



### 基于LabVIEW7 Express电导法测定弱酸离解常数的虚拟仪器

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Virtual instrument based on LabVIEW 7 express for determinating dissociation constant of weak acid by conductivity

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摘要 利用自制的调理电路,将常规的电导率仪、温度传感器与计算机连接,运用Lab VIEW 7 Express开发了测定一元弱酸离解常数的虚拟仪器.该虚拟仪器不仅具有界面友好、操作简单、功能易扩展等优点,还具有温度实时补偿的功能,实现了实验数据自动采集、实时显示、数据处理和存储,避免了常规人工操作的繁琐和人为误差,提高了测试结果的准确性、重现性,扩展了传统仪器的功能.应用实例表明,测试结果令人满意.

关键词: LabVIEW 电导法 离解常数 虚拟仪器

Abstract: The virtual instrument based on LabVIEW 7 Express for determinating the dissociation constant of monoatomic weak acid was developed by connecting the general conductivity meter and temperature sensor with computer by homemade adjusting circuit.The virtual instrument not only has advantages of friend interface,easy operation,easy expandability of function,etc,but also has the function of real-time temperature compensation.The automatical acquiring,real-time displaying,processing and saving of experimental data are realized.By this method,the complexity of manual operating and personal error are avoided;the accuracy and repeatability of testing result are improved;the function of traditional instrument is also expanded.The application results are satisfactory.

Key words: LabVIEW electric conductivity dissociation constant virtual instrument

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