



## FAQ – ORDELA Model 8600A-LB

Q: What is the counting efficiency of the Model 8600A-LB?

A: Approximately 94%

Q: Why is your efficiency so much higher than what some of your competitors are reporting?

A: Two very good reasons; the entire volume of our counter is active and this helps to stop the alpha particles and thereby deposit all their energy in the counter. Two, there is no entrance window to attenuate the alpha particles.

An added benefit of the Model 8600A-LB counter is that you do not have to adjust the sample height or spacing within the detector. The efficiency will be constant, and high, no matter where the sample is placed.

Q: How do you determine the counting efficiency of the Model 8600A-LB counter?

A: We use a very thin  $^{241}\text{Am}$  alpha source, of known activity, and count it in our counter.

Q: With a point source such as above, does the efficiency vary depending upon the position of the source within the counter?

A: No; due to our design and uniform electric fields within the counter, efficiency is the same around the edges, sides and middle of the detector.

Q: What is the background of your Model 8600A-LB counter?

A: <2 counts per hour/1000  $\text{cm}^2$  is possible; your actual background count rate will depend upon such environmental factors as altitude, radon background, proximity to high energy electric fields, etc.

Q: How did you get started in the business of large area, low background alpha counting?

A: ORDELA has been involved in alpha counting and spectroscopy for many years. Only when a major semiconductor manufacture came to us and requested we build him a system better than those available in the then current market did we agree to enter this field.

Q: What is your normal sample count time in the Model 8600A-LB counter?

A: We normally purge the system and count for 24 hours.

Q: Is a 24 hour count time appropriate for all samples?

A: Sample count times should be adjusted depending upon the Lower Limit of Detection and the statistical accuracy needed for your application.

Q: Does your system use a lot of P-10 gas?

A: Our system operates at 80 – 85 cc per minute, sccm.

Q: How often should our Model 8600A-LB counter be checked for background?

A: We recommend keeping a control chart of the background. Whenever, or if, the background counts vary by more than three standard deviations, the counter should be inspected for poor P-10 counting gas, contamination or other problem.

Q: Should I measure the background when I change P-10 cylinders?

A: Yes; P-10 varies considerably between vendors and individual tanks.

Q: What is the purge time in the Model 8600A-LB counter?

A: Purge times should be between 45 minutes and 1 hour in our counter. As counts accumulate and are displayed on the computer screen, you will know if you have purged long enough.

For more information, please contact us at +1 (865) 483-8675.