

我可以 使用 35ppt NaCL 缓冲液来校准 8372 吗？

8372 没有校准解决方案，所以当我购买它时，我还买了一个 NaCl 标准溶液（35ppt 盐度，1.026sg，53 uS/cm），因为我用的是盐度笔测量我的盐水水族馆中的盐分，35ppt，1.026sg。

当我收到盐度笔并阅读使用明时，它说用盐度计校准的时需要像 KCl 这类溶液。现在我很困惑，因为这支笔据说没有导电能力。你能说明一下吗？我可以 使用 35ppt 溶液校准吗？如果是这样，我该如何做？例如，是否需要保留我认为是 P3.3 的 1413uS 默认值设定。

如果我必须用 KCl 溶液进行校准，这使用在我的盐水水族馆是否能提供正确的读数？

回答：

8372 盐度笔的测量原理是测量液体的导电值，再按一定的换算系数换算成盐度值。在 8372 型号中，转换系数是假设被测液体是氯化钠盐溶液，不是 KCL 或 NaCL+KCL。从下表中，您可能会稍微了解转换系数因液体和温度而不同。这张表是在手册的第 16 页。

### Appendix A: Conductivity to TDS Conversion Factors

| Conductivity at 25°C | TDS KCl   |        | TDS NaCl  |        | TDS 442   |        |
|----------------------|-----------|--------|-----------|--------|-----------|--------|
|                      | ppm value | Factor | ppm value | Factor | ppm value | Factor |
| 23 μS                | 11.6      | 0.5043 | 10.7      | 0.4652 | 14.74     | 0.6409 |
| 84 μS                | 40.38     | 0.4807 | 38.04     | 0.4529 | 50.5      | 0.6012 |
| 447 μS               | 225.6     | 0.5047 | 215.5     | 0.4822 | 300       | 0.6712 |
| 1413 μS              | 744.7     | 0.527  | 702.1     | 0.4969 | 1000      | 0.7078 |
| 1500 μS              | 757.1     | 0.5047 | 737.1     | 0.4914 | 1050      | 0.7    |
| 2070 μS              | 1045      | 0.5048 | 1041      | 0.5029 | 1500      | 0.7246 |
| 2764 μS              | 1382      | 0.5    | 1414.8    | 0.5119 | 2062.7    | 0.7463 |
| 8974 μS              | 5101      | 0.5685 | 4487      | 0.5    | 7608      | 0.8478 |
| 12,880 μS            | 7447      | 0.5782 | 7230      | 0.5613 | 11,367    | 0.8825 |
| 15,000 μS            | 8759      | 0.5839 | 8532      | 0.5688 | 13,455    | 0.897  |
| 80mS                 | 52,168    | 0.6521 | 48,384    | 0.6048 | 79,688    | 0.9961 |

442: 40% sodium sulfate, 40% sodium bicarbonate and 20% sodium chloride.

附录 A: TDS 转换系数的电导率

442: 40%硫酸钠，40%碳酸氢钠以及 20%氯化钠

8372 的校准模式仅支持电导率值。幸运的是，因为您的校准 NaCl 缓冲液清楚地告诉您它是 NaCl 35ppt 盐度，1.026sg，53 uS/cm，您仍然可以使用它，但为了有好结果，请控制您的校准缓冲液在 25°C 左右。

请按照手册第 11 页进行校准程序，如果您看到显示值不是 53uS/cm 而是类似 51 或 54，您可以按向上或向下键将值调整为 53。

希望以上能给您帮助并享受海水水族馆乐趣。

**Q: Can I use 35ppt NaCl buffer to calibrate 8372?**

8372 came with no calibration solution so when I purchased it I also bought a standard solution of **NaCl (35ppt salinity, 1.026sg, 53 uS/cm)** because I'm using the salinity pen to measure the salt in my saltwater aquarium which is 35ppt, 1.026sg.

When I received my salinity pen and read the instructions it said to calibrate with a KCl solution like. Now I'm confused because this pen supposedly doesn't have the ability to do conductivity. Can you please clarify? Can I use the 35ppt solution to calibrate and if so how do I go about doing this? For example do I leave the default setting of 1413uS which I think is P3.3.

If I have to calibrate with a solution of KCl will this give proper readings for my saltwater aquarium?

**Answer:**

The measuring principle of 8372 salinity pen is to measure conductivity value of liquid and convert the value into salinity value according to certain conversion factor. In model 8372, the conversion factor is to assume the measured liquid is NaCl salt solution, not KCl or NaCl+KCl. From below table, you may slightly understand the conversion factor is different based on different liquid and temperature. This table is in page 16 of manual.

**Appendix A: Conductivity to TDS Conversion Factors**

| Conductivity at 25 °C | TDS KCl   |        | TDS NaCl  |        | TDS 442   |        |
|-----------------------|-----------|--------|-----------|--------|-----------|--------|
|                       | ppm value | Factor | ppm value | Factor | ppm value | Factor |
| 23 μS                 | 11.6      | 0.5043 | 10.7      | 0.4652 | 14.74     | 0.6409 |
| 84 μS                 | 40.38     | 0.4807 | 38.04     | 0.4529 | 50.5      | 0.6012 |
| 447 μS                | 225.6     | 0.5047 | 215.5     | 0.4822 | 300       | 0.6712 |
| 1413 μS               | 744.7     | 0.527  | 702.1     | 0.4969 | 1000      | 0.7078 |
| 1500 μS               | 757.1     | 0.5047 | 737.1     | 0.4914 | 1050      | 0.7    |
| 2070 μS               | 1045      | 0.5048 | 1041      | 0.5029 | 1500      | 0.7246 |
| 2764 μS               | 1382      | 0.5    | 1414.8    | 0.5119 | 2062.7    | 0.7463 |
| 8974 μS               | 5101      | 0.5685 | 4487      | 0.5    | 7608      | 0.8478 |
| 12,880 μS             | 7447      | 0.5782 | 7230      | 0.5613 | 11,367    | 0.8825 |
| 15,000 μS             | 8759      | 0.5839 | 8532      | 0.5688 | 13,455    | 0.897  |
| 80mS                  | 52,168    | 0.6521 | 48,384    | 0.6048 | 79,688    | 0.9961 |

**442: 40% sodium sulfate, 40% sodium bicarbonate and 20% sodium chloride.**

The calibration mode of model 8372 support conductivity value only. Fortunately since your calibration NaCl buffer clearly tell you it is NaCl 35ppt salinity, 1.026sg, 53 uS/cm, you still can use it but please control your calibration buffer at around 25°C for good result.

Please follow the page 11 of manual to conduct your calibration procedure, if you see the displayed value is not 53uS/cm but something like 51 or 54, you may press up or down key to adjust the value to 53.

Hope above help and enjoy your saltwater aquarium fun.