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A Study on combined effect of Methylene blue and Sodium anthraquinone-2- sulphonate on inactivation efficiency of *Escherichia coli* and *Enterococcus hirae*

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Abstract : In this study, the effect on photoinactivation efficiency of photosensitizers MB and SAQS is studied when applied together for inactivating *Enterococcus hirae* and *Escherichia coli* employing statistically valid full factorial design. Photo inactivation efficiency of MB and SAQS in combination and at pH 9.0 varied in the range of 32.87% - 49.50% for *E. hirae* and in the range of 27.02% - 37.06% for *E. coli*. Statistical analysis of the photo-inactivation results in the form of analysis of variance (ANOVA) and student 't' test revealed significant individual effect of MB on *E. hirae* inactivation but no significant effect on *E. coli* whereas SAQS had no significant effect on both *E. hirae* and *E. coli* inactivation.

Keywords: Photo inactivation, photo sensitizer, methylene blue (MB) and sodium-2-anthraquinone sulphonate.

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