**什么是pH标度**

pH测量是一种相对测量，它仅仅指示标准溶液与未知溶液之间的pH差别，实际测量时，需要用标准缓冲溶液定期进行校准。因此，为了达到量值的一致，必须建立pH标度。pH标度范围定为0~14pH。pH标度的量值由基准缓冲溶液的pHs值确定。因此，pH标度的含义可表达为：根据pH定义，在0~14pH范围内选择若干个pH缓冲溶液作为pH标度的固定点，并且采用当代技术能达到的最准确的方法测定它们的pHS值。国际上有二种pH标度，即多种基准pH标度和单种基准pH标度，中国采用多种基准pHS标度。六种基准缓冲溶液0~95℃的pHs值见表(1)。

表(1) 六种基准缓冲溶液的pHs值

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 温度，℃ | B1 | B3 | B4 | B6 | B9 | B12 |
| 0 | 1.668 | ---- | 4.006 | 6.981 | 9.458 | 13.416 |
| 5 | 1.669 | ---- | 3.999 | 6.949 | 9.391 | 13.210 |
| 10 | 1.671 | ---- | 3.996 | 6.921 | 9.330 | 13.011 |
| 15 | 1.673 | ---- | 3.996 | 6.898 | 9.276 | 12.820 |
| 20 | 1.676 | ---- | 3.998 | 6.879 | 9.226 | 12.637 |
| 25 | 1.680 | 3.559 | 4.003 | 6.864 | 9.182 | 12.460 |
| 30 | 1.684 | 3.551 | 4.010 | 6.852 | 9.142 | 12.292 |
| 35 | 1.688 | 3.547 | 4.019 | 6.844 | 9.105 | 12.130 |
| 40 | 1.694 | 3.547 | 4.029 | 6.838 | 9.072 | 11.975 |
| 45 | 1.700 | 3.550 | 4.042 | 6.834 | 9.042 | 11.828 |
| 50 | 1.706 | 3.555 | 4.055 | 6.833 | 9.015 | 11.697 |
| 55 | 1.713 | 3.563 | 4.070 | 6.834 | 8.990 | 11.553 |
| 60 | 1.721 | 3.573 | 4.087 | 6.837 | 8.968 | 11.426 |
| 70 | 1.739 | 3.596 | 4.122 | 6.847 | 8.926 | ---- |
| 80 | 1.759 | 3.622 | 4.161 | 6.862 | 8.890 | ---- |
| 90 | 1.782 | 3.648 | 4.203 | 6.881 | 8.856 | ---- |
| 95 | 1.795 | 3.660 | 4.224 | 6.891 | 8.839 | ---- |