

$$2) \frac{\text{Average net count} \times K}{\text{Air volume sampled (ml)}} = \text{fibers/ml}$$

The field area used has to be calibrated prior to counting with a microscope stage micrometer. For this example, the assumption is made that it is 0.005 mm^2 .

$$\text{Therefore: } 1) K = \frac{855 (\text{mm}^2)}{0.005 (\text{mm}^2)} = 171,000$$

Assuming the average net count per field of 20 fields was 5 fibers and the sample was collected at 2 liters per minute (2000 ml/min) for 90 Minutes: Then:

$$2) \frac{5 (\text{fibers}) \times 171,000}{2000 (\text{ml/min}) \times 90 (\text{min})} = \frac{855}{180} = 4.7 \text{ fibers/ml}$$

Principles of Sampling - (This section is quoted from the Criteria Document on Asbestos; reviews the topic very concisely.)

"A dust sampling procedure must be designed so that samples of actual dust concentrations are collected accurately and consistently. The results of the analysis of these samples will reflect, realistically, the concentrations of dust at the place and time of sampling.

In order to collect a sample representative of airborne dust, which is likely to enter the subject's respiratory system, it is necessary to position a collection apparatus near the nose and mouth of the subject or in his 'breathing zone'.

The concentration of dust in the air to which a worker is exposed will vary, depending upon the nature of the operation and upon the type of work performed by the operator and the position of the operator relative to the source of the dust. The amount of dust inhaled by a worker

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