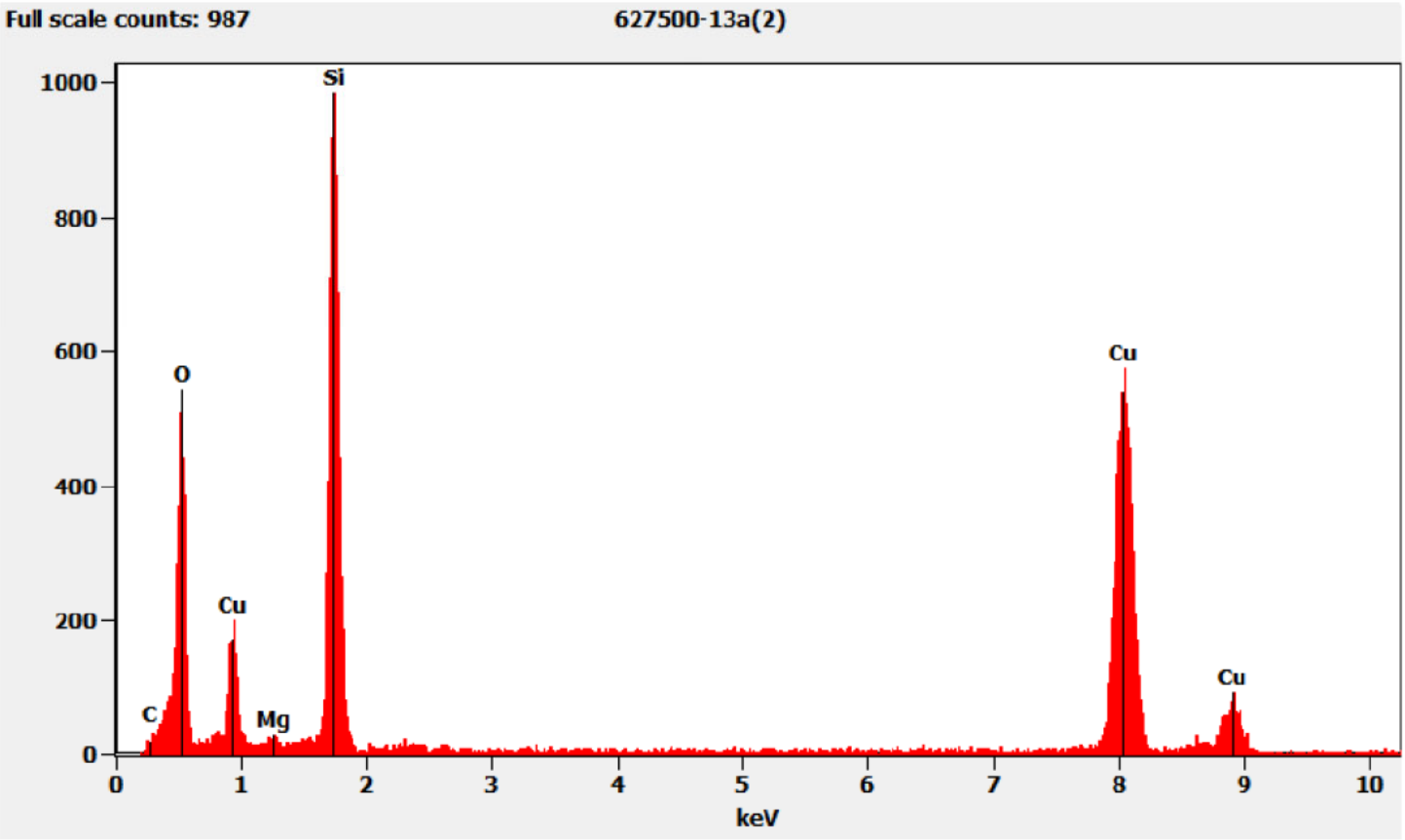
200 nm
HV=100kV
Direct Mag: 10000 x
AMA Analytical Services, Inc

Diffraction Pattern from Silica Particle pictured above

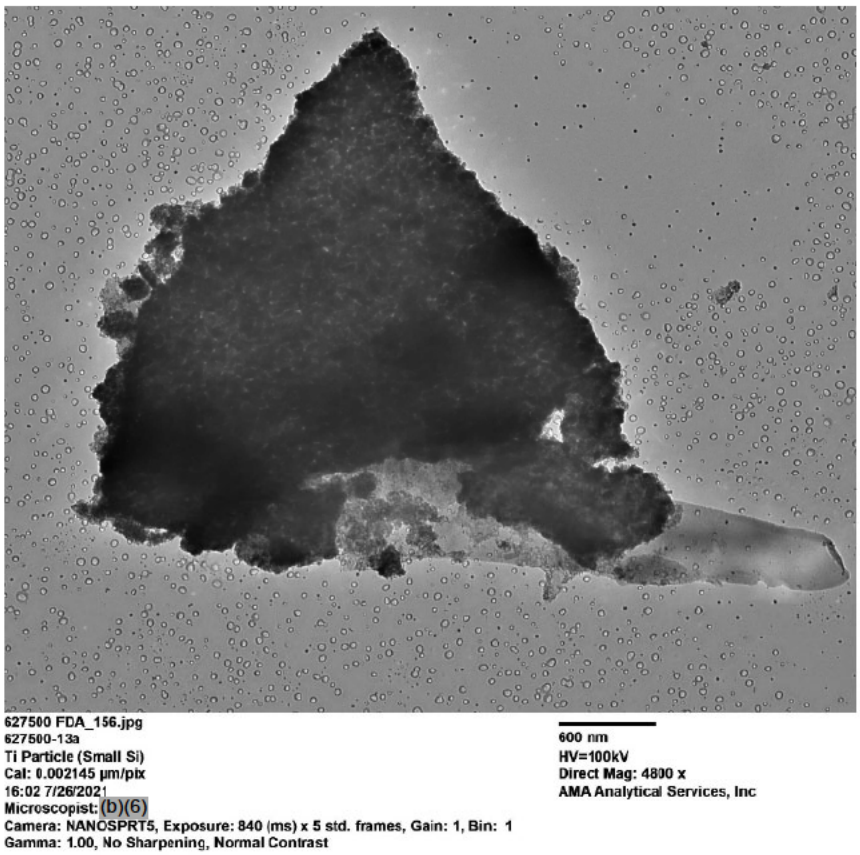
627500 FDA_150.jpg
627500-13a
Si Particle Dif
15:36 7/26/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Silica Particle pictured above

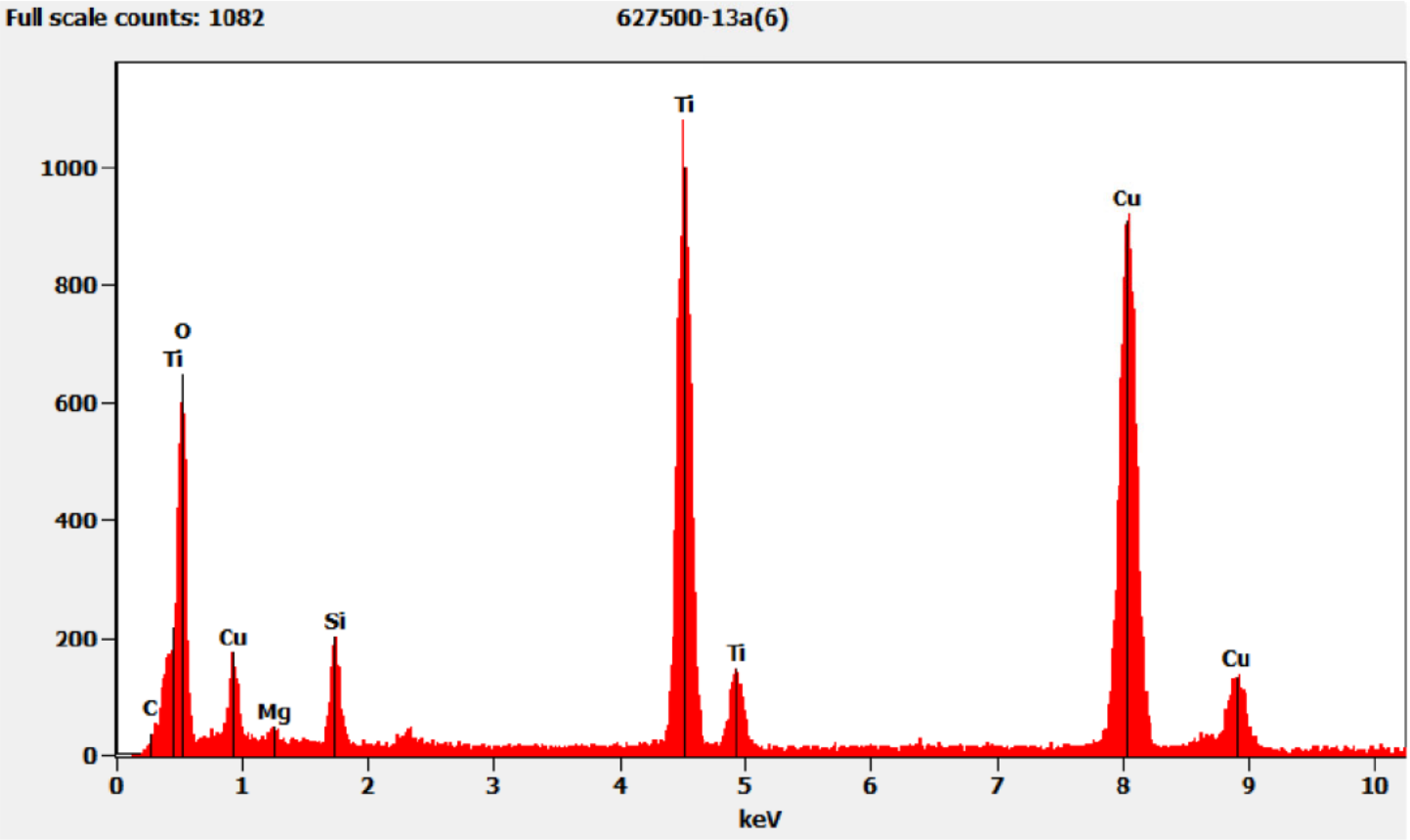


627500-13A, Titanium Particle

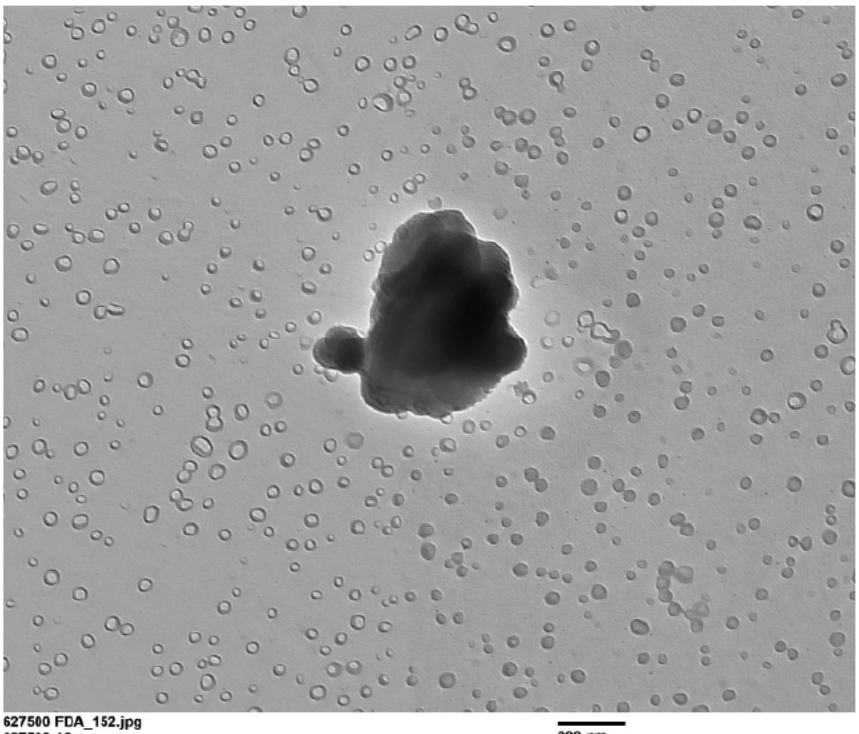


Diffraction Pattern from Titanium Particle pictured above

Chemistry from the Titanium Particle pictured above



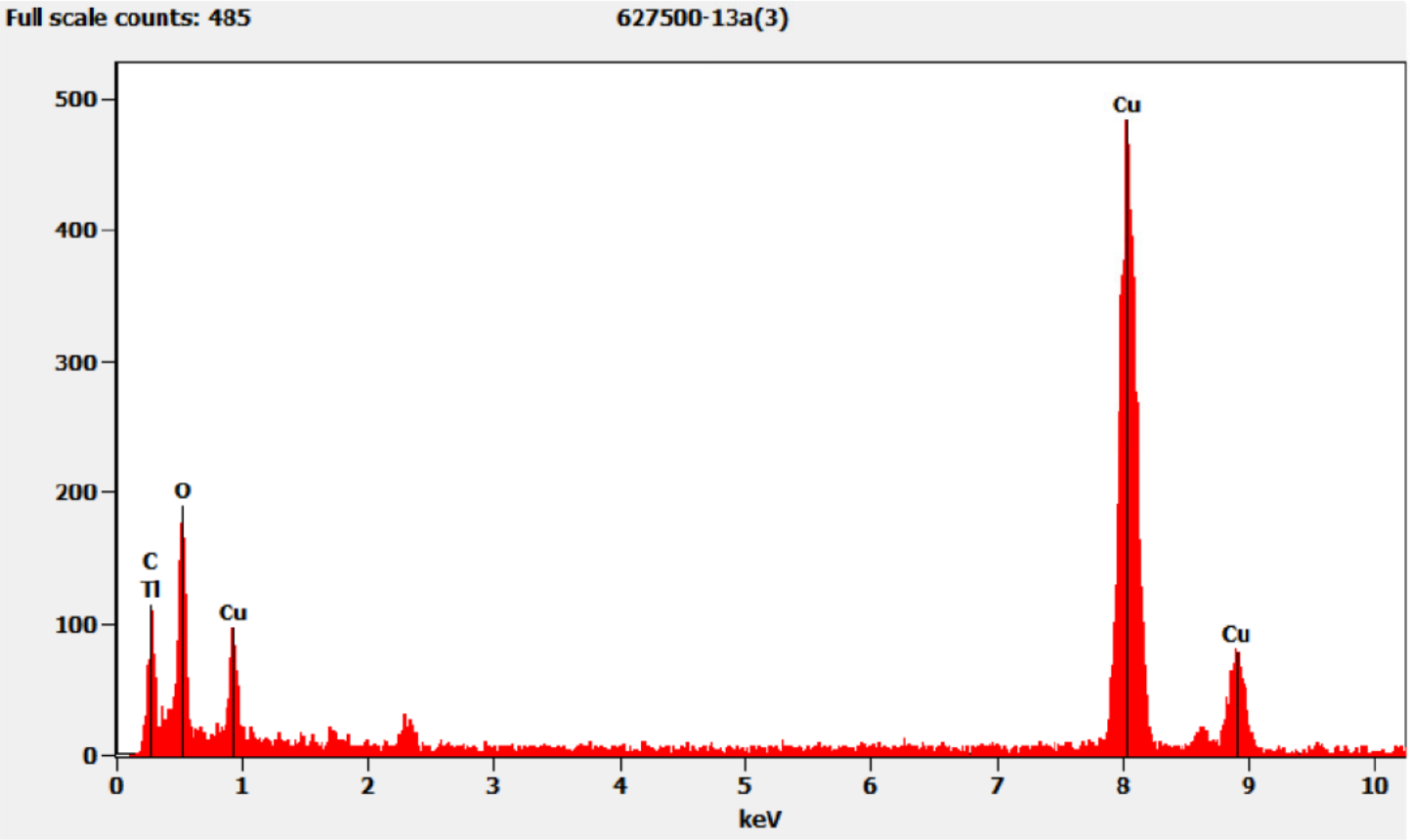
627500-13A, Copper Particle



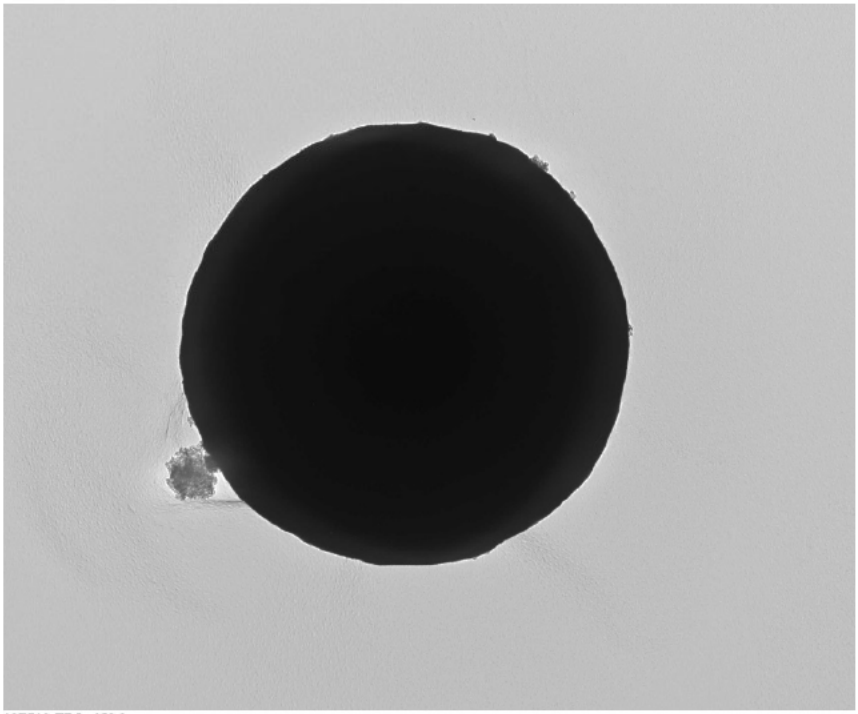
627500 FDA_152.jpg
627500-13a
Cu Particle
Cal: 0.001030 µm/pix
15:42 7/26/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Copper Particle pictured above



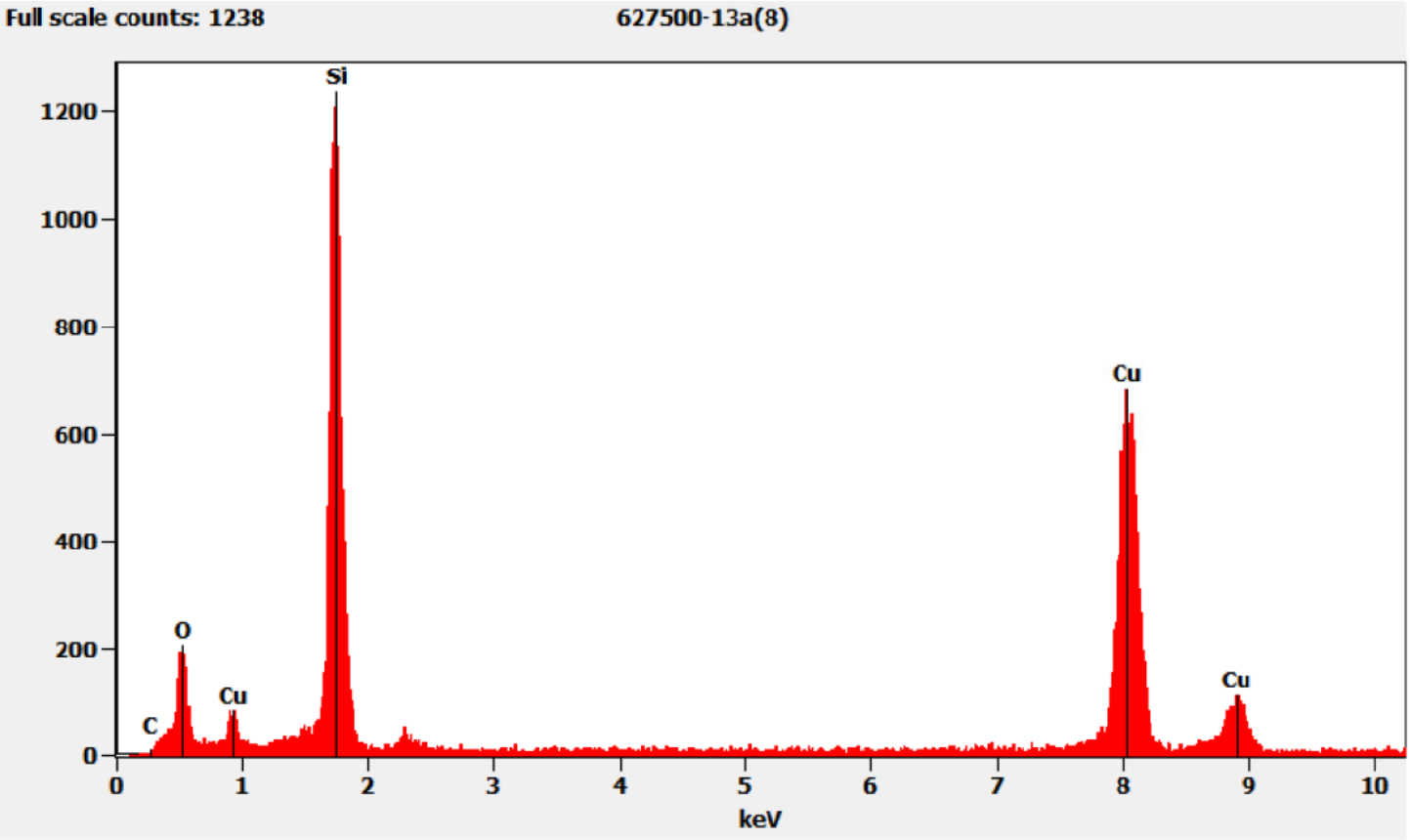
627500-13A, Silica Sphere



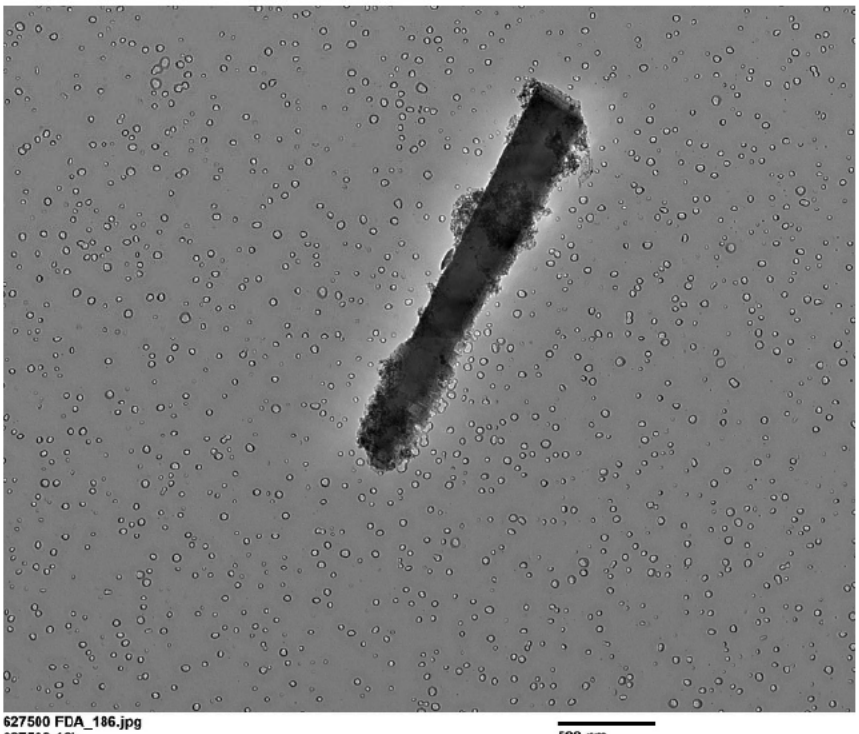
627500 FDA_159.jpg
627500-13a
Silica Sphere
Cal: 0.002145 µm/pix
16:17 7/26/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Silica Sphere pictured above



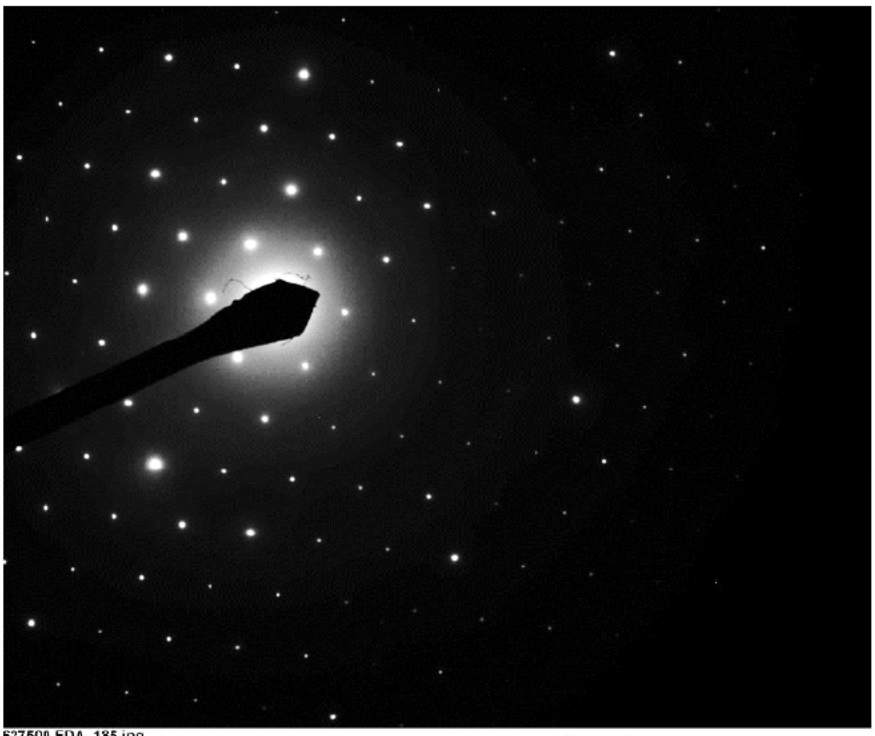
627500-13B, Talc Fiber



627500 FDA_186.jpg
627500-13b
Talc Fiber
Cal: 0.001775 µm/pix
15:30 7/27/2021
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

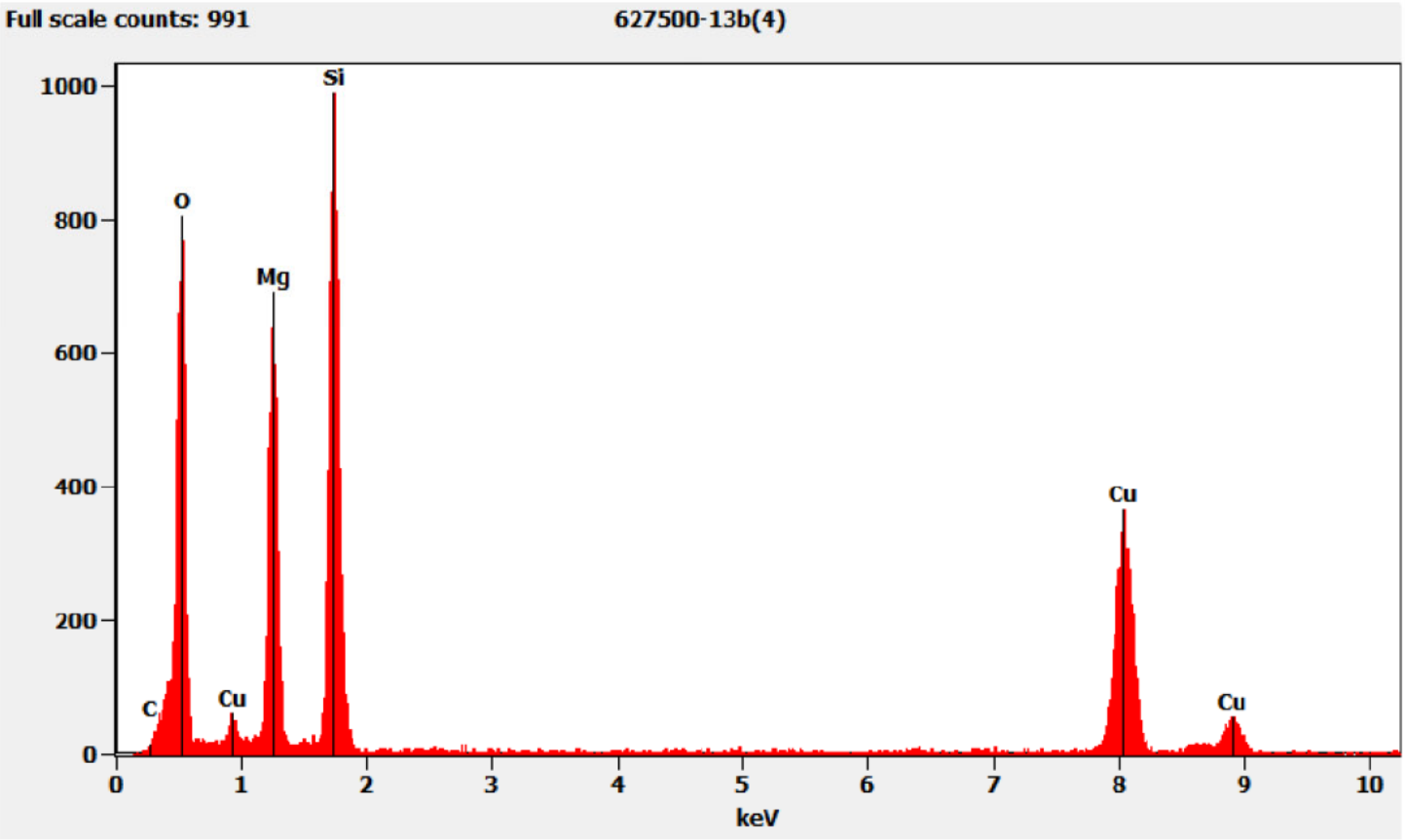
Hexagonal Diffraction Pattern from Talc Fiber pictured above



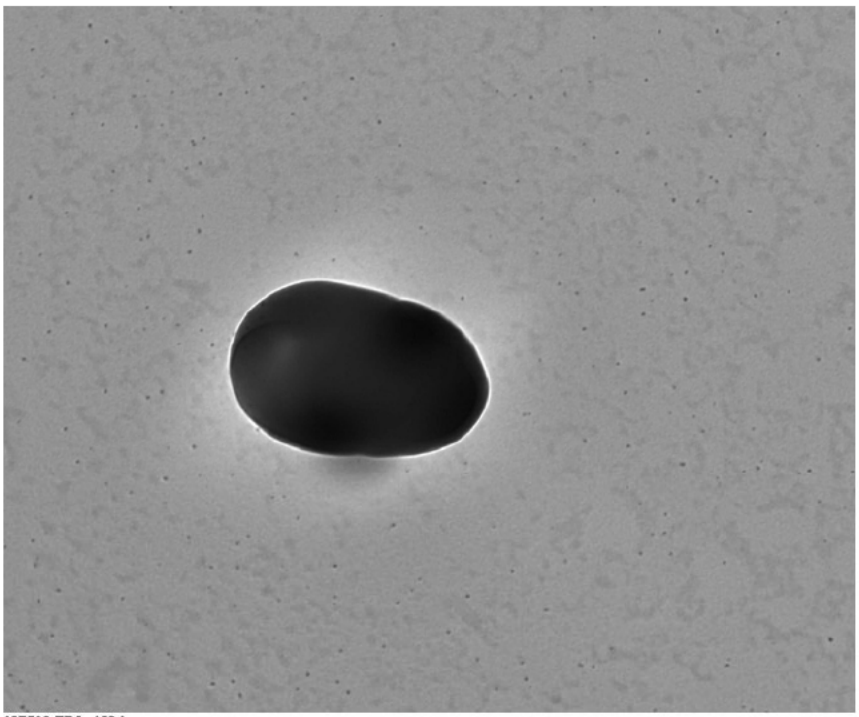
627500 FDA_185.jpg
627500-13b
Talc Fiber Dif
15:29 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

Chemistry from the Talc Fiber pictured above



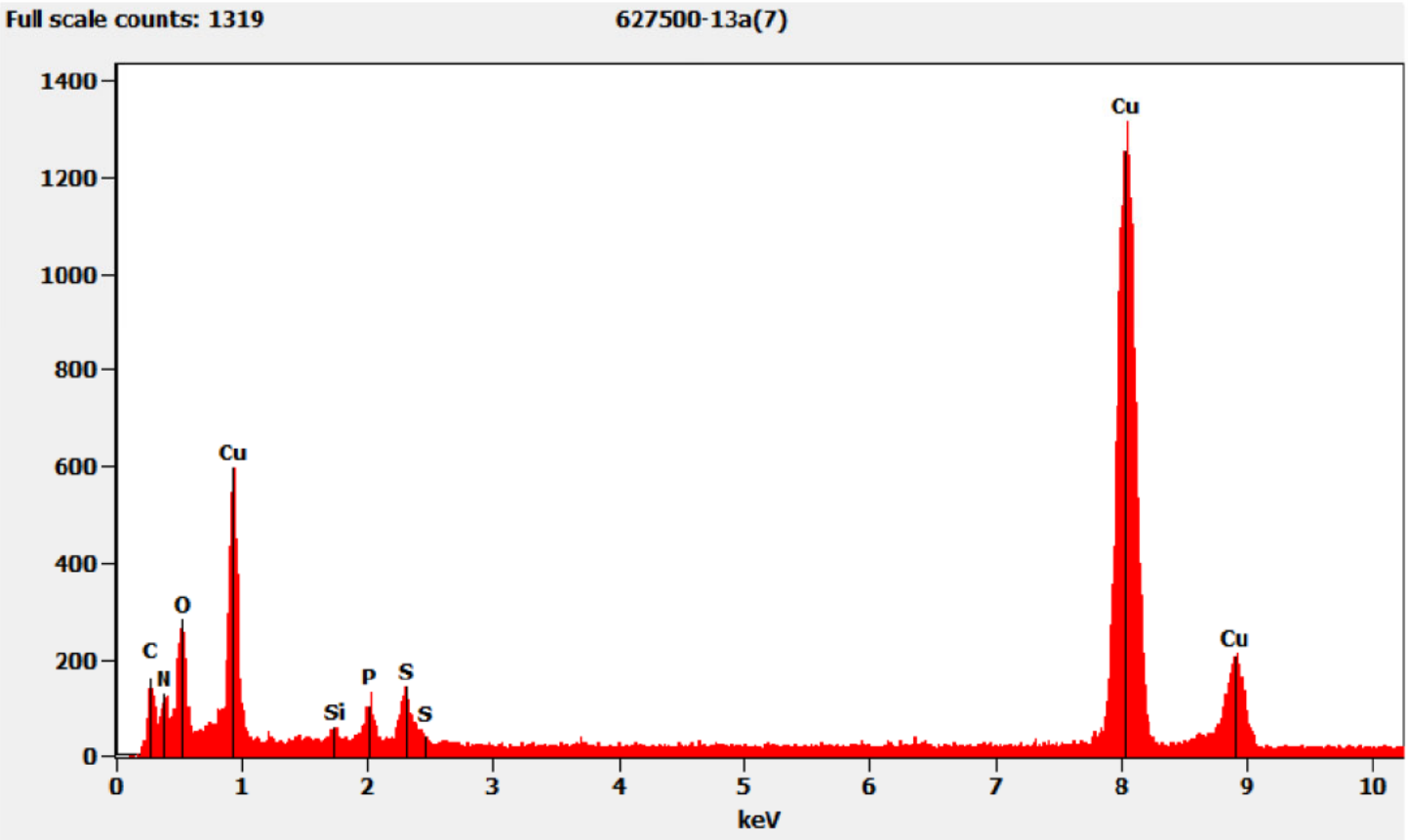
627500-13A, Particle containing Silicon, Phosphorus and Sulfur



627500 FDA_158.jpg
627500-13a
PSiS Particle
Cal: 0.001030 µm/pix
16:13 7/26/2021
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

Chemistry from the Particle containing Silicon, Phosphorus and Sulfur pictured above



627500-14A, 14B, 14C/Client Sample: 04272021-14

PLM

All three aliquots of sample 04272021-14 were analyzed by (b)(6) on July 28, 2021. No asbestos or non-asbestos amphibole variants were observed during analysis. The results were calculated using the equations detailed in the *Calculations* section above.

627500-14A	No Asbestos Detected
627500-14B	No Asbestos Detected
627500-14C	No Asbestos Detected

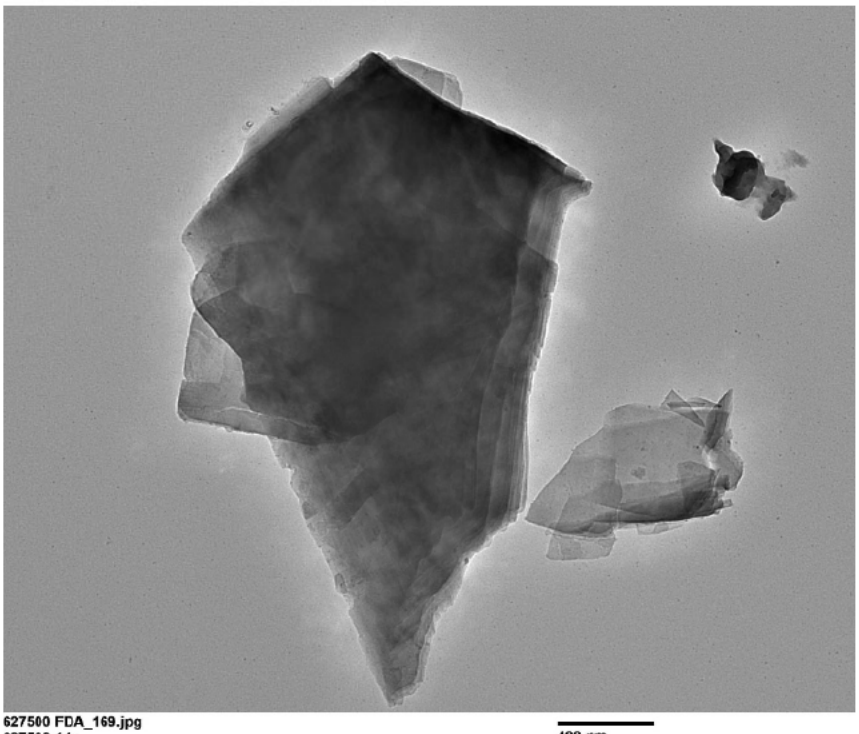
TEM

(b)(6) analyzed aliquot 14A on July 27, 2021 and aliquot 14C on July 28, 2021. Andreas Saldivar analyzed aliquot 14B July 27, 2021. The primary particle observed was talc; particles containing magnesium, aluminum, silicon and iron were also observed along with calcium particles, copper particles, particles containing silicon, phosphorus and calcium and a few 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.

627500-14A	No Asbestos Detected
627500-14B	No Asbestos Detected
627500-14C	No Asbestos Detected

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

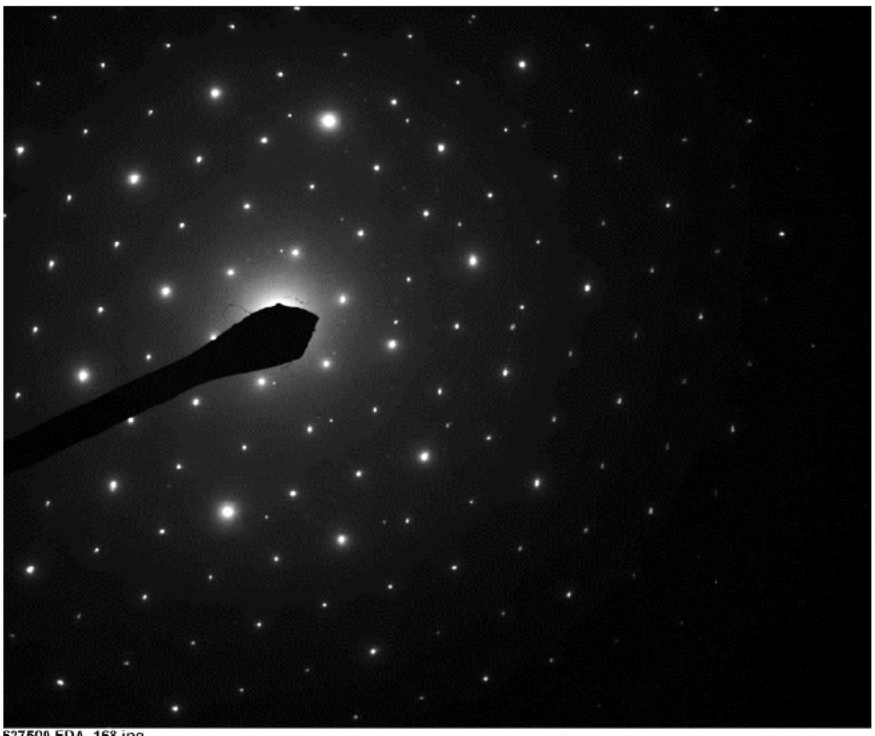
627500-14A, Talc Particle



627500 FDA_169.jpg
627500-14a
Talc Particle
Cal: 0.001430 µm/pix
10:49 7/27/2021
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

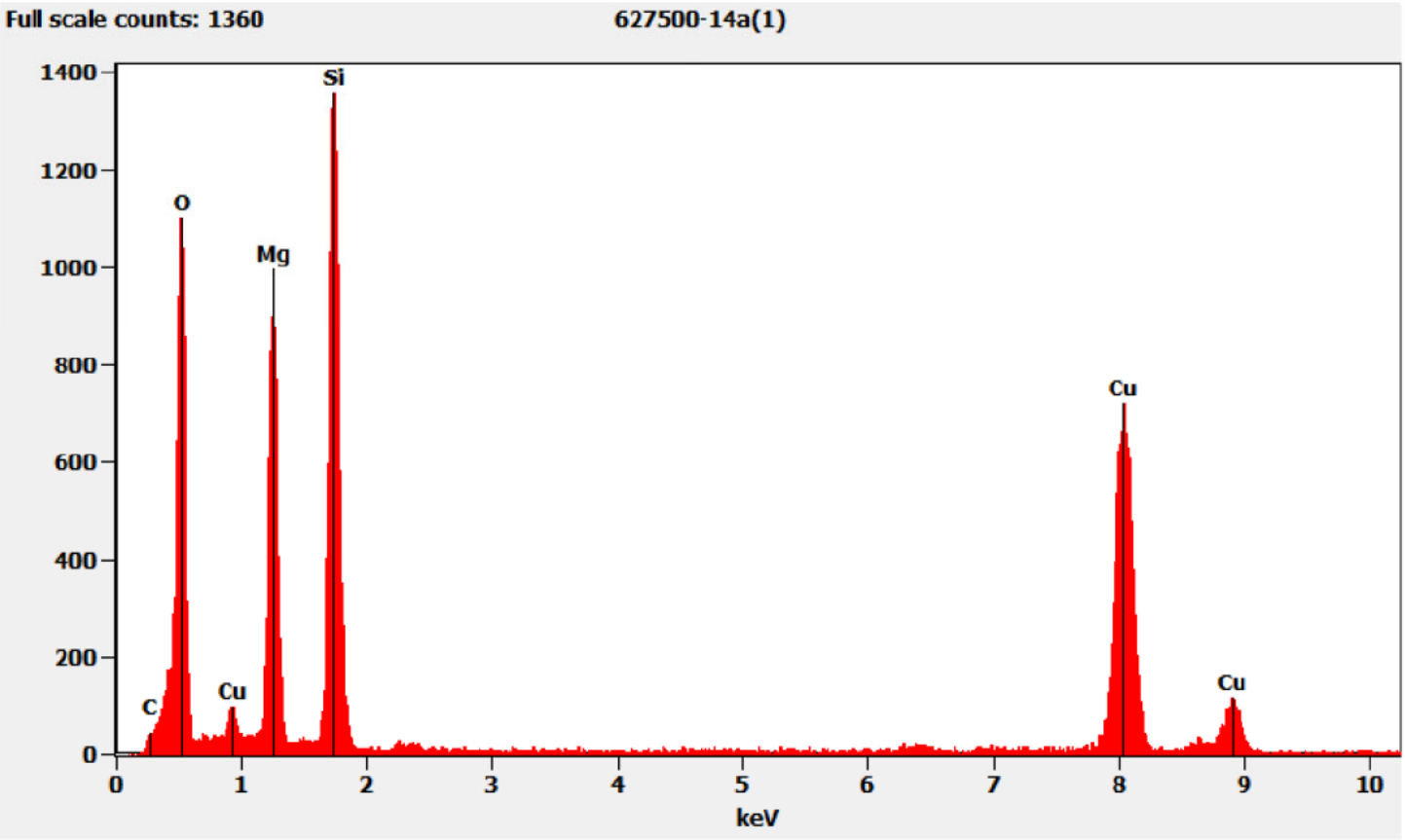
Hexagonal Diffraction Pattern from the Talc Particle pictured above



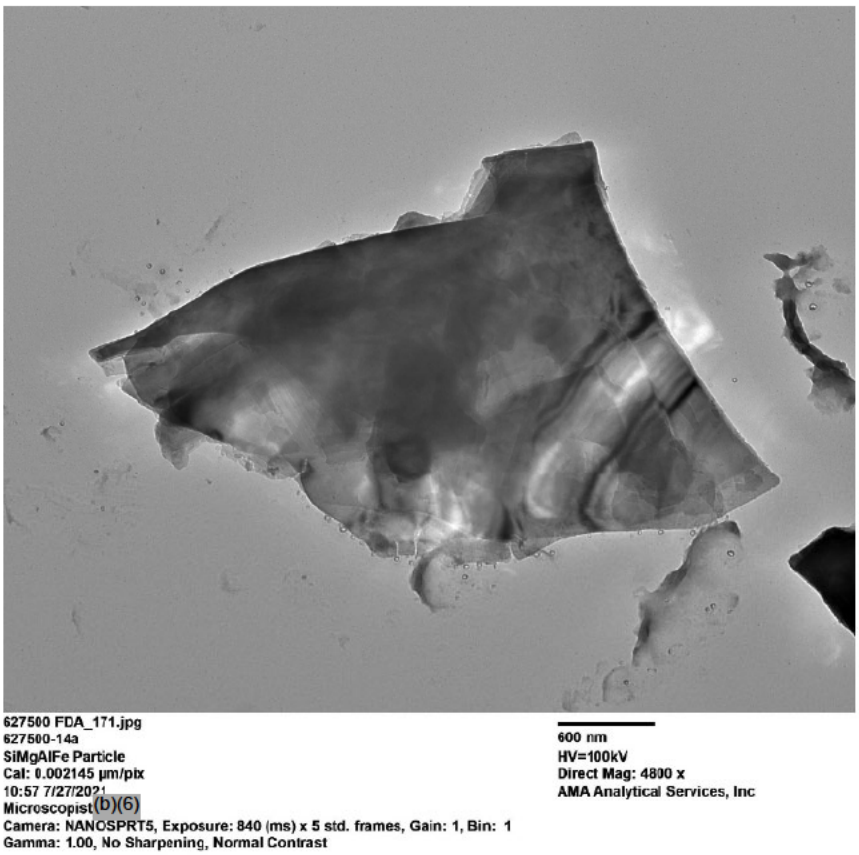
627500 FDA_168.jpg
627500-14a
Talc Particle Dif
10:48 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

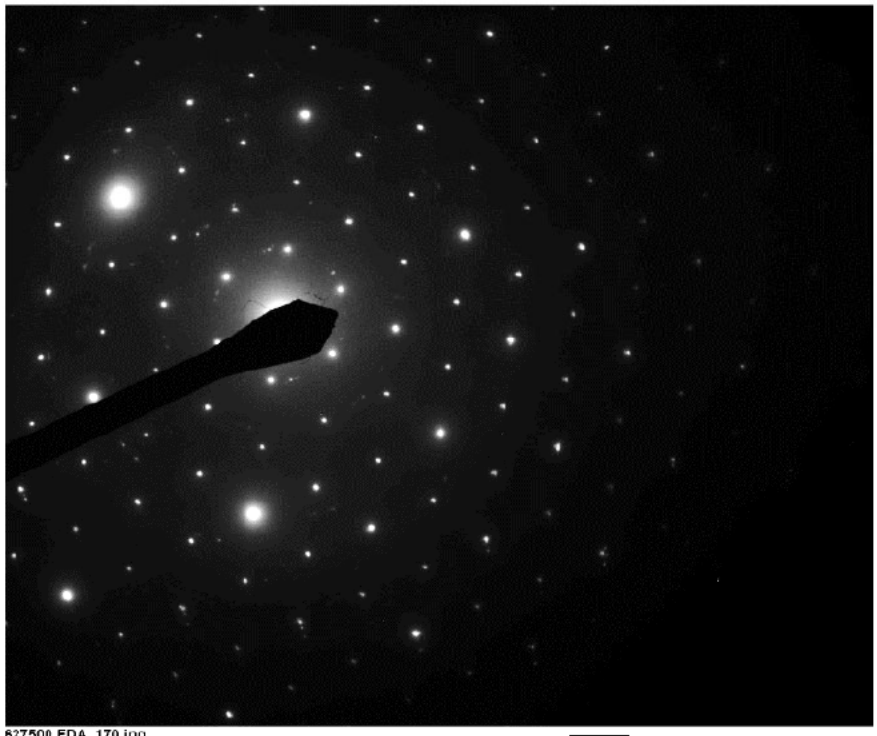
Chemistry from the Talc Particle pictured above



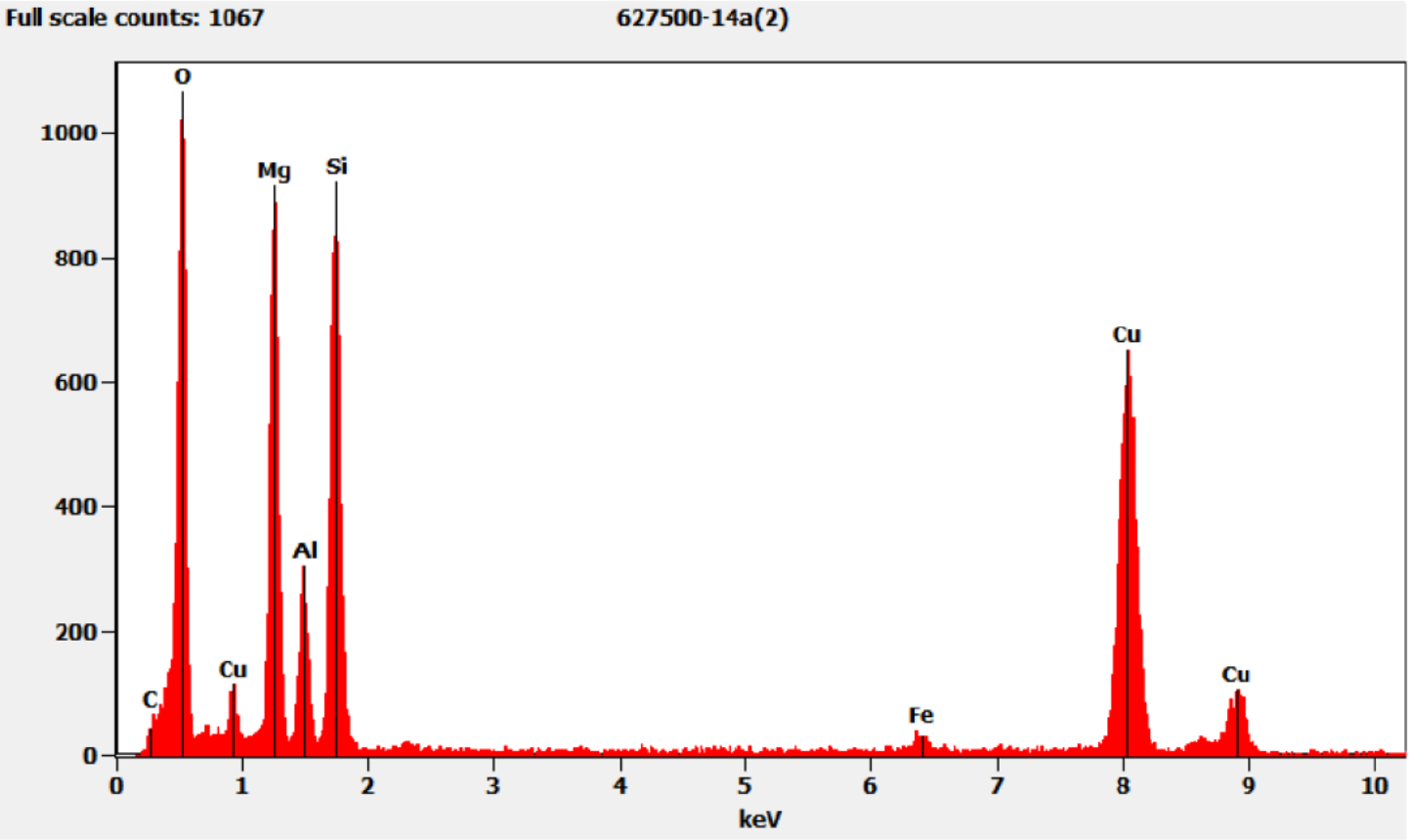
627500-14A, Particle containing Magnesium, Aluminum, Silicon and Iron



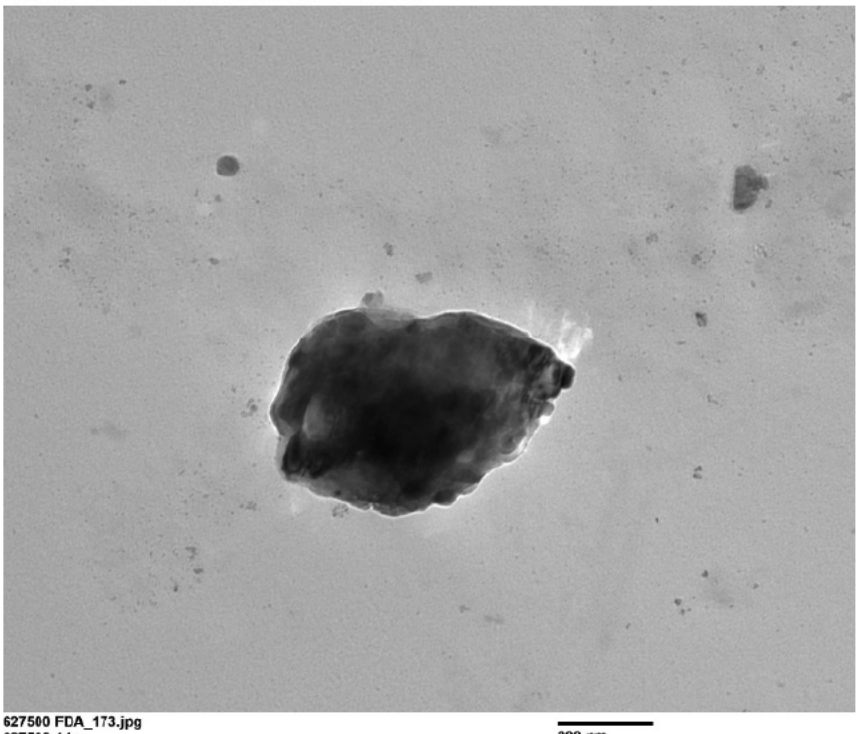
Hexagonal Diffraction Pattern from the Particle containing Magnesium, Aluminum, Silicon and Iron pictured above



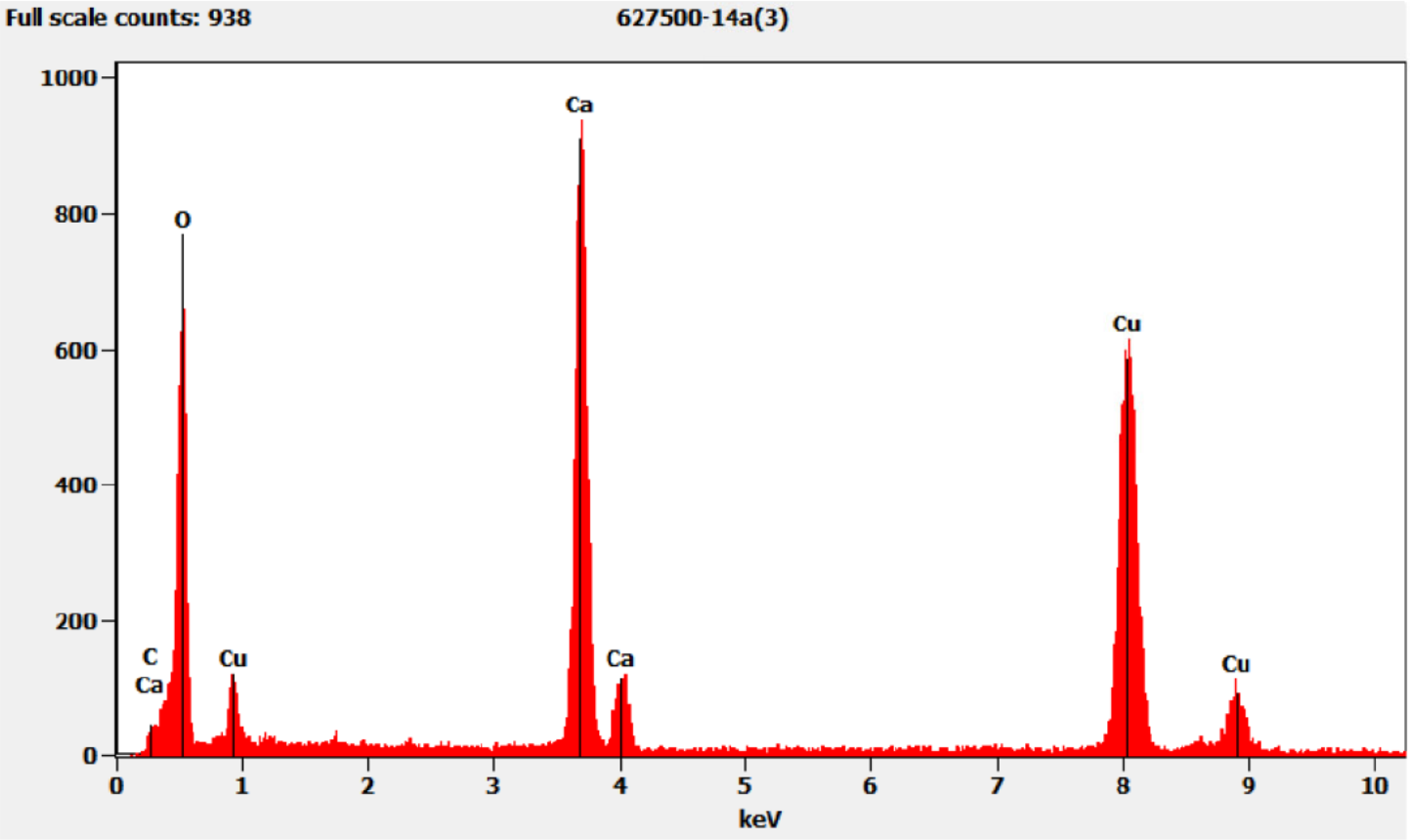
Chemistry from the Particle containing Magnesium, Aluminum, Silicon and Iron pictured above



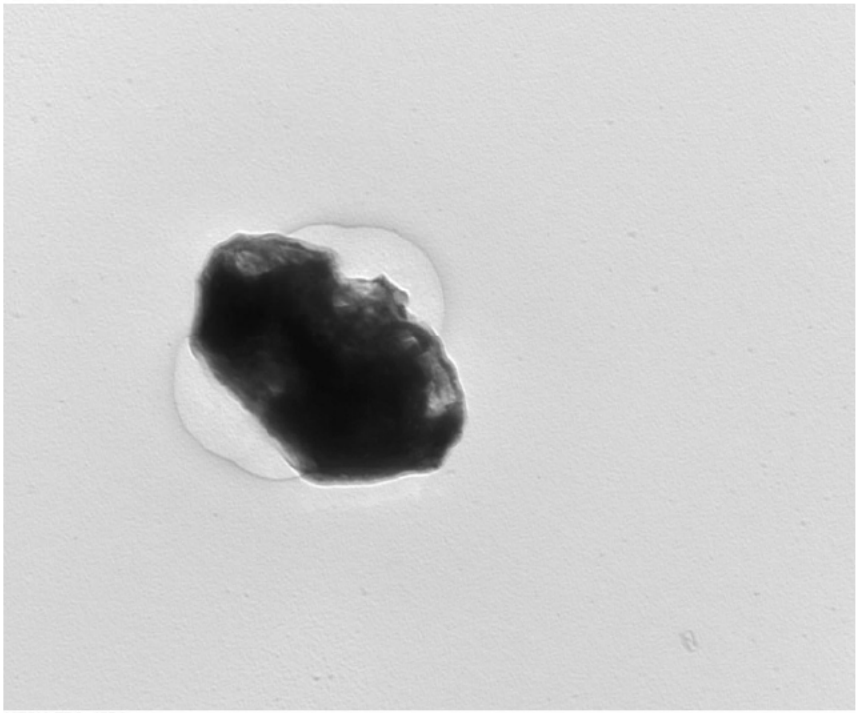
627500-14A, Calcium Particle



Chemistry from the Calcium Particle pictured above



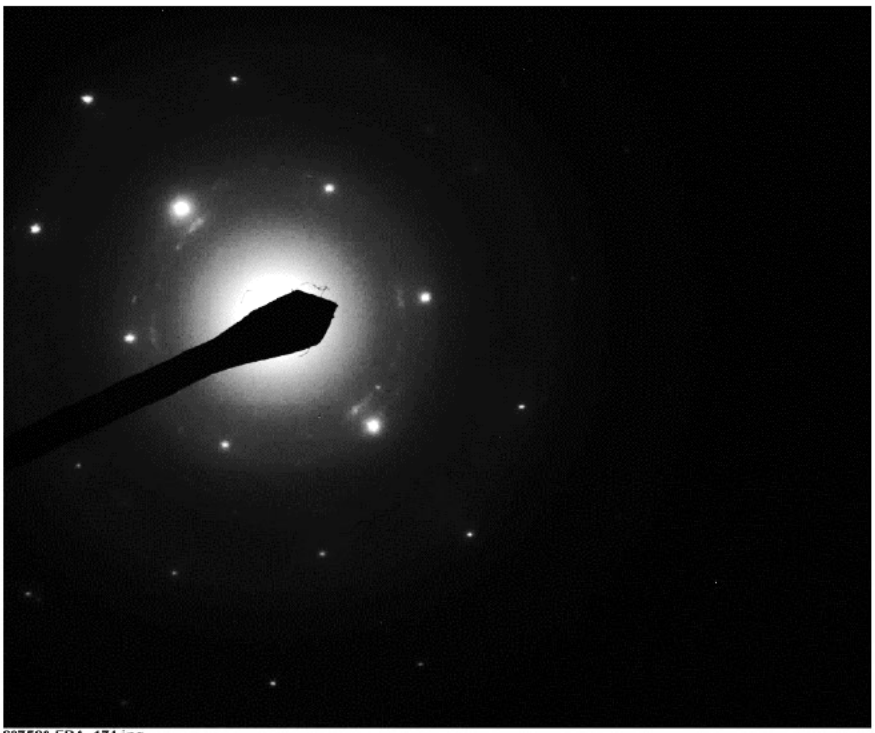
627500-14A, Copper Particle



627500 FDA_175.jpg
627500-14a
Cu Particle
Cal: 0.571351 nm/pix
11:17 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

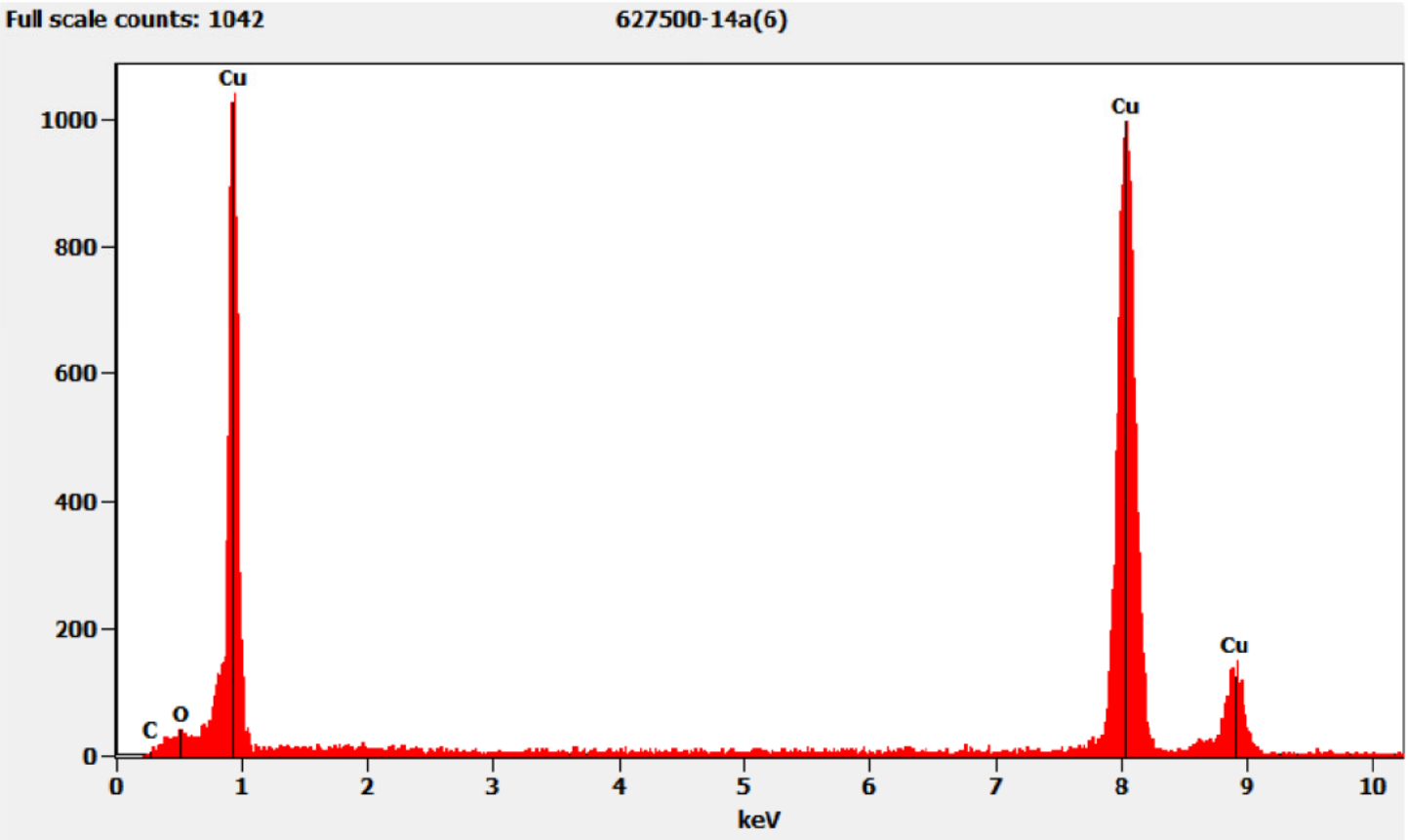
Diffraction Pattern from the Copper Particle pictured above



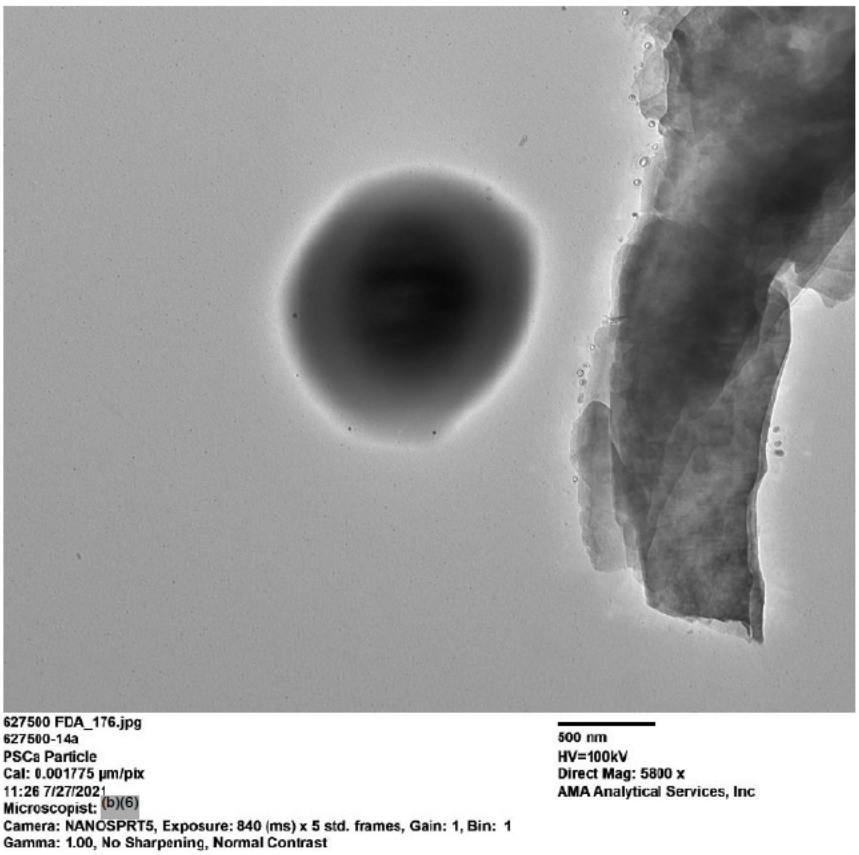
627500 FDA_174.jpg
627500-14a
Cu Particle Dif
11:16 7/27/2021
Microscopist: (b)(6)
Camera: NANOSPRT5, Exposure: 840 (ms) x 5 std. frames, Gain: 1, Bin: 1
Gamma: 1.00, No Sharpening, Normal Contrast

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

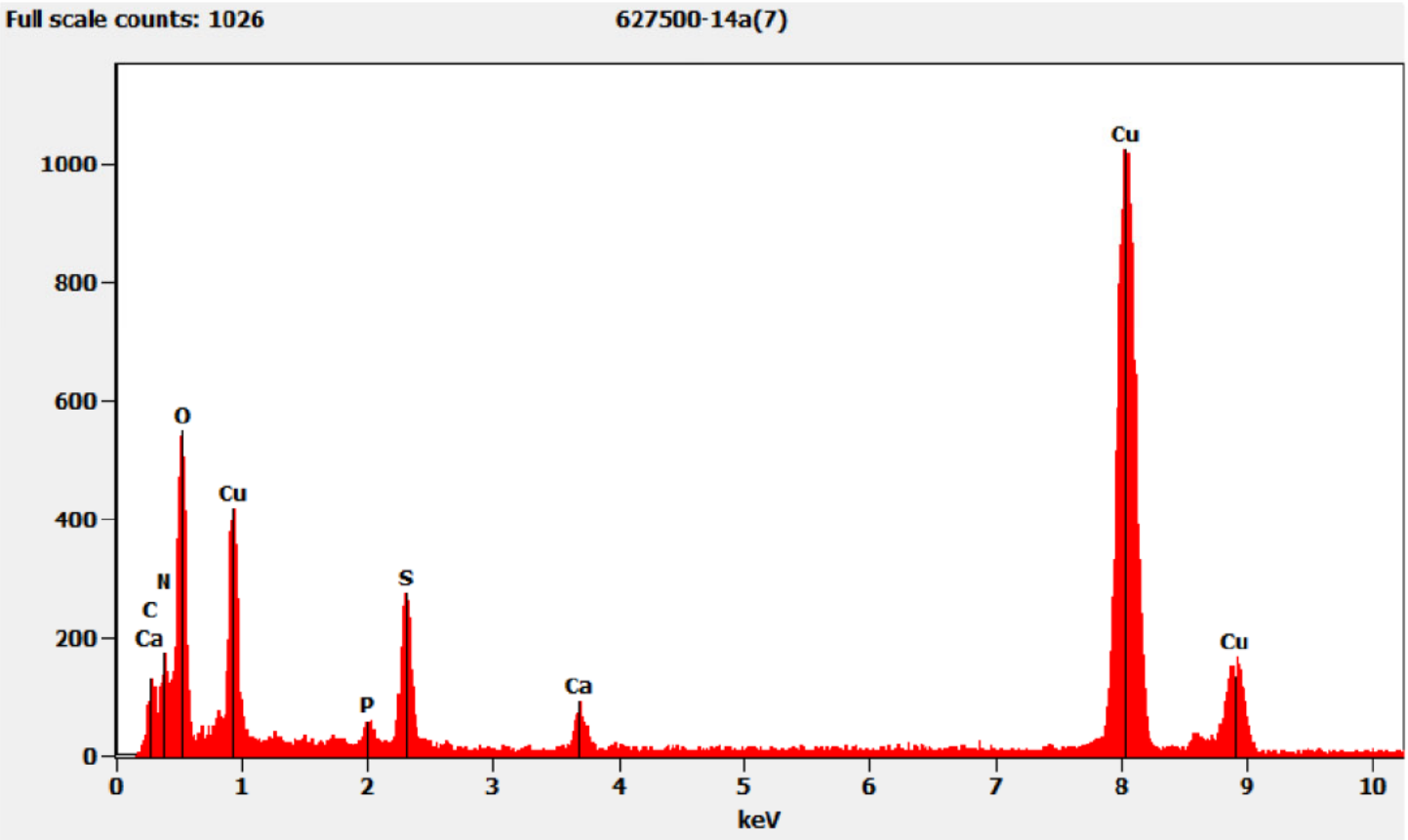
Chemistry from the Copper Particle pictured above



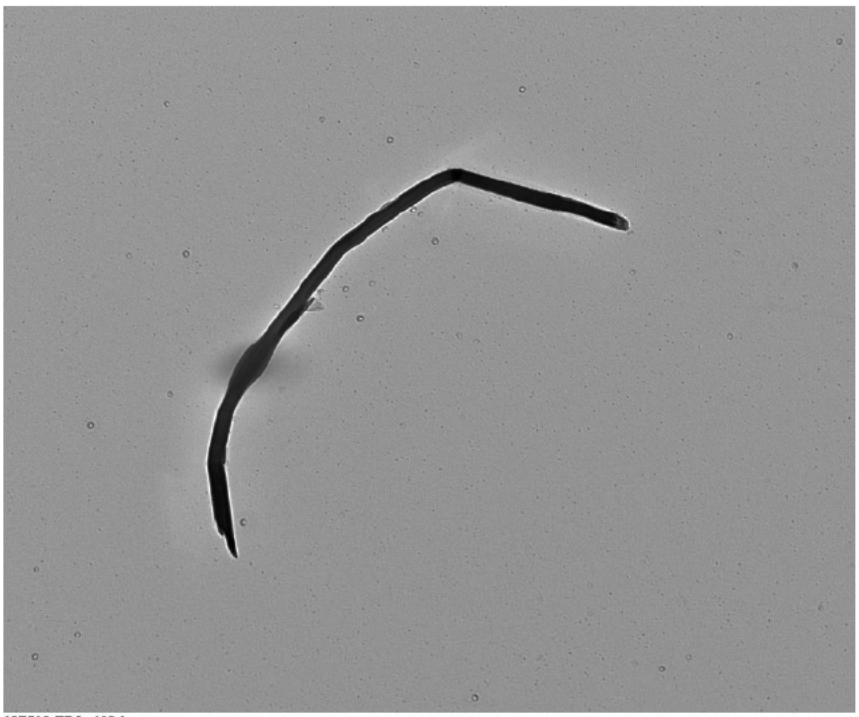
627500-14A, Particle containing Phosphorus, Silicon and Calcium



Chemistry from the Particle containing Phosphorus, Silicon and Calcium pictured above

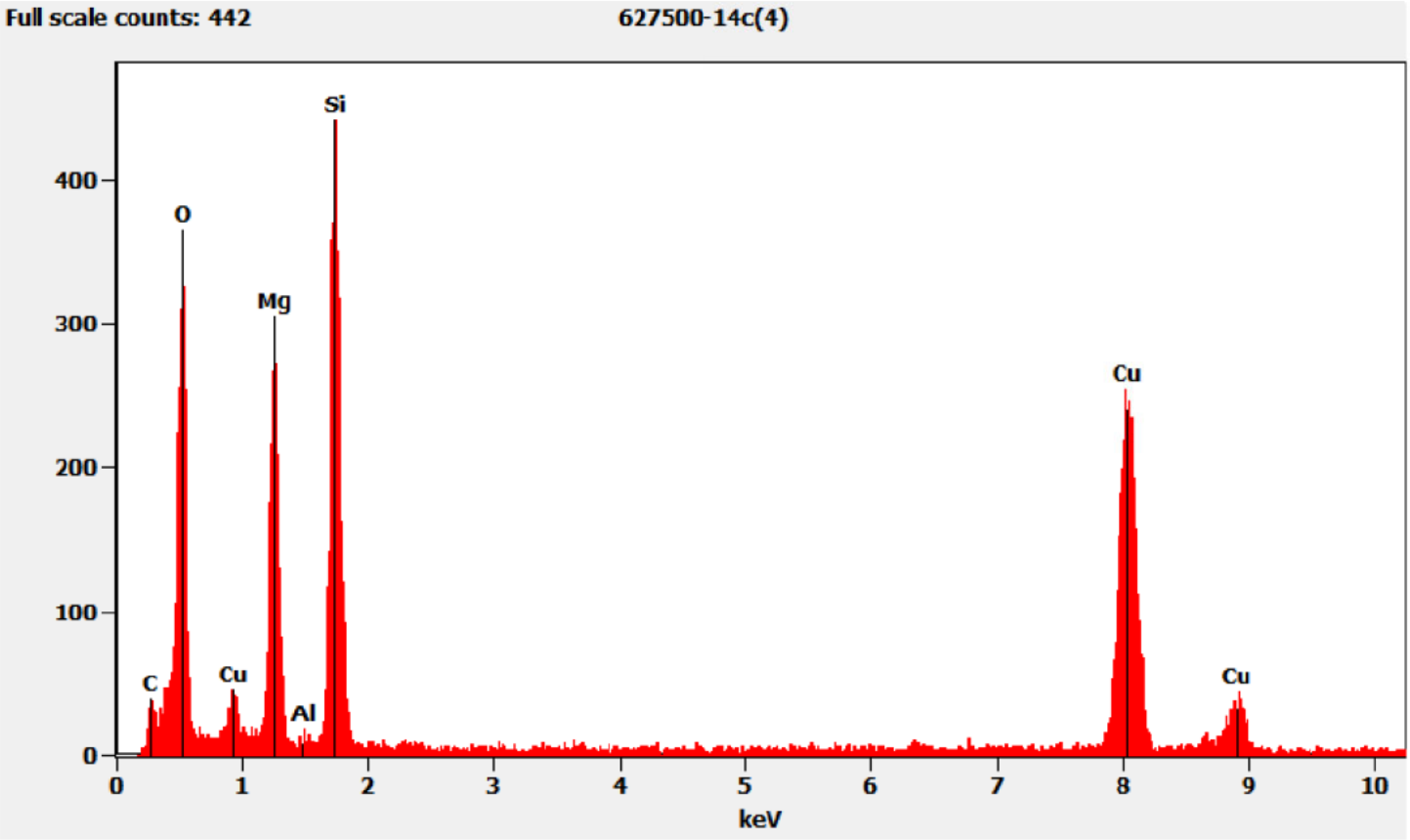


627500-14C, Talc Ribbon



Diffraction Pattern from Talc Ribbon pictured above

Chemistry from the Talc Ribbon 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. Matrix blank sample numbers NB21-417/418, NB21-448/449, NB21-464/465 and NB21-472/473 were not analyzed since no asbestos was observed on the associated client samples.

A talc reference control sample was randomly selected from our library of TEM grid preparations made from Sigma-Aldrich Talc Powder, <10 micron (Product No. 643604-500G; Batch No. 10830AJ) spiked with various levels of Chrysotile ranging from 0.4%-10%. One (1) reference control sample, sample number 627500-RB1, was analyzed with this set. It was analyzed by (b)(6) on July 13, 2021 and found to be within acceptable limits.

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 57010, 57135, 57160 and 57165 were analyzed. (b)(6) analyzed these samples on July 22, 27 and 28, 2021. No asbestos was detected on the TEM grid preparation blank samples.

Our laboratory information management system (LIMS) randomly selected sample 627500-9A/04272021-9 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 July 28, 2021 for PLM and by (b)(6) on July 29, 2021 for TEM. The QC results were consistent with the original findings.

Our laboratory information management system (LIMS) randomly selected samples 627500-6A/04272021-6 and 627500-13A/04272021-13 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 July 28, 2021 for PLM and by (b)(6) on August 3, 2021 for TEM. The QC results were consistent with the original findings.

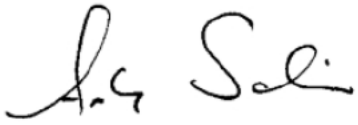
Attachments:

The following items are attached to this case narrative for your reference:

1) Sample Log-In Sheet
2) Analytical Balance Verification Log
3) Daily PLM Scope Verification Log
4) Refractive Index Oil Verification Log
5) Daily TEM Scope Verification Log(s)
6) QC Results Summary for 627500
7) NB (Matrix) Blank Preparation Log
8) RB (Reference) Sample Bench Sheet(s)

9) EB (TEM Grid) Blank Preparation Log
10) EB (TEM Grid) Blank Bench Sheet(s)
11) Duplicate & Replicate QC Charts for (b)(6) for samples analyzed between 1/1/2021 & 7/28/2021
12) Duplicate & Replicate QC Charts for (b)(6) for samples analyzed between 1/1/2021 & 7/28/2021
13) Duplicate & Replicate QC Charts for (b)(6) for samples analyzed between 1/1/2021 & 7/28/2021
14) Duplicate & Replicate QC Charts for Andreas Saldivar for samples analyzed between 1/1/2018 & 7/28/2021
15) Raw Data Sheets
    a. PLM Gravimetric Reduction Bench Sheet
    b. TEM Gravimetric/Filtration Bench Sheet
    c. PLM Analysis
    d. TEM Analysis
    e. Duplicate QC Analysis
    f. Replicate QC Analysis

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.



8/20/2021

Andreas Saldivar
President

Date