

为什么我将 EC 笔放在空中时，LCD 上显示 3~6uS?

问：我买了一个新的电导笔型号#8351。我已经按照手册上的说明对其进行了校准。校准范围为 12.88 毫秒，范围 0 - 19.99 毫秒并手动更改显示从自动量程到手动量程 2 (0~19.99mS)

当我打开笔并将它放在空中时，我在屏幕上看到的是 uS 3、4、5 或 6 以及屏幕底部的温度。数字 3,4,5,6 各不相同。它们的变化不是那么快，但它们会一直变化，直到它稳定在 5 或 6。

我不认为在读取空气的电导率是以这么低的电压，而且笔的负极和正极端子要这么远处。

在开始测试前，笔在空中举起来不是应该读数为 0 吗？

回答：

在空气中看到 3~6 uS 是正常的，这是校准引起的。

这支笔的精度是 1%+1 位 (0.01mS)，这是什么意思？它的意思是在校准高浓度时，这是正常的，可能会导致 0.01mS (10uS) 差异，这是无法避免的，因为所有设计都有性能限制。

校准高浓度的原因是为了测量高浓度缓冲液。在高浓度缓冲液中，10uS (0.01mS) 几乎没有，用户感觉不到。但现在您手动切换到范围 2 并放入空气中。所以，总的来说，你所看到的(3~6uS)是高浓度校准后很常见的情况缓冲。

Q: I bought a new Conductivity Pen Model# 8351.

I have calibrated it to as per the instructions on the manual. Calibration is to a 12.88 mS for range 0 - 19,99mS. And manually change the display from auto ranging to manual range 2 (0~19.99mS)

When I turn the pen on and just have it in the air, what I get on the screen is uS 3, 4, 5 or 6 and the temperature at the bottom of the screen. The numbers 3,4,5,6 vary. They change not so fast but they change until it settles at either 5 or 6.

I do not think that the pen is reading the conductivity of the air with so low voltage and the negative and positive terminals of the pen being at the distance that they are.

Shouldn't the pen be reading 0 while holding it in the air before use in a solution?

Answer:

To see 3~6 uS to see value in air is normal and that is caused by calibration.

The accuracy of this pen is 1% + 1 digit (0.01mS), What does this mean? It means while you calibrate high concentration, it is normal and possible to cause 0.01mS (10uS) variance, this is not avoidable since all design has a performance limitation.

The reason to calibrate high concentration is for measuring high concentration buffer. In high concentration buffer, 10uS (0.01mS) is nearly nothing, user won't feel it. But now you manually switch to range 2 and put in air. So, in overall, what you see (3~6uS) is a very common situation after the pen is calibrated by high concentration buffer.