

Typical test durations were in the range of 10 to 100 minutes depending on fiber concentration. The duration of the tests was based on counting statistics requirements of the reference filter collection as well as for the FAM. Concentrations in the range of 0.4 to 40 fibers/cm³ as determined by the phase contrast microscopy method were generated using three types of fibrous aerosols: UICC Crocidolite,¹⁴ Code 110 fiber glass and UICC Chrysotile. Tests with the former two materials were performed with the signal ratio threshold setting of 3 (i.e., ratio of 3 between the central part of the pulse with respect to the sides of the pulse) for a central gating width of $\pm 4^\circ$ and side gates of $\pm (4^\circ \text{ to } 8^\circ)$. Although initial testing has been performed for $\pm 3^\circ$ and $\pm (3^\circ \text{ to } 6^\circ)$, it was considered that the finite degree of pulse jitter observed during those tests justified the slight widening of the gating widths. The ratio discrimination was bypassed for Chrysotile because the extreme irregularity and curvature of these fibers invalidated and ratio sensing. The amplitude discrimination was set to a dial reading of 0.5 (full scale = 10) for all three aerosols and the tests were performed as described above. The results of this series of aerosol tests are shown in Figure 8. The two data points below 0.5 fibers/cm³ are somewhat questionable because the reference filter counts were very low, resulting in potentially large statistical errors. It appears reasonable that for a statistically more accurate reference count, these two data points would have been close to the same FAM/filter ratio as the data points between 1 and 30 fibers/cm³ which fell reasonably close to an average level of 0.5. The two data points above 30 mg/m³ were at