

## CHAPPER V

### CONCLUSION

The study of color formation of sulfacetamide under light stress, shows that the degree of color formation from sulfacetamide sodium solution changes from colorless to yellowish brown is varied to the time of exposure to light.

Color formation can be measured by comparing the color with standard caramel color solutions at different concentrations and/or by measuring the absorbance at the wavelength of 450 nm.

The color formation also varies to the pH of the solution, the more acidic pH shows higher color formation rate.

To adjust the pH of sulfacetamide solution with phosphate buffer, it is found that the buffer used has an accelerating effect to the color formation.

Antioxidants, sodium thiosulfate and sodium metabisulfite can retard the color formation and the retardation effect is varied to the amount used. Sodium thiosulfate shows good retardation effect of color formation at all time. Sodium metabisulfite retards the color formation at the first period of exposure to light, after this the color formation is accelerated to even more than of pure sulfacetamide sodium solution

The use of chelating agent (disodium EDTA) alone in sulfacetamide sodium solution has little effect on the color formation. However when it is used in combination with antioxidants, it shows better color retardation effect.

For 10% sulfacetamide sodium eye drop it is found from this study that the most suitable formular should be:

Sulfacetamide sodium 10%

Sodium thiosulfate 0.1%

Disodium EDTA 0.05%

The pH of the solution is 8.0 which is acceptable for eye-solution.

The solution is good in retarding of the color formation.

The use of amber glass ampules can retard the color formation due to light stress even further.



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