

## Appendix C4

# SEM/EDS and ESEM/EDS Data for Test #3 Day-30 Birdcage Fiberglass

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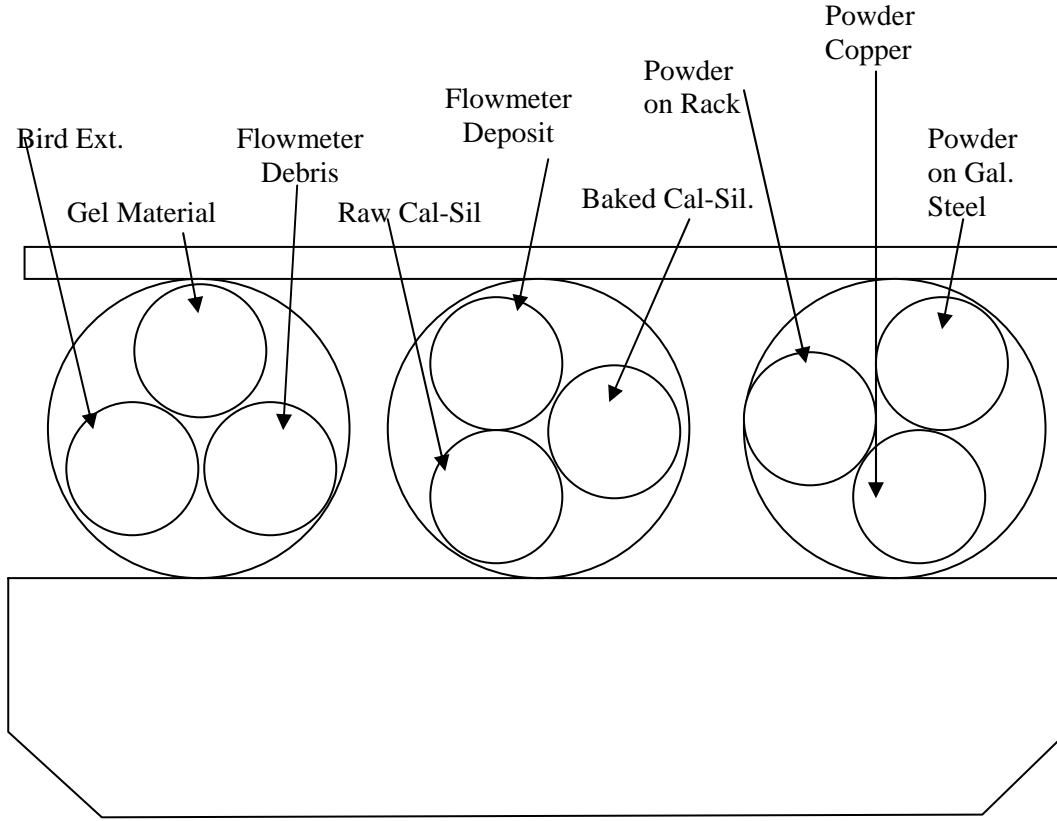
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This appendix lists the ESEM/SEM/EDS results for the fiberglass samples within a birdcage submerged in the testing solution. The purpose of this analysis was to determine the degree and the extent of particulate debris that migrated and attached on fiberglass. In this appendix, the fiberglass samples within the birdcage were extracted on the shut down date of Test #3 (May 5, 2005). Both exterior and interior fiberglass samples were examined. Probe SEM was used to examine the fiberglass samples after drying at room temperature followed by being coated with Au/Pd. In addition to probe SEM, Environmental SEM (ESEM) was employed to analyze the uncoated, wet fiberglass samples under a low-vacuum condition (i.e., 80 Pa), to minimize the potential for modification of the fiberglass samples that might occur through the drying process. Available logbook entries for this laboratory session are included in this appendix as transcribed notes.

# Transcribed Laboratory Log

Laboratory session from May 9, 2005.

Test #3 Day-30 Birdcage

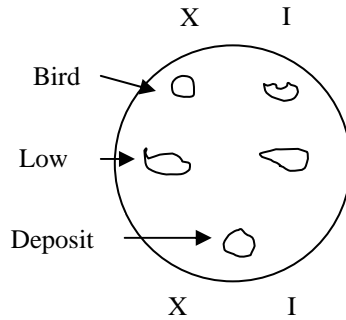


## Birdcage Exterior

Image:	T3D30BirdExt001	100 ×	Figure C4-1
	T3D30BirdExt002	550 ×	Figure C4-2
EDS:	T3D30BirdExtPt01	Particles on fiberglass, image 002	Figure C4-3

## Transcribed Laboratory Log

Laboratory session from May 6, 2005.  
 Test #3 Day-30 Birdcage Fiberglass.

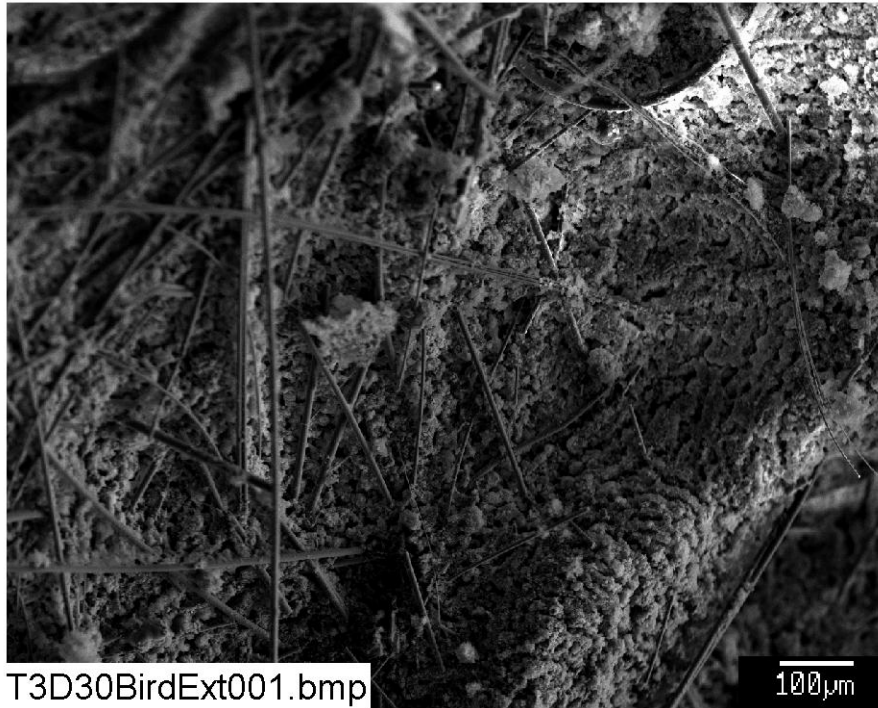


### Birdcage Exterior

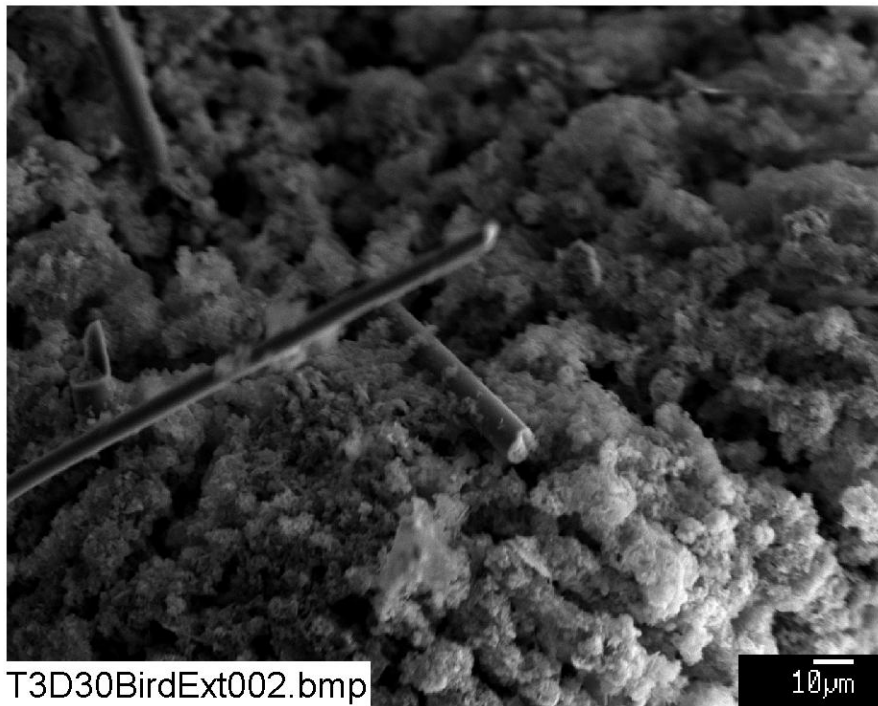
Image:	T3BCEX01	80 ×		Figure C4-4
EDS:	t3bcexe2		EDS on particles-T3BCEXE2	Figure C4-5
Image:	t3bcex02	80 ×		Figure C4-6
	t3bcex03	500 ×		Figure C4-7
EDS:	T3BCExE1		EDS on particles in t3bcex03	Figure C4-8
	t3bcexe3		Comparing t3bcexe2 & T3BCExE1	Figure C4-9
Image:	t3bcex04	1000 ×		Figure C4-10

### Birdcage Interior

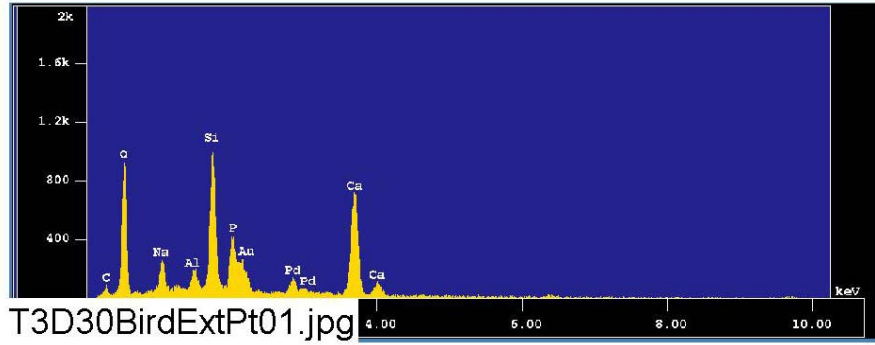
Image:	t3bcin05	80 ×		Figure C4-11
	t3bcin06	950 ×		Figure C4-12
	t3bcin07	1000 ×		Figure C4-13



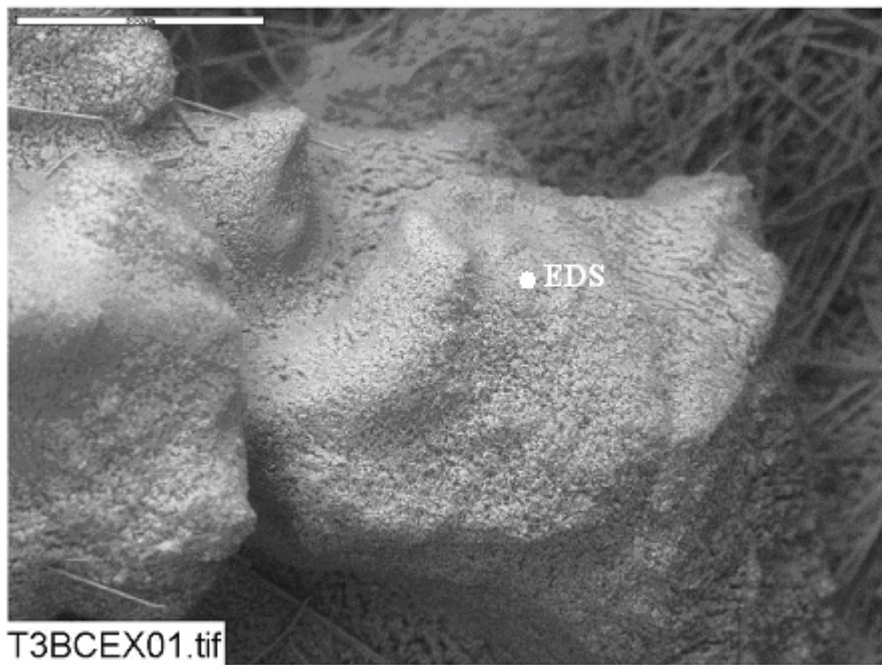
**Figure C4-1: SEM image magnified 100 times for a Test #3 Day-30 exterior fiberglass sample within a birdcage. (T3D30BirdExt001)**



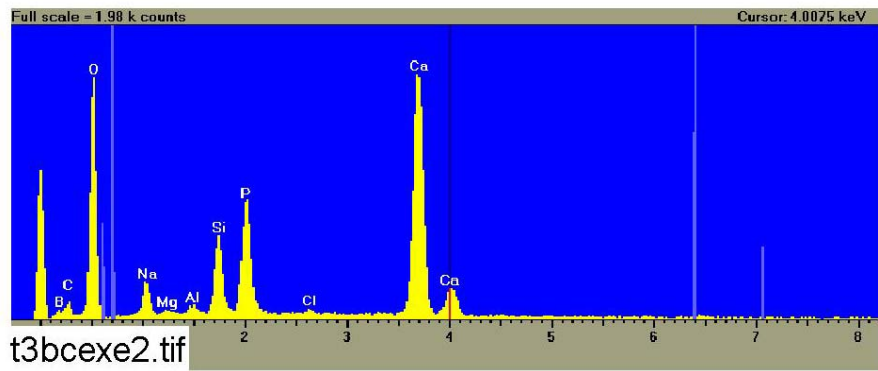
**Figure C4-2: SEM image magnified 550 times for a Test #3 Day-30 exterior fiberglass sample within a birdcage. (T3D30BirdExt002)**



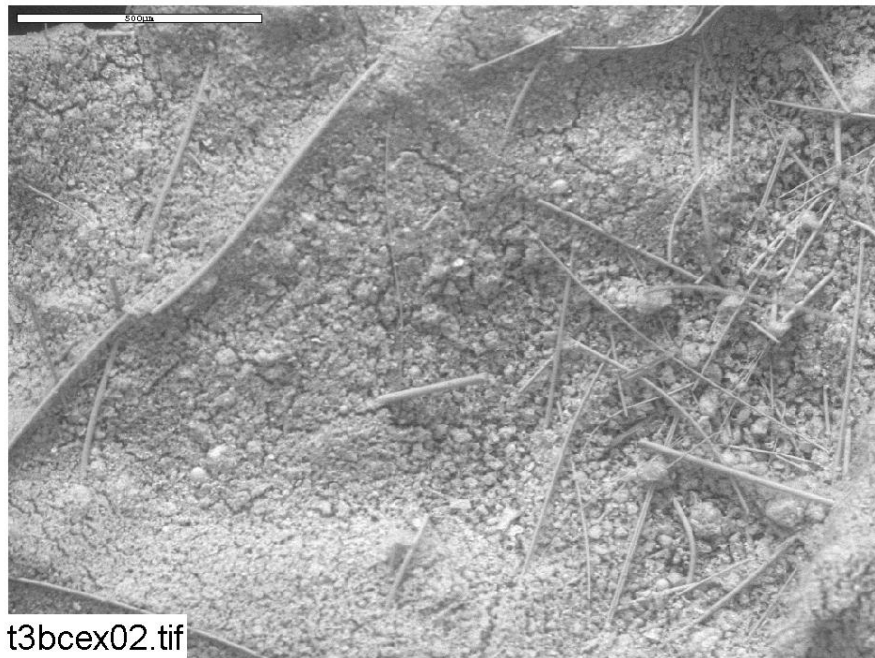
**Figure C4-3: EDS counting spectrum for the large masses of particulate deposits shown in Figure C4-2. (T3D30BirdExtPt01)**



**Figure C4-4: ESEM image magnified 80 times for a Test #3 Day-30 exterior fiberglass sample within a birdcage. (T3BCEX01)**



**Figure C4-5: EDS counting spectrum for the the large deposits shown in Figure C4-4. (t3bcexe2)**



**Figure C4-6: ESEM image magnified 80 times for a Test #3 Day-30 exterior fiberglass sample within a birdcage. (t3bcex02)**



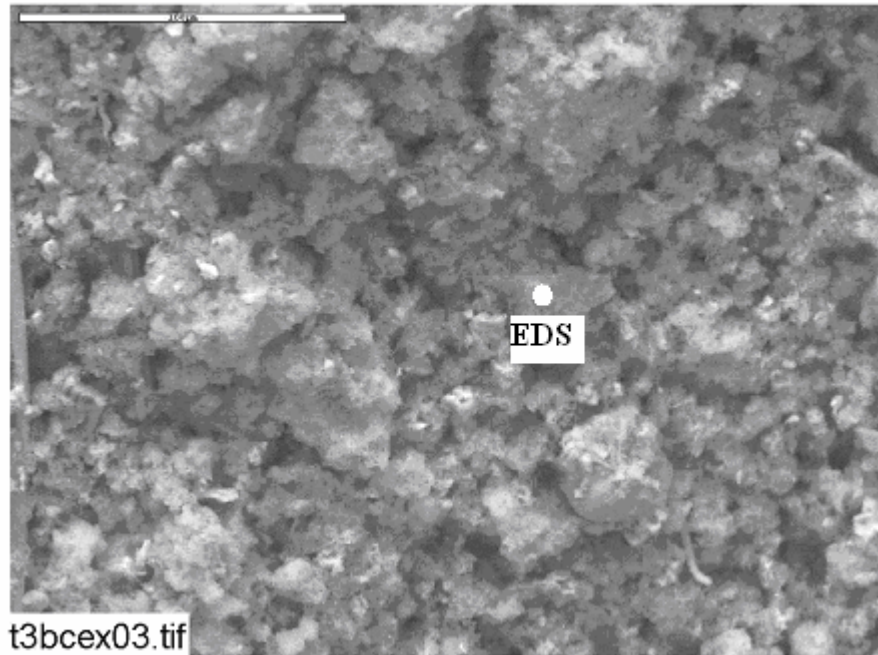


Figure C4-7: ESEM image magnified 500 times for a Test #3 Day-30 exterior fiberglass sample within a birdcage. (t3bcex03)

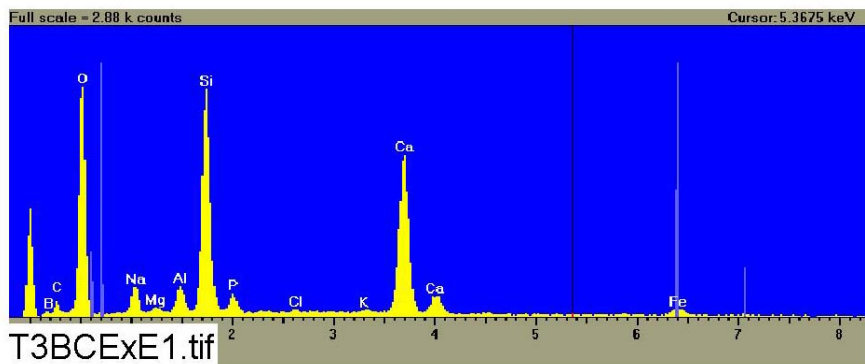
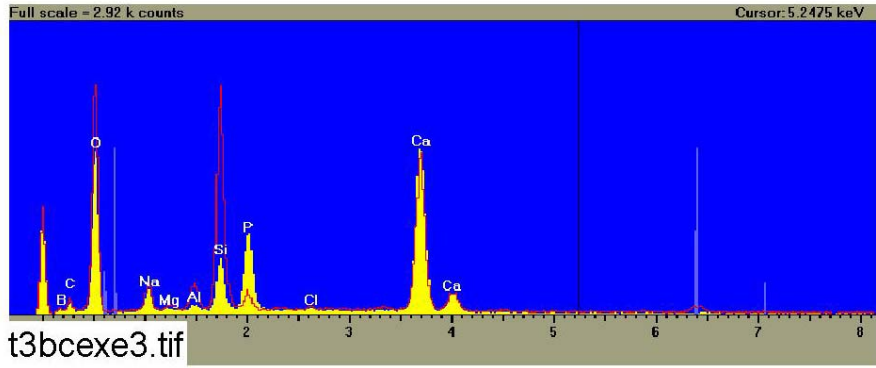
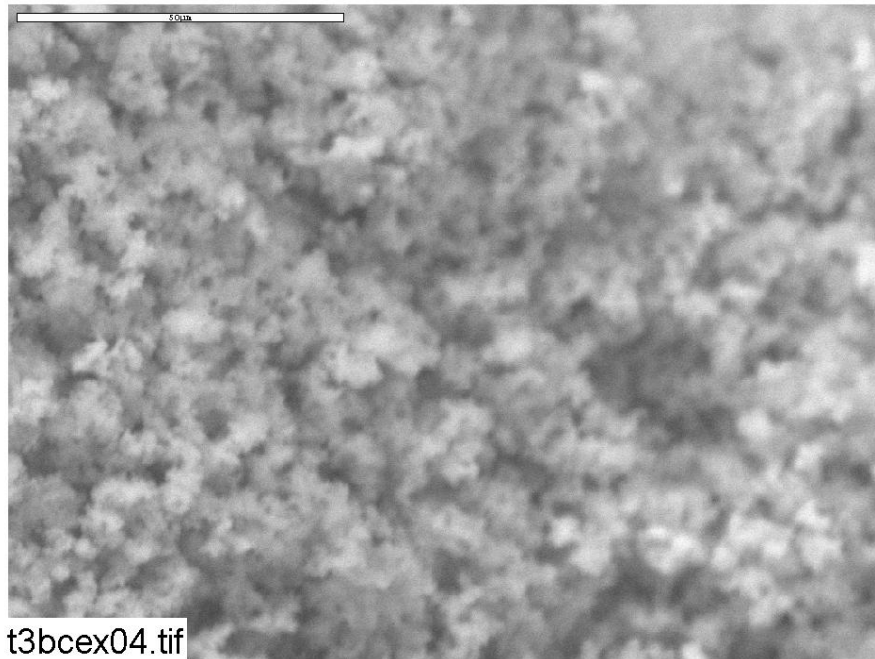


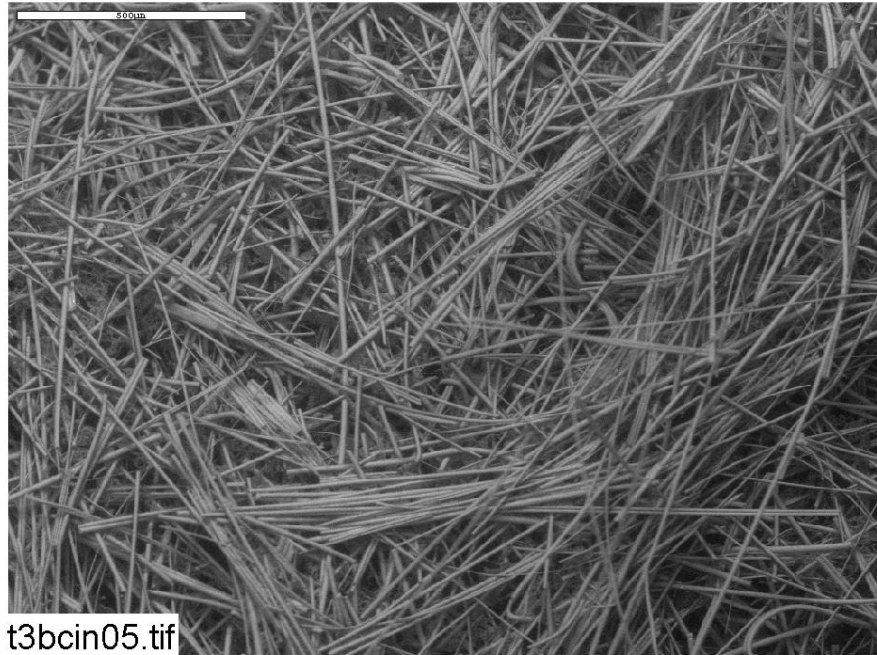
Figure C4-8: EDS counting spectrum for the deposits shown in Figure C4-7. (T3BCExE1)



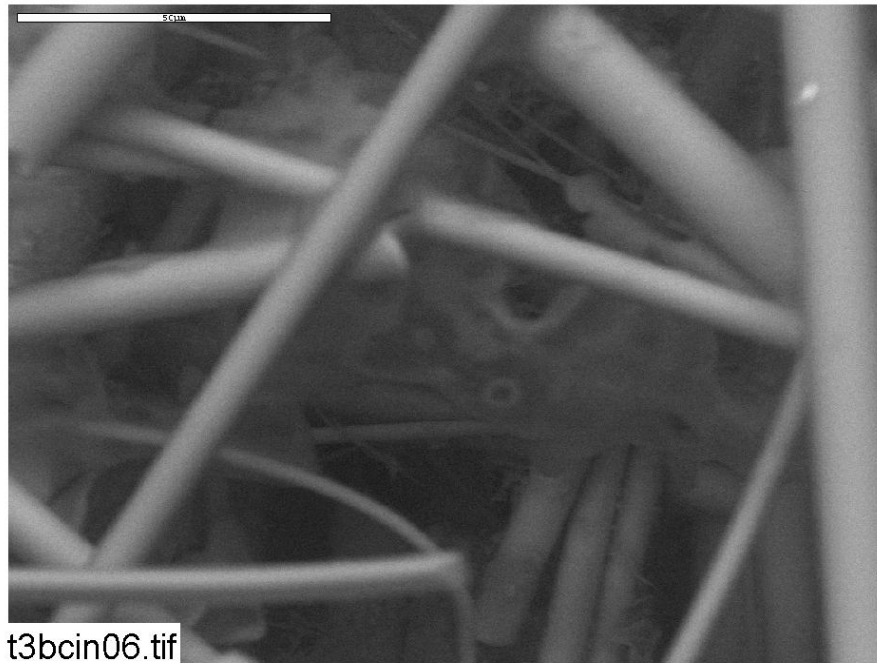
**Figure C4-9: Comparison of EDS counting spectra of Figure C4-5 (yellow) and Figure C4-8 (red). (t3bcexe3)**



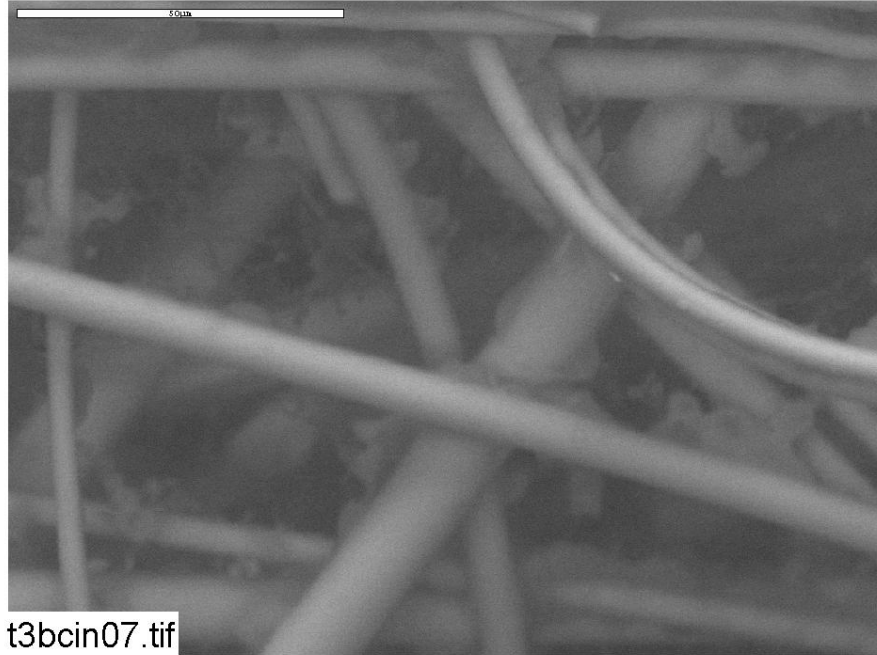
**Figure C4-10: ESEM image magnified 1000 times for a Test #3 Day-30 exterior fiberglass sample within a birdcage. (t3bcex04)**



**Figure C4-11: ESEM image magnified 80 times for a Test #3 Day-30 interior fiberglass sample within a birdcage. (t3bcin05)**



**Figure C4-12: ESEM image magnified 950 times for a Test #3 Day-30 interior fiberglass sample within a birdcage. (t3bcin06)**



**Figure C4-13: ESEM image magnified 1000 times for a Test #3 Day-30 interior fiberglass sample within a birdcage. (t3bcin07)**