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Abstract

Virtual instrumentation is a modern concept in the field of instrumentation design technology. In the present work, simple and inexpensive signal processing circuit is designed in our laboratory, using off-the-shelf components, to amplify signal received from glass electrode. The designed prototype consists of an USB based data acquisition card 4711, procured from Advantech, interfaced to the IBM compatible PC, operated under windows 7 operating system. User

friendly data acquisition software is developed in VB. NET at the back end as well as at the front end to accomplish data acquisition, parameter setting, file manipulation, control and synchronization of the other functions involved in the measurements. The GUI control panel directly displays the pH value of the liquid under test at a given temperature. The designed pH measurement system has been tested in our laboratory and found to be much easy to operate, reliable, powerful and effective as compared to that of the conventional pH measurement instruments.

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Index Terms

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Keywords