

Appendix B1

ESEM/EDS and SEM/EDS Data for Test #3 Day-15 Fiberglass in High-Flow Zones

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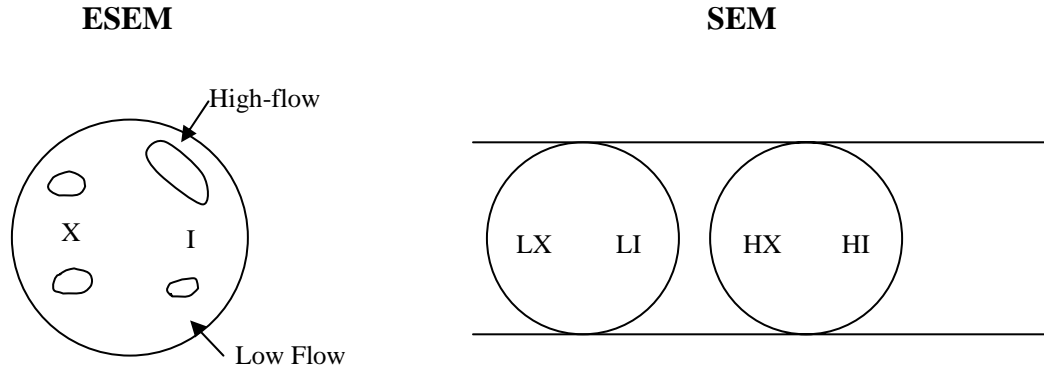
This appendix shows the ESEM/probe SEM/EDS results for ICET Test #3 Day-15 high-flow zone fiberglass samples. Both exterior and interior locations of the fiberglass samples were examined. These fiberglass samples were obtained on April 20, 2005 (15th day of Test #3). For probe SEM examination, the fiberglass samples were air dried at room temperature and then were coated with Au/Pd. Available logbook entries for this laboratory session are included in this appendix as transcribed notes.

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Transcribed Laboratory Log

Laboratory session from April 22, 2005.

Test #3 Day-15 fiberglass in high-flow zones



Instrument Conditions: ESEM, Pressure=80 Pa
SEM, Electron beam of 1×10^{-9} (A)

ESEM Fiberglass High-flow Interior

| | | | |
|--------|----------|------------------------------------|-------------|
| Image: | T3D15HI1 | 100 × | Figure B1-1 |
| | T3D15HI2 | 1000 × | Figure B1-2 |
| | T3D15HI3 | 2000 × | Figure B1-3 |
| EDS: | T3D15HIA | EDS on particles shown in T3D15HI3 | Figure B1-4 |

ESEM Fiberglass High-flow Exterior

| | | | |
|--------|----------|------------------------------------|-------------|
| Image: | T3D15HX4 | 110 × | Figure B1-5 |
| | T3D15HX5 | 1000 × | Figure B1-6 |
| EDS: | T3D15HXB | EDS on particles shown in T3D15HX5 | Figure B1-7 |

SEM Fiberglass High-flow Interior

| | | | |
|--------|--------------------|----------------------------------|--------------|
| Image: | T3D15HIFlowInt002 | 100 × | Figure B1-8 |
| | T3D15HIFlowInt003 | 1000 × | Figure B1-9 |
| | T3D15HIFlowInt004 | 1000 × | Figure B1-10 |
| EDS: | T3D15HIFlowIntEDS1 | EDS on particles shown in Int004 | Figure B1-11 |

SEM Fiberglass High-flow Exterior

| | | | |
|--------|--------------------|----------------------------------|--------------|
| Image: | T3D15HIFlowExt005 | 100 × | Figure B1-12 |
| | T3D15HIFlowExt006 | 1000 × | Figure B1-13 |
| | T3D15HIFlowExt007 | 500 × | Figure B1-14 |
| EDS: | T3D15HIFlowExtEDS2 | EDS on particles shown in Ext007 | Figure B1-15 |

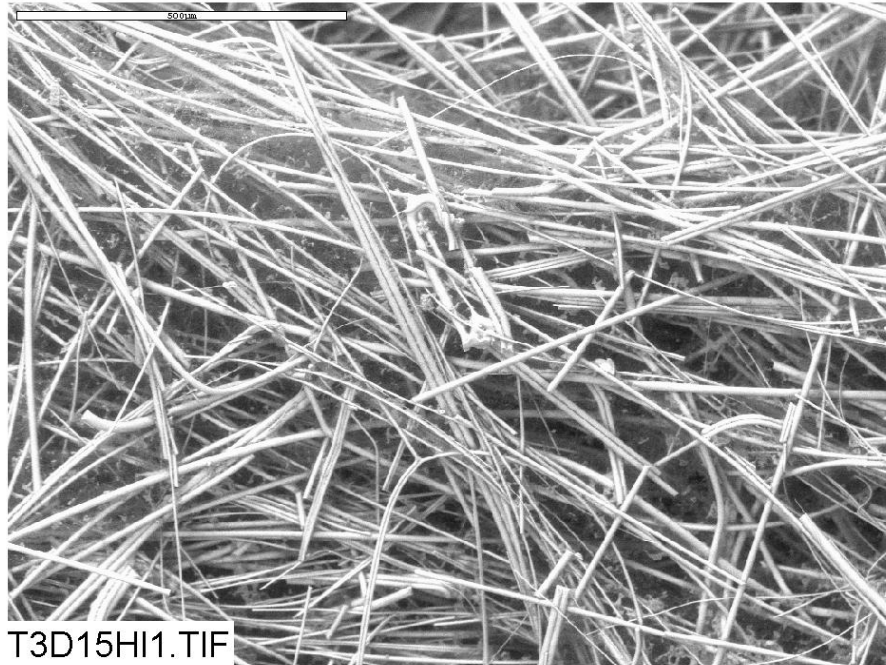


Figure B1-1: Environmental SEM image magnified 100 times for a Test #3 Day-15 high-flow interior fiberglass sample. (T3D15HI1)

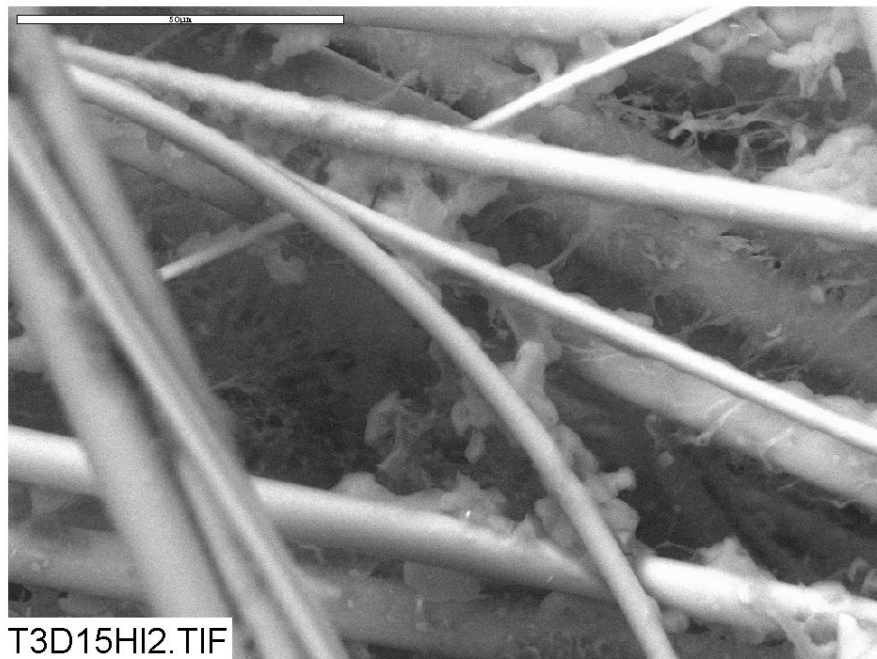


Figure B1-2: Environmental SEM image magnified 1000 times for a Test #3 Day-15 high-flow interior fiberglass sample. (T3D15HI2)

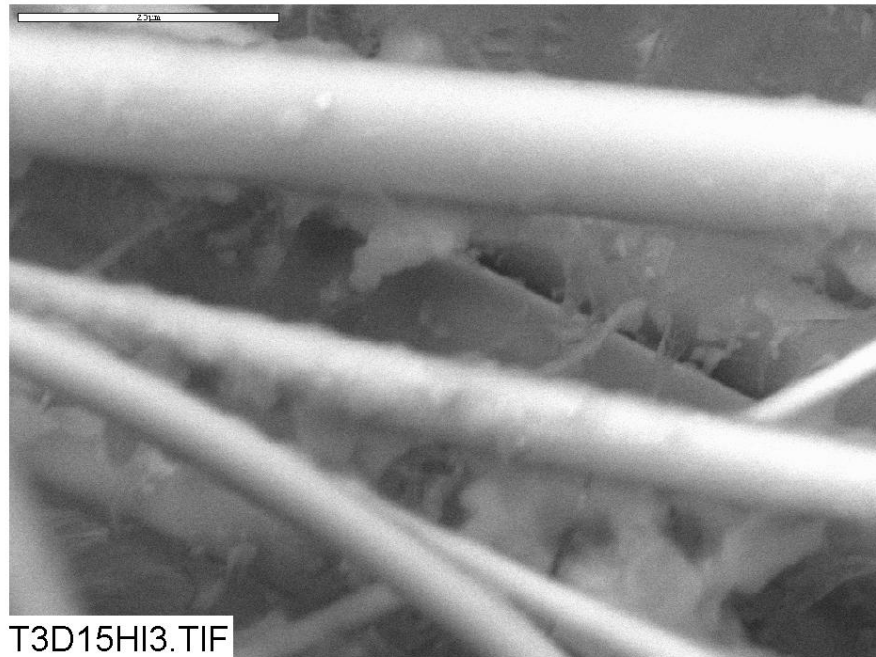


Figure B1-3: Environmental SEM image magnified 2000 times for a Test #3 Day-15 high-flow interior fiberglass sample. (T3D15HI3)

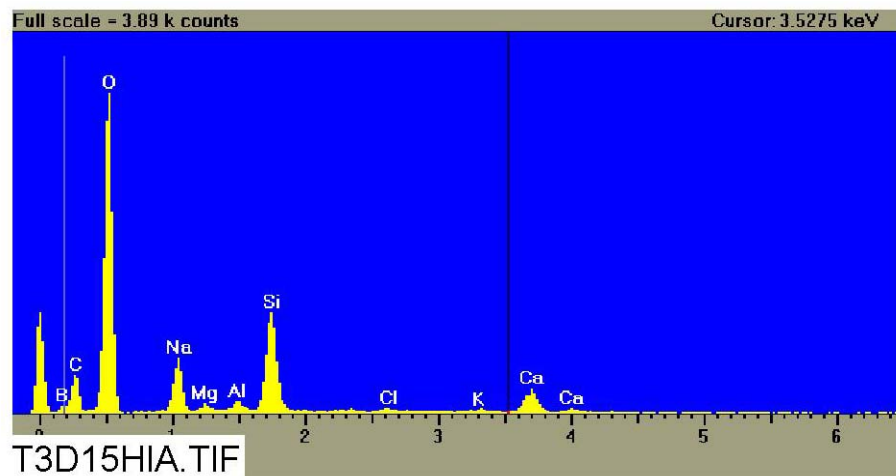


Figure B1-4: EDS counting spectrum for the flocculence deposits between the fibers on ESEM image shown in Figure B1-3. (T3D15HIA)

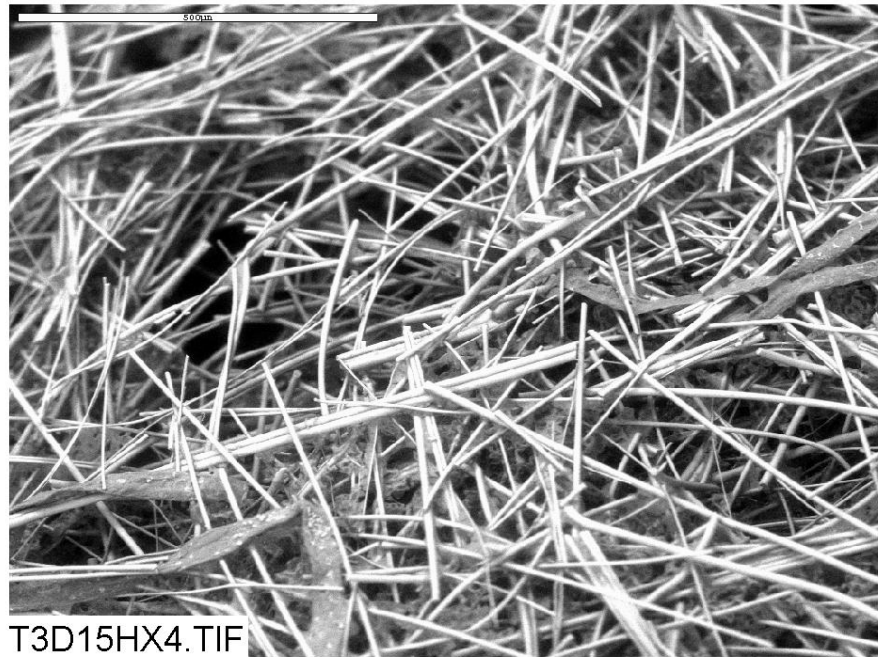


Figure B1-5: Environmental SEM image magnified 110 times for a Test #3 Day-15 high-flow exterior fiberglass sample. (T3D15HX4)

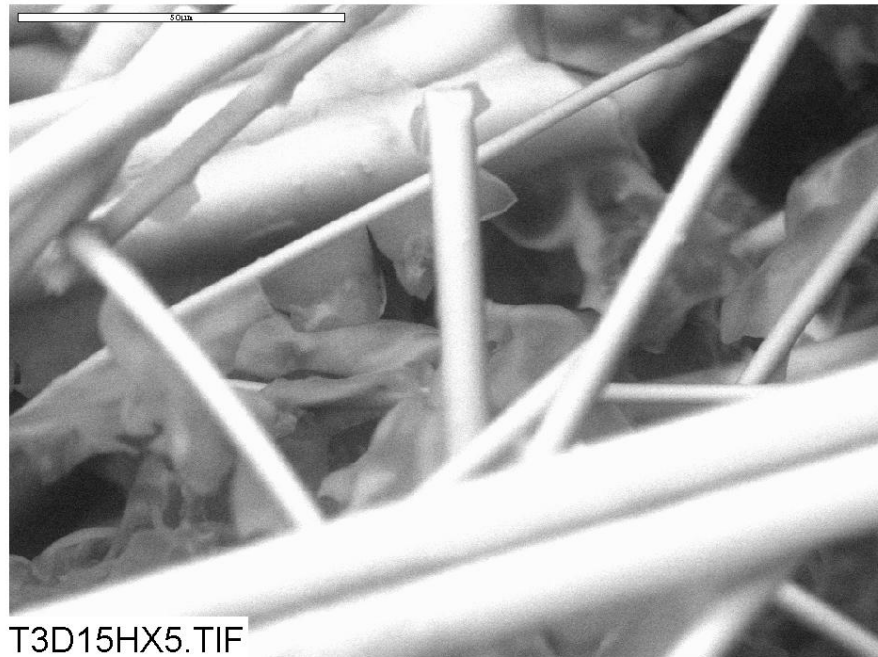


Figure B1-6: Environmental SEM image magnified 1000 times for a Test #3 Day-15 high-flow exterior fiberglass sample. (T3D15HX5)

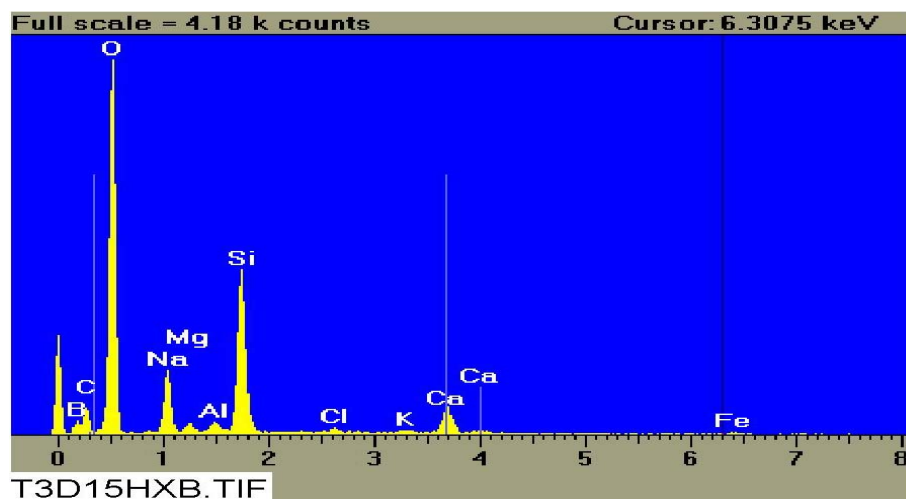


Figure B1-7: EDS counting spectrum for the deposits between the fibers on ESEM image shown in Figure B1-6. (T3D15HXB)

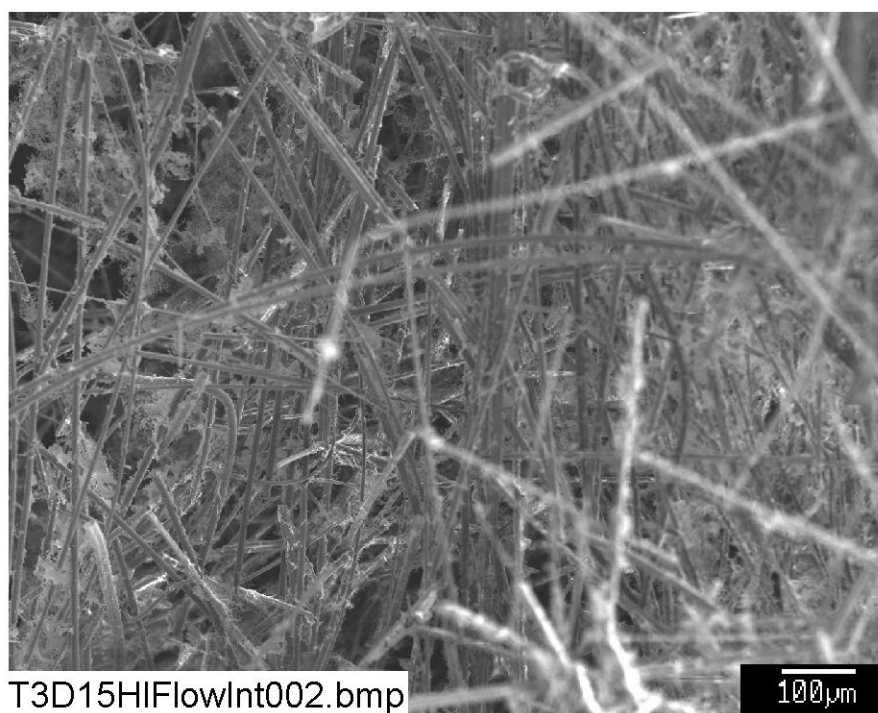


Figure B1-8: SEM image magnified 100 times for a Test #3 Day-15 high-flow interior fiberglass sample. (T3D15HIFlowInt002)

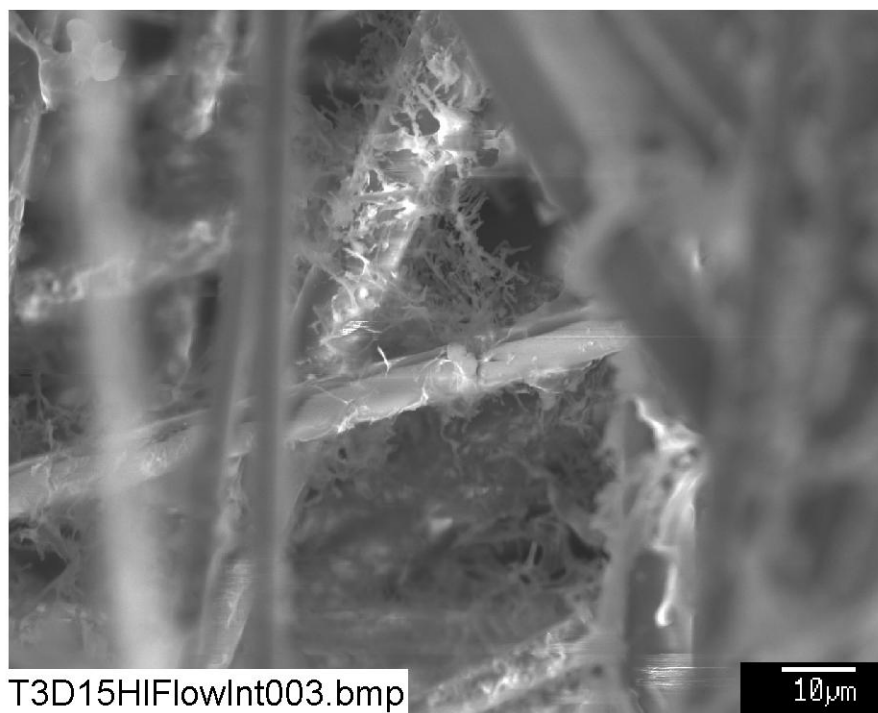


Figure B1-9: SEM image magnified 1000 times for a Test #3 Day-15 high-flow interior fiberglass sample. (T3D15HIFlowInt003)

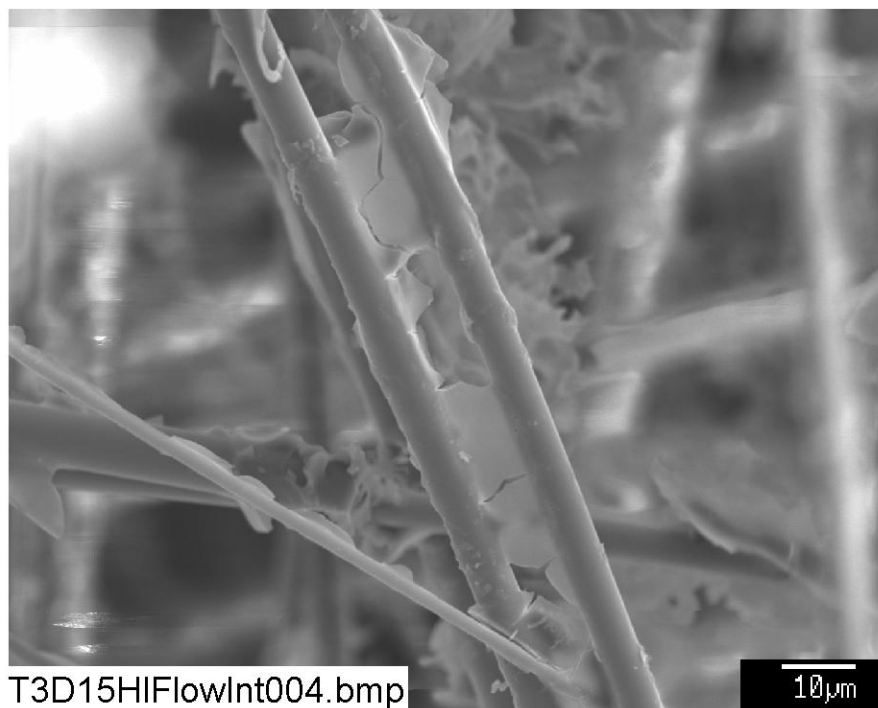


Figure B1-10: SEM image magnified 1000 times for a Test #3 Day-15 high-flow interior fiberglass sample. (T3D15HIFlowInt004)

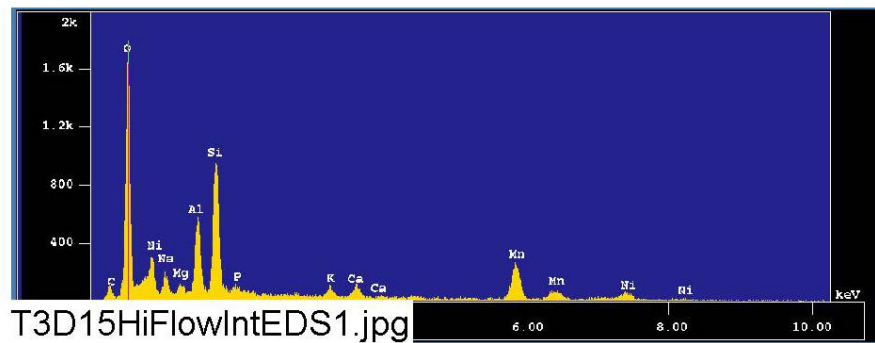


Figure B1-11: EDS counting spectrum for the flocculence deposits between the fibers on SEM image shown in Figure B1-10. (T3D15HiFlowIntEDS1)

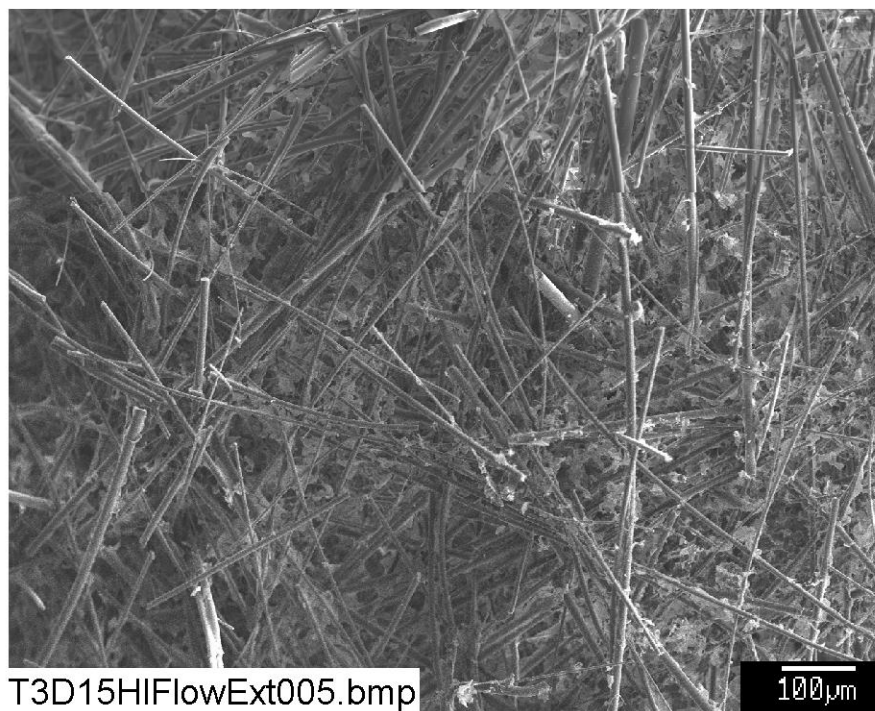


Figure B1-12: SEM image magnified 100 times for a Test #3 Day-15 high-flow exterior fiberglass sample. (T3D15HiFlowExt005)

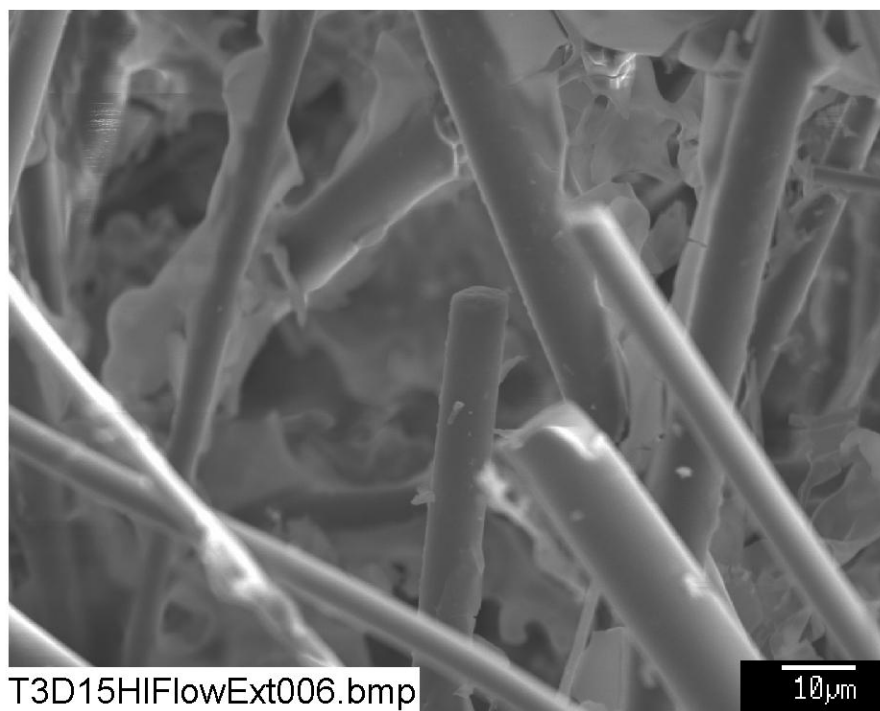


Figure B1-13: SEM image magnified 1000 times for a Test #3 Day-15 high-flow exterior fiberglass sample. (T3D15HIFlowExt006)

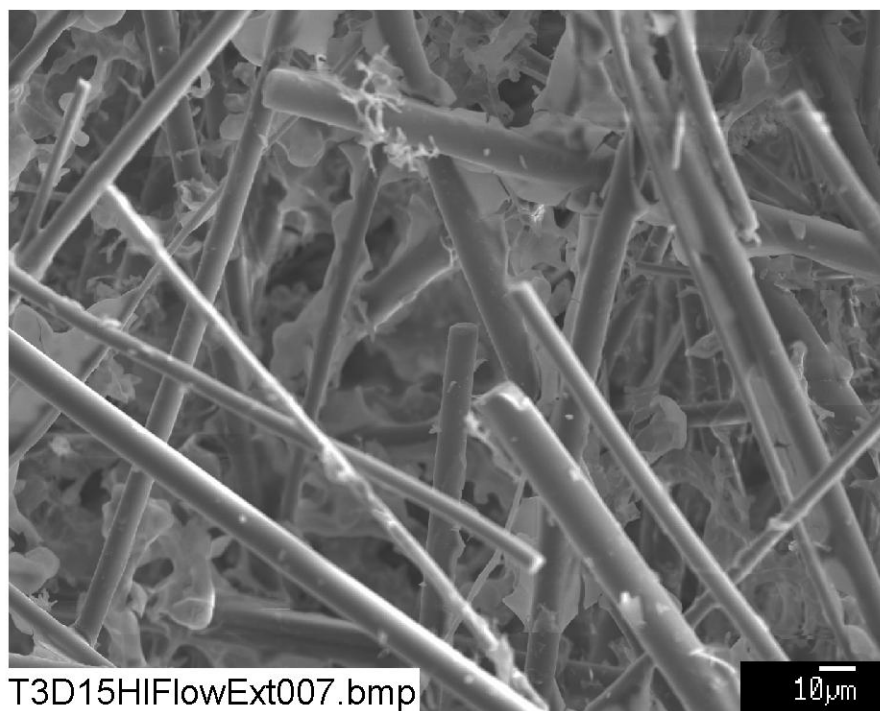


Figure B1-14: SEM image magnified 500 times for a Test #3 Day-15 high-flow exterior fiberglass sample. (T3D15HIFlowExt007)

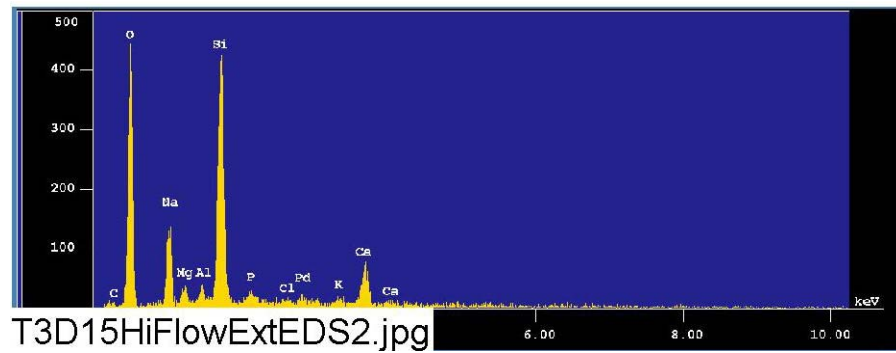


Figure B1-15: EDS counting spectrum for the flocculence deposits between the fibers on SEM image shown in Figure B1-14. (T3D15HiFlowExtEDS2)