



Does only glucose is responsible for color in Benedict's semi quantitative test

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Abstract:

In undergraduate (MBBS) medical biochemistry practical examination for semi-quantitative estimation of urinary glucose by Benedict's semi-quantitative test, pure glucose solution in distilled water of different concentrations (0.5%, 1%, 1.5% and 2%) are given to students. But each sample gave brick red color instead of expected green, yellow, orange and brick red color.

Keywords: urinary, glucose, Benedicts, semi quantitative test

In undergraduate (MBBS) medical biochemistry practical examination for semi-quantitative estimation of urinary glucose by Benedict's semi-quantitative test, pure glucose solution in distilled water of different concentrations (0.5%, 1%, 1.5% and 2%) are given to students. But each sample gave brick red color instead of expected green, yellow, orange and brick red color. (Fig. A).

Questions

1. Is there any fault in pure glucose solution or any interference in assay?
2. Are all sample concentrations $\geq 2\%$?
3. How to overcome this problem?

Answer

The range of colors in Benedict's test is not only due to presence of glucose in urine, but also creatinine imparts color to the solution. Pure glucose solution gives brick red color¹ while creatinine gives yellowish tinge to the solution. In the present study, addition of glucose (0.5, 1, 1.5 & 2% respectively) to normal urine or addition of creatinine (final concentration of 0.025%) to pure glucose solution (0.5, 1, 1.5 & 2% respectively) gives green, greenish yellow, yellowish orange and brick red color (Fig. B).

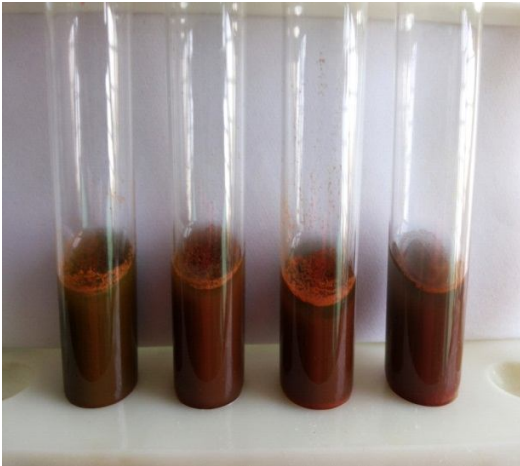


FIGURE (A)

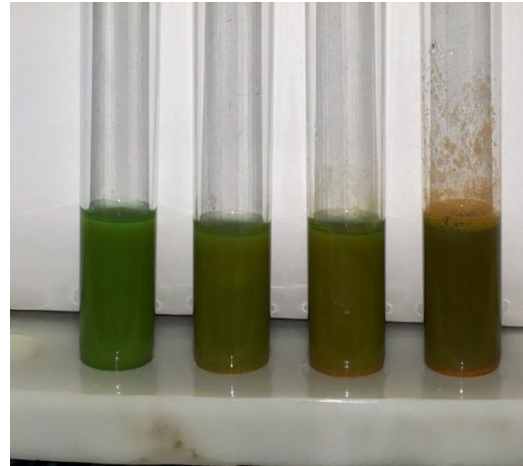


FIGURE (B)

References:

1. Sur BK, Shukla RK, Agashe VS. The role of creatinine and histidine I Benedict's qualitative test for reducing sugar in urine. *J Clin Path* 1972;25:892-895.