Q1:

Home-work

Compound X that possess molarity absorption 2.45x103 L.mol-1.cm-1 at λmax450 nm .what is the concentration for this compound X when lose Radiation power about 25% in the absorption pass cell light at 1.0 cm ?

Q2:

A solution from potassium permanganate (KMnO4) with concentration 1.28x10-4M that possess transmittance 0.50 at the wave length 525 nm in the absorption cell length 1.0 cm .

1- what the absorption for this solution ?

2- when a doubly concentration for this solution . what are the absorption and transmittance ?

3- what is the concentration which have transmittance 0.75 in this cell ?

4- what is pass cell length ? which gave exactly precision for concentration that remind at once state .

Q3:

A solution 2x10-4 M possess absorption 1.0 in the Pass cell light 1.0cm at λmax 320 nm .

1- what is the absorption constant ?

2- what is the apart of dropping light ? which transmittance during pass cell light .

3- what is the part of transmitted light during a solution with concentration 4.0x10-4 M ?

Q4:

A sample weighing 500 mg that containing color component X . dissolve it and dilution into 500 ml . The absorption for amount solution measured in λmax 400 nm in the pass cell 1.0 cm equal 0.90 . when dissolve 10 mg from component X in same solution , cell and λmax. The absorption was found 0.30 . what is a percentage for component X in first sample ?

Q5:

You have unknown concentration(Cx) solution from Potassium permanganate giving absorption (Ax= 0.5) at λmax 520 nm . when the standard solution from Potassium permanganate having a concentration (Cs=1.0x10-4 M) giving absorption (As=0.20) at the same λmax . what is the unknown concentration (Cx) ?