

Appendix B2

ESEM/EDS Data for Test #4, Day-15 Fiberglass in High-Flow Zones

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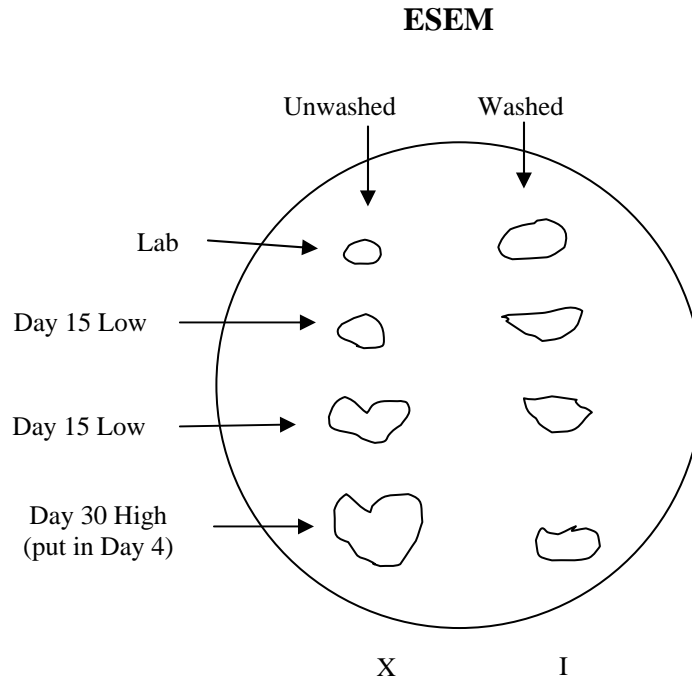
This appendix lists the ESEM/EDS results on ICET Test #4, Day-15 high-flow zone fiberglass samples. The samples were obtained on June 8, 2005 (fifteenth date for Test #4). Both exterior and interior locations of the fiberglass samples were examined. ESEM/EDS data presented here were obtained on June 23, 2005. The hydrated fiberglass samples without any coating were examined by ESEM under a low-vacuum condition (i.e., 80 Pa). EDS results provide a semi-quantitative elemental analysis of the debris attached on fiberglass.

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Transcribed Laboratory Log

Laboratory session from June 23, 2005.

Test #4, Day-15 Fiberglass In High-Flow Zones



ESEM Fiberglass High-Flow Exterior

Image:	t4d15hx8	100 ×	ESEM image	Figure B2-1
	t4d15hx9	400 ×		Figure B2-2
	t4d15hx7	750 ×	ESEM Annotated Image	Figure B2-3
EDS:	t4d15hx6		EDS on web material for t4d15hx7	Figure B2-4

ESEM Fiberglass High-Flow Interior

Image:	t4d15hi1	100 ×	ESEM image	Figure B2-5
	t4d15hi3	100 ×		Figure B2-6
	t4d15hi2	800 ×		Figure B2-7

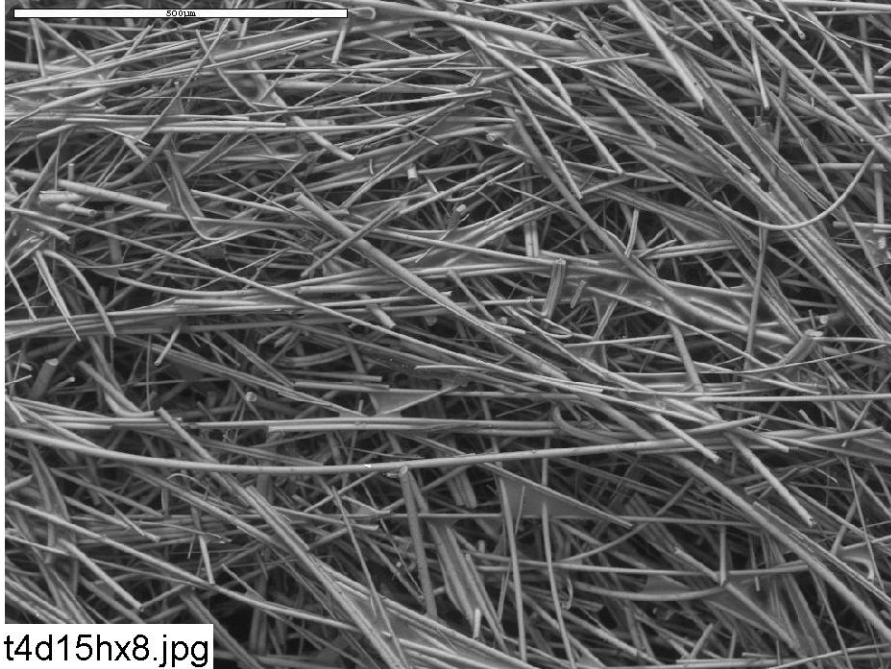


Figure B2-1. Environmental SEM image magnified 100 times for a Test #4, Day-15 exterior high-flow fiberglass sample. (t4d15hx8.jpg)

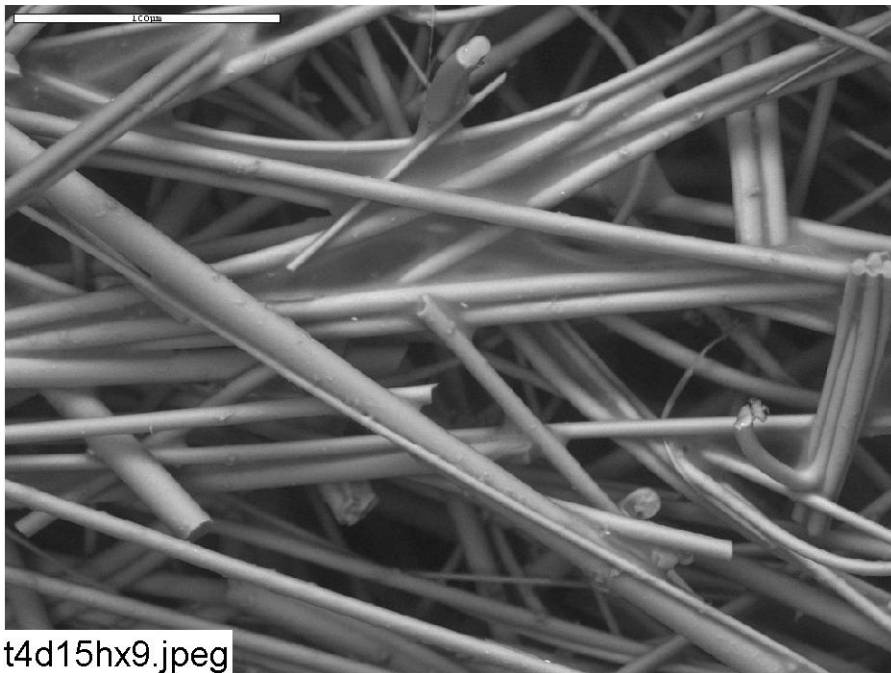


Figure B2-2. Environmental SEM image magnified 400 times for a Test #4, Day-15 exterior high-flow fiberglass sample. (t4d15hx9.jpg)

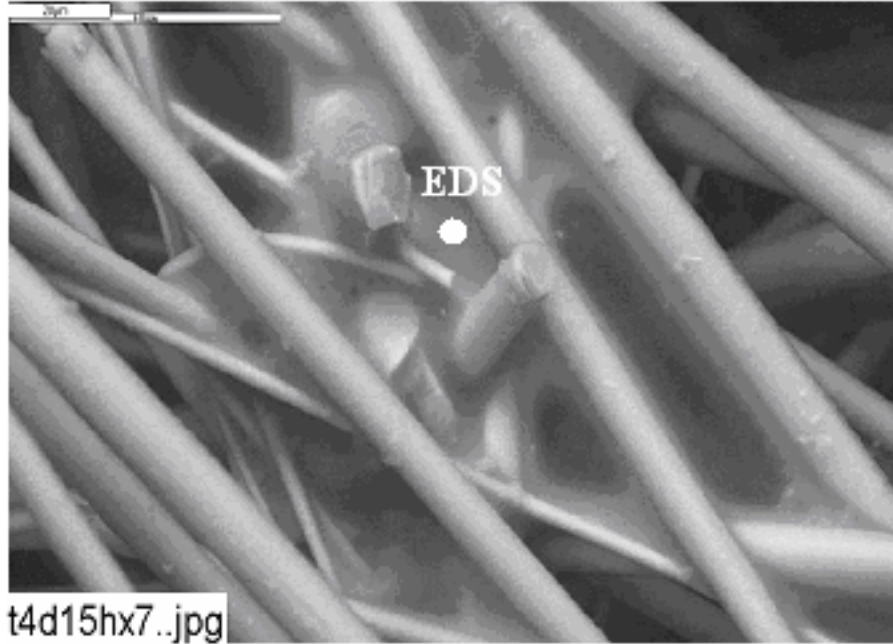


Figure B2-3. Annotated environmental SEM image magnified 750 times for a Test #4, Day-15 exterior high-flow fiberglass sample. The white spot shows the area for EDS analysis. (t4d15hx7.jpg)

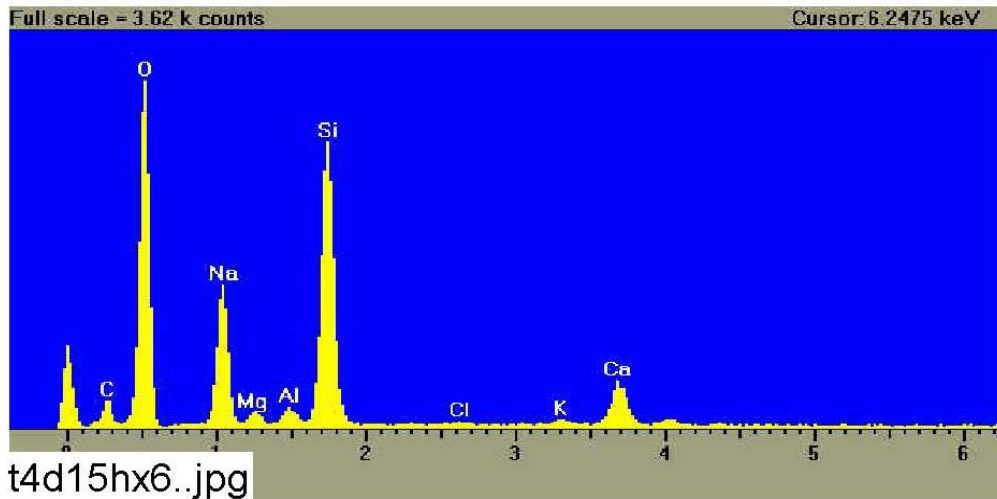


Figure B2-4. EDS counting spectrum for the spot of the film between the fibers shown in Figure B2-3. (t4d15hx6.jpg)

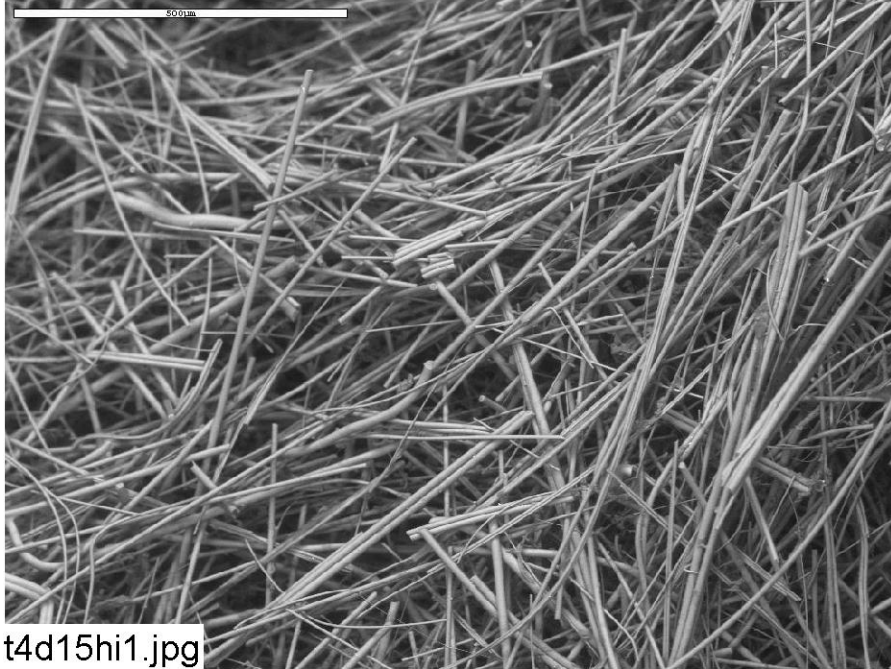


Figure B2-5. Environmental SEM image magnified 100 times for a Test #4, Day-15 interior high-flow fiberglass sample. (t4d15hi1.jpg)

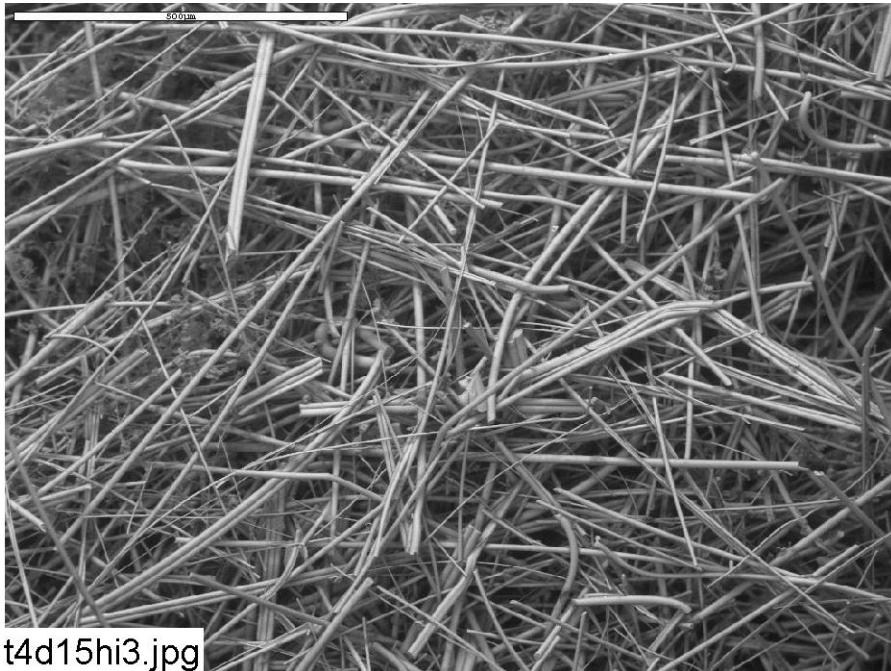


Figure B2-6. Environmental SEM image magnified 100 times for a Test #4, Day-15 interior high-flow fiberglass sample. (t4d15hi3.jpg)

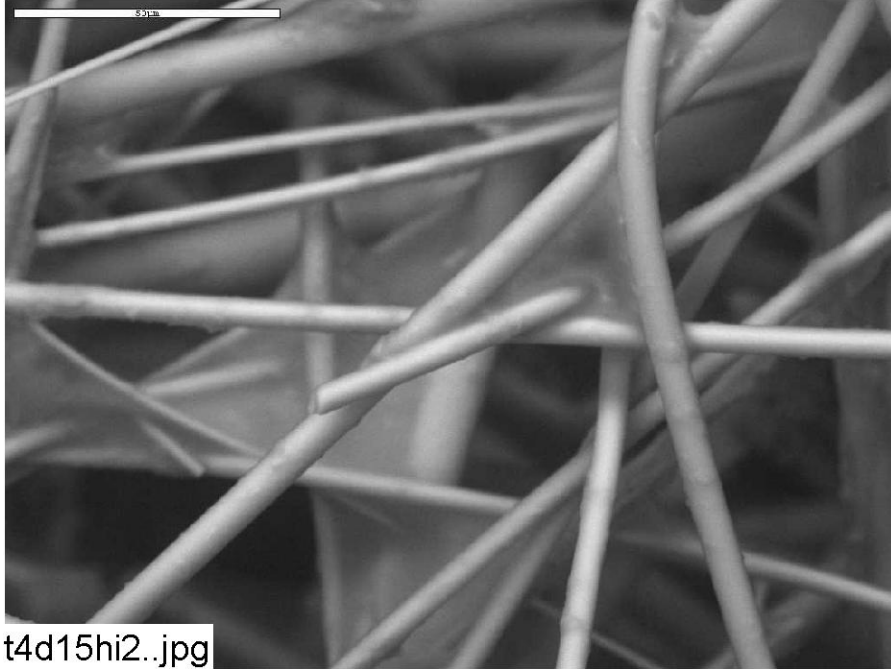


Figure B2-7. Environmental SEM image magnified 800 times for a Test #4, Day-15 interior high-flow fiberglass sample. (t4d15hi2.jpg)

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Appendix C1

ESEM/EDS Data for Test #4, Day-30 Fiberglass in Low-Flow Zones

Figures

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This appendix shows the ESEM/EDS results on fiberglass samples submerged in a low-flow zone in the tank. The fiberglass samples were extracted on the date Test #4 was shut down (June 23, 2005). Both exterior and interior locations of the fiberglass samples were examined. ESEM was employed to analyze the hydrated fiberglass samples without any coating under a low-vacuum condition (i.e., 80 Pa) to minimize the modification of the fiberglass samples through a drying process. The results of Test #4, Day-30 low-flow fiberglass samples were obtained on June 24, 2005. EDS results provide a semi-quantitative elemental analysis of the debris attached on fiberglass.

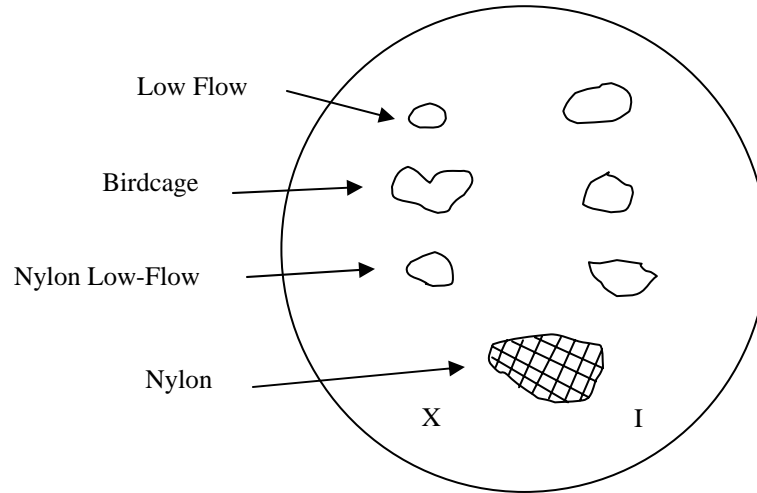
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Transcribed Laboratory Log

Laboratory session from June 24, 2005.

Test #4, Day-30 Low-Flow Fiberglass

ESEM



Low-Flow Exterior

Image:	t4d30lx1	100 ×	ESEM image	Figure C1-1
	t4d30lx2	500 ×	ESEM image higher magnification	Figure C1-2
	t4d30lx5	1000 ×	ESEM annotated image	Figure C1-3
EDS:	t4d30lx4		Spot of coating substance for t4d30lx5	Figure C1-4

Low-Flow Interior

Image:	T4D30LI6	100 ×	ESEM image of fiberglass	Figure C1-5
	t4d30li9	500 ×	ESEM annotated image	Figure C1-6
EDS:	t4d30li8		Film on fiberglass for t4d30li9	Figure C1-7

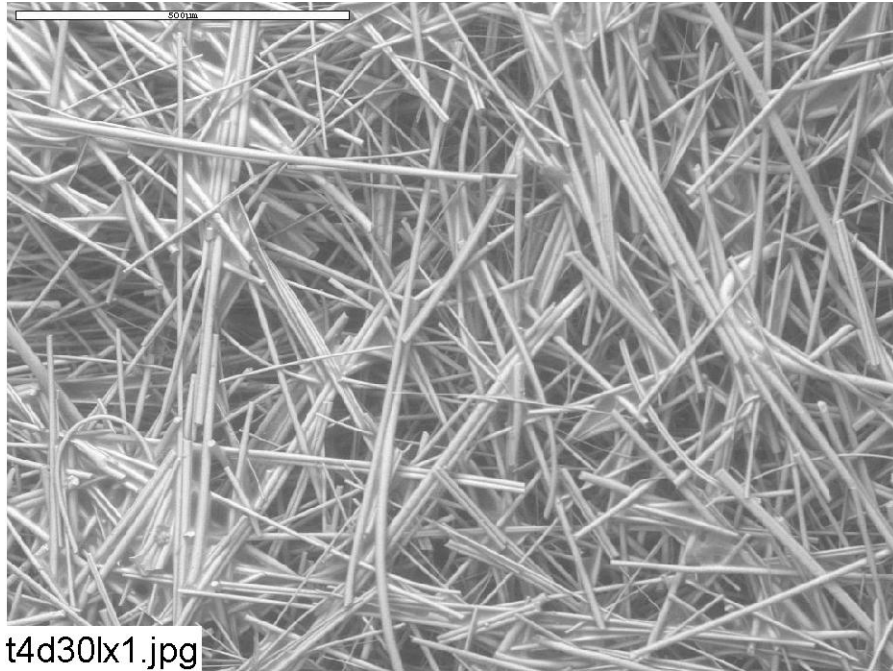


Figure C1-1. Environmental SEM image magnified 100 times for a Test #4, Day-30 exterior low-flow fiberglass sample. (t4d30lx1.jpg)

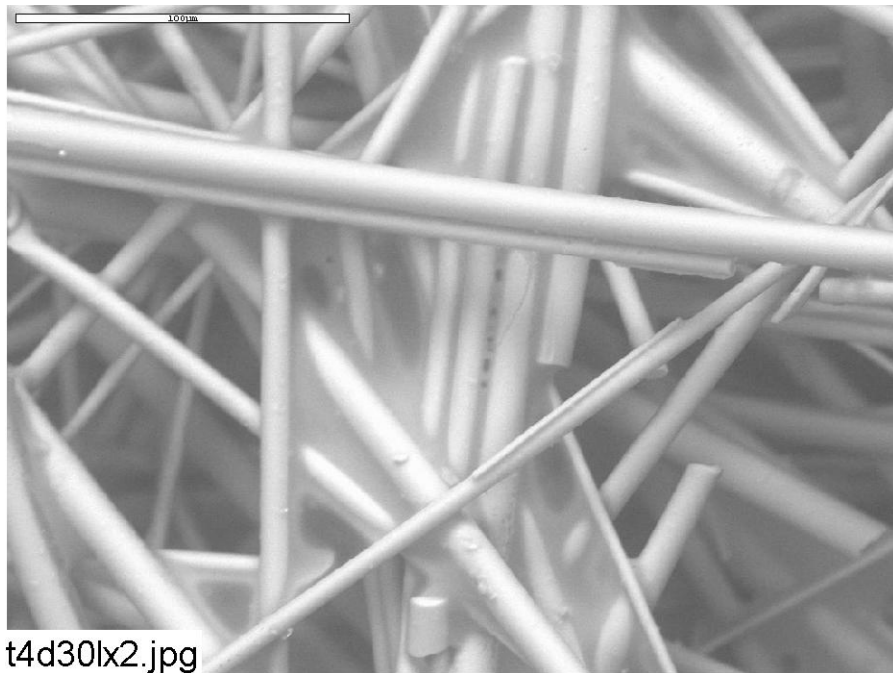


Figure C1-2. Environmental SEM image magnified 500 times for a Test #4, Day-30 exterior low-flow fiberglass sample. (t4d30lx2.jpg)

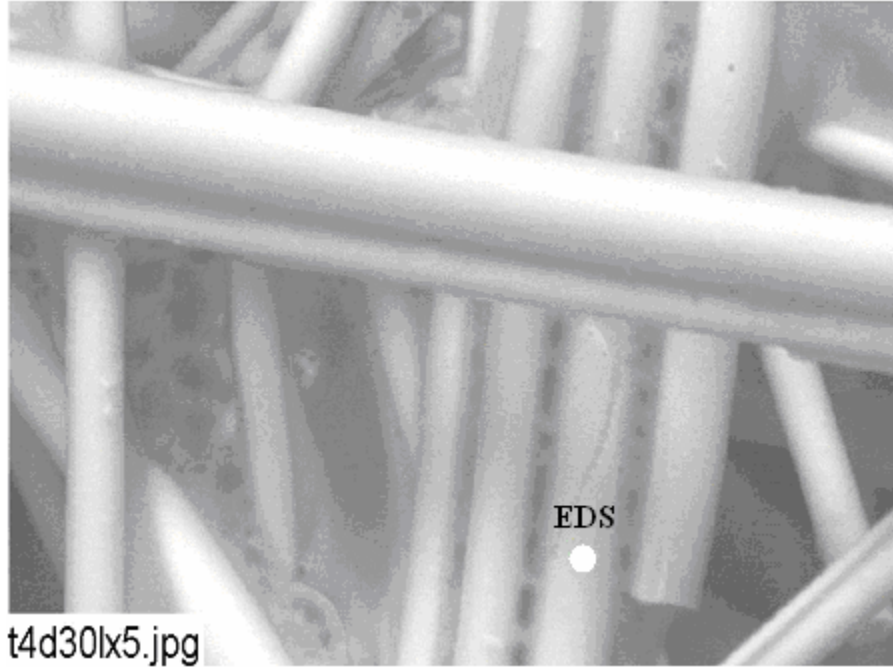


Figure C1-3. Annotated environmental SEM image magnified 1000 times for a Test #4, Day-30 exterior low-flow fiberglass sample. (t4d30lx5.jpg)

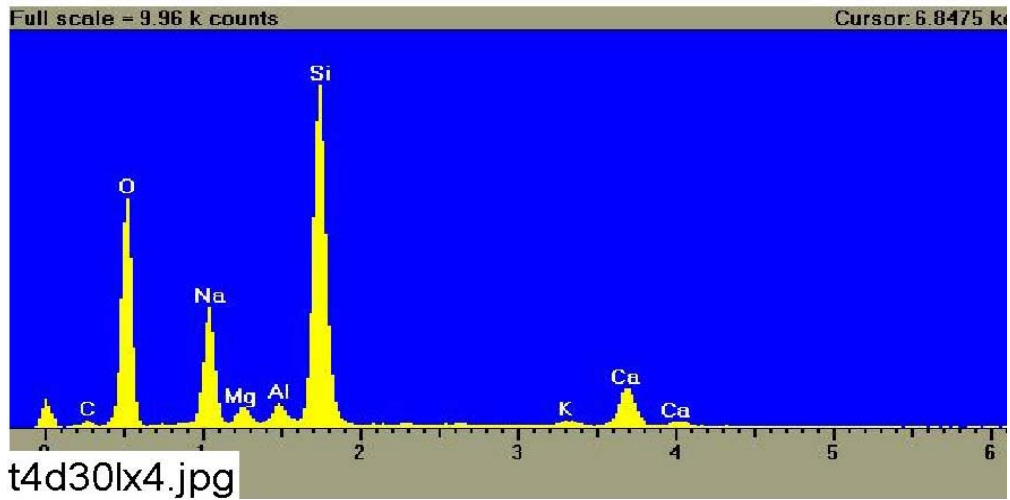


Figure C1-4. EDS counting spectrum for the spot of coating substance on fiberglass shown in Figure C1-3. (t4d30lx4.jpg)

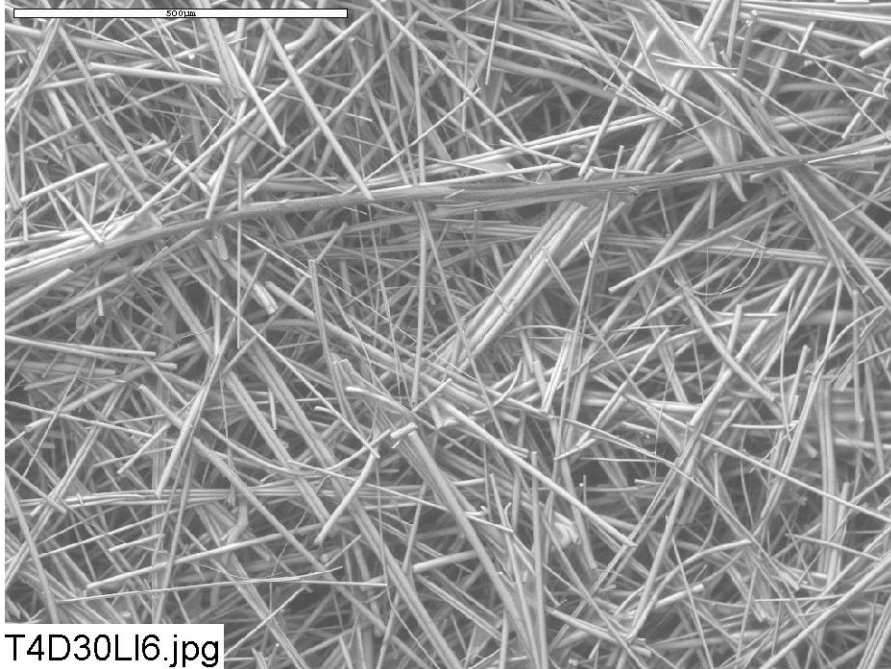


Figure C1-5. Environmental SEM image magnified 100 times for a Test #4, Day-30 interior low-flow fiberglass sample. (T4D30LI6.jpg)

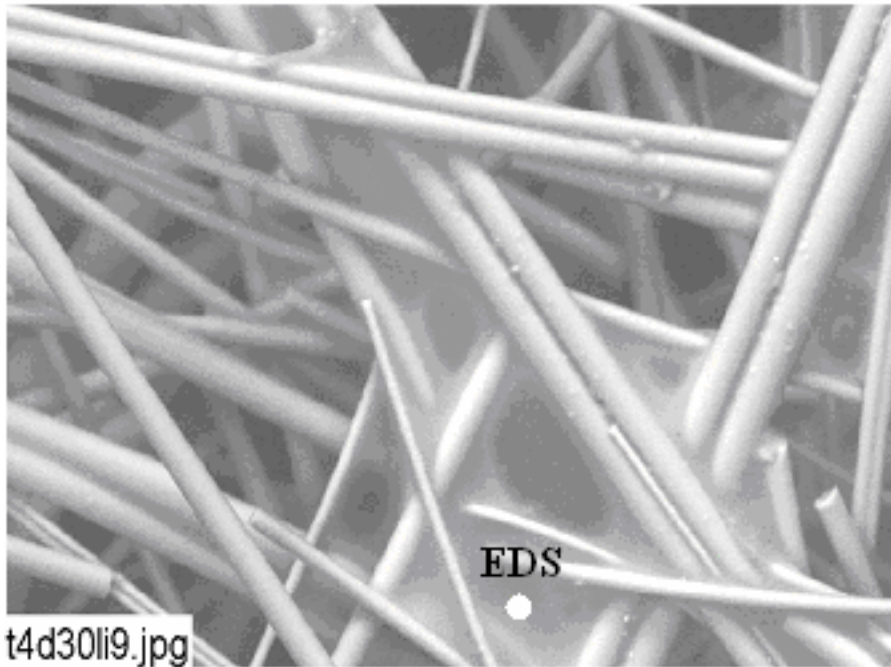


Figure C1-6. Annotated environmental SEM image magnified 500 times for a Test #4, Day-30 interior low-flow fiberglass sample. EDS spot is shown in the picture (t4d30li9.jpg)

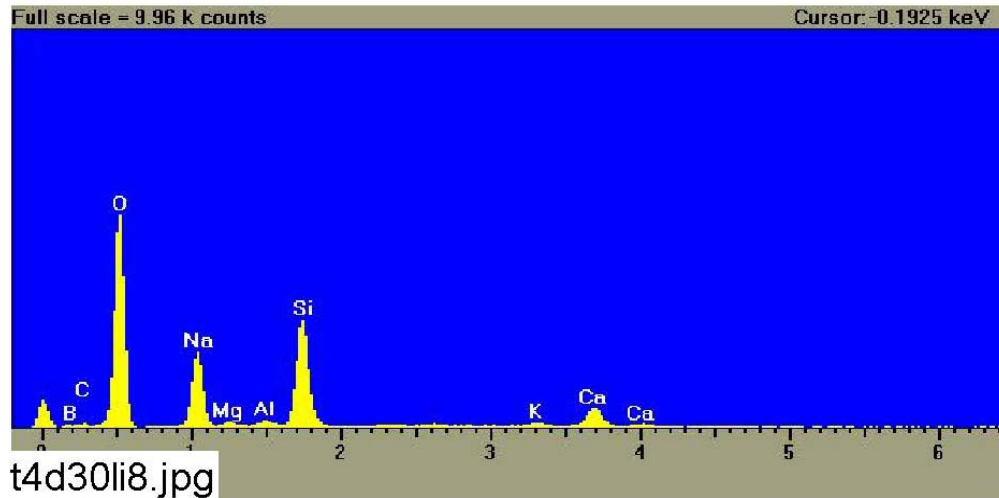


Figure C1-7. EDS counting spectrum for the film between fibers shown in Figure C1-6. (t4d30li8.jpg)

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