IV. Conclusion

Color assessment for urine dipstick reagent result interpretation has been done in this study. To simulate and automate the visual interpretation, a color similarity matching is used. The result shows a consistent color assessment. A better approach of urine dipstick reagent interpretation is proposed for reagents which measure a quantity such as glucose or pH. For this purpose an additional linear interpolation is proposed. This approach achieves a higher measurement precision in urinalysis. Our tests shows this achievements, and it can also determine whether the tested data lies beyond expected color range.

Algorithms and formulas which are introduced in this paper has been considered to be easily implemented in a current mobile platform. A smartphone which is equipped with a camera can use this method to be used as a mobile dipstick urinalysis. A method for automatically recognize each reagent in a dipstick urinalysis and automatically calibrate the recorded color is required.

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