

TABLE III. SHOW THE RESULT OF ΔE_{AB} AFTER APPLY THE QUADRATIC POLYNOMIAL MODEL

ΔE Spectro.	ΔE Camera
21.578	10.111
11.404	7.823
11.969	2.560
11.364	7.198
11.384	2.664
15.056	6.776
15.012	12.271
19.452	9.679
7.201	4.121
8.950	4.059
7.546	8.550
4.911	7.621
18.713	11.645
6.724	2.464
12.540	10.680
1.288	9.712
7.833	4.825
23.263	15.847
22.912	15.338
11.807	4.684
8.356	2.086
8.677	2.089
12.611	2.456
15.426	5.371

IV. CONCLUSION

This paper presents a simple method that uses a digital camera to measure color, and the Matlab program to transform color space. The term “measure” means that the digital camera is used to obtain the color values of the pixels on the “Color Bar”. The term “analyze” means that Matlab is used to manipulate those color values to obtain color distribution, averages, and so on. With a proper calibration between a digital camera and the standard spectrophotometer, the accuracy of the color measurement can be ensured. A modern digital camera can be operated at high speed; hence it overcomes the speed limitation of using the standard spectrophotometer in monitoring process of the printed banknotes. Therefore, a continuous monitoring and correcting of the printed banknotes is possible using the proposed method.

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