

June 21, 1977

APPENDIX I

Procedure for Measurement of Airborne Respirable Particle (ARP) Concentration

A 9 oz. container of powder is placed in a mechanical device and shaken vertically at a fixed rate to deliver about 1 gram of powder. The shaker is located within a closed chamber so that any airborne dust is contained within the chamber and is rapidly dispersed and uniformized by means of a small circulating fan. The airborne dust is sampled with a 10mm nylon cyclone at a 1.7 l/min. flow rate. The cyclone separates out the respirable sized particles and delivers them to a TS1 3210A quartz crystal mass monitor for weighing. The concentration of respirable particles, as mg/m^3 , in the chamber is monitored and printed out every 10 sec.

The peak ARP concentration and the average ARP concentration for the first two (2) minutes after shaking are measured and recorded. The peak concentration is normally reached in the first 10 sec. following shaking.

The number of shakes and the powder delivered from the container are also recorded as data.

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