

5

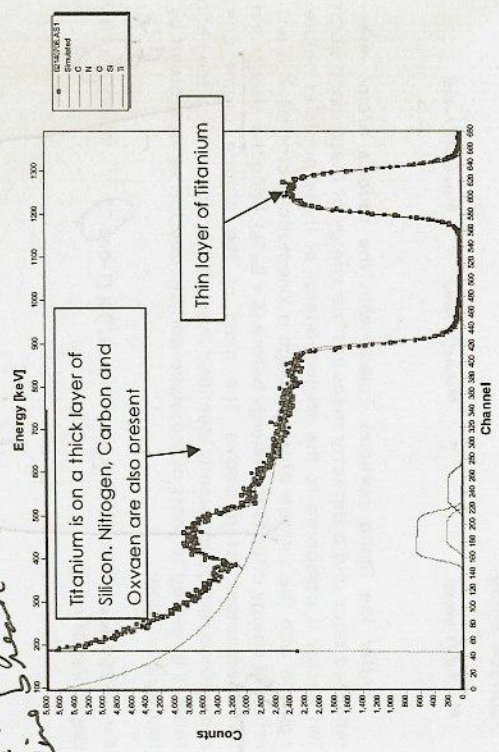
Definitely earlier

keep calc on the y-axis
one line in the graph
can up line by hand

For example if an alpha particle comes in with 4 MeV and leaves with a scattering angle of 170 degrees and an energy of 3 MeV then $K = (3 \text{ MeV}) / (4 \text{ MeV}) = .75$ which corresponds to the atomic mass of Iron (Fe).

After millions of alpha particles collide with the surface of the sample being analyzed, there is a good distribution of collisions with the variety of concentrations of atoms as a function of depth. This distribution is used to calculate the composition of corrosion layers or to determine how far a certain element has penetrated into a surface. This technique is used today to do surface analysis on a broad spectrum of materials.

cite



Full cite please

much earlier

A sample data collection is displayed below:

Acknowledgment
see YAP or SACL or Bochicchio/Deayer

690 ms.

Supplemental Materials

For a flash animation of expected results and actual results go to:

<http://www.mhe.com/physsci/chemistry/essentialchemistry/flash/rutherford14.swf>

From **Essential Chemistry** by Raymond Chang

For a mind map of concepts related to Rutherford's experiments

<http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html>

From **Hyperphysics** by Carl R. Nave

spell check & proofread allowed

References