If the standard line isnt straight explain why report example

Environment, Water



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It is worthyto note that a somepercentage of data scattering due to personal error in measurement usually occur. There is a thus the need to make a straight line of best fit. There are times when deviations from linearity occurwithout any known exceptions to the Beer-Lambert law. The deviationsfrom linearity could arise as a result of the kind of chemical association, high concentrations of the analyte, and how the instrument is calibrated. Also, a change in the refractive index of the analytical system may lead to deviationssuch changes will only matter in high-absorbance differential measurements. Many substances obey the Beer-Lambert law when at a moderate and even lowconcentration, that explains why dilute solutions has better linearity and whyhigher concentrations result in deviations.

Why do we need to add ammonia?

It is added to enhance the color intensity of the solution. Ammonia is needed so as to make the blue coloration of the solution deeper.

Can we use water to dissolve ore samples?

No, we cannot. Due to the fact that metal sulfides undergo oxidation reaction in the presence of water to form sulfuric acid

Possible errors and limitations

Data scatter usually occurs due to personal errors in measurements

The linearity of the Beer-Lambert law is limited by chemical and instrumental

factors

Changes in refractive index at high analyte concentration

Scattering of lights as a result of particles in the sample

Non-monochromatic radiation might have occurred

Does the Ore given have enough copper to be considered economically

viable?

Yes, it is. This is owing to the fact that a deposit of copper-bearing minerals

is classed as an ore reserve if there are sufficient quantities and

concentrations of minerals to be extracted at a profit. Once a copper deposit

contain from 0. 5 to 6 percent copper it is considered economically viable.

Reference

J. D. J. Ingle and S. R. Crouch, Spectrochemical Analysis, Prentice Hall, New Jersey (1988)