

Material: B-D Vacutainers

Source: Stock as supplied by Becton-Dickinson Company,
Rutherford, New Jersey

Required: Determination of range of lead contamination resulting
from the use of B-D tubes not undergoing special cleaning.

Discussion: Of the last shipment of 250, a total of 135 were analyzed
for lead by the usual method. Including results which
were reported at various times previous to this report,
a total of 165 results were available for study. The
results have been arranged as a frequency distribution
in order to indicate more clearly the magnitudes of the
lead contaminations and the frequency of their occurrence.
It is obvious from this study that it is not safe to
use the tubes which are prepared in the usual commercial
manner. Special cleaning techniques will have to be
employed if contamination is to be reduced to a safe
range. If the cleaning is carried out with careful
attention to the elimination of possible dust contamina-
tion arising in the various processes employed in the
plant, it should not be difficult to keep the contamina-
tion considerably below 0.5 microgram, as has been
demonstrated by results obtained in earlier studies
carried on in our laboratory.

Results

Frequency Distribution of Lead Contaminations

<u>Micrograms Pb</u>	<u>No.</u>	
Nil	8	} Range of tolerated contamination = 123 = 74.6%
0.1	21	
0.2	34	
0.3	33	
0.4	19	
0.5	8	
0.6	9	} Contamination not tolerated = 42 = 25.4%
0.7	3	
0.8	7	
0.9	1	
1.0	4	
1.2	2	
1.3	3	
1.4	1	
1.5	3	
1.6	1	
1.7	2	
1.9	1	
2.0	1	
2.3	1	
2.4	1	
2.6	1	
2.9	1	
Total	165	165