

Chromatography of food dye assignment



**ASSIGN
BUSTER**

Incorrect solution strength could have not included enough Of the component needed to create the proper reaction with the food dyes, preventing the separation of components in the dye. Insufficient development time would mean that the reaction was not able to be completed fully so the dye components may not have risen up the solvent front to their proper height or may not have been able to completely separate. I do not believe any of these sources of error occurred in our experiment. There was no dye contamination since none of the dyes bled over into the other lanes.

The solution seemed to be the correct concentration since the dyes did react with the solvent and did move up with the solvent and separated in the process. As well the chromatography paper was left in the solvent for a sufficient amount of time and was able to rise up to the desired height. Conclusion: When observing the spots created by the known dyes we can apply these known patterns to the unknown mixtures to determine their components. For Mixture A it appears to have two components to the mixture, as to the dyes involved it is still unknown since it does not match any of the known dyes.

The only known dye I could guess as to be one of the components would be egg yellow. For Mixture B it appears to have 3 components to the mixture. The components it contains appears to be pink, green and blue. The first dot seems to be the base dot for red slightly tinted by the base dot for green. Then follow by the yellow component of the green dye, then the blue and the red with the small yellow component at the very top. So in summary Mixture

A contains two components though still unknowns and mixture B contains three components composed of pink, green and blue.