

High pH buffer – pH range 2.6 –7.6

Prepare 0.1M solutions of sodium carbonate ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) (28.62g/l) and sodium hydrogen carbonate (NaHCO_3) (8.4g/l)

Mix these in the volumes shown in the table.

Or dissolve the masses shown and make up to 100cm^3 with water

| pH | | Na_2CO_3 | | NaHCO_3 | |
|-----------------------|-----------------------|---|------------------------------|---|------------------------------|
| at 20°C | at 37°C | Volume of 0.1M solution (cm^3) | Mass in 100cm^3 (g) | Volume of 0.2M solution (cm^3) | Mass in 100cm^3 (g) |
| 9.2 | 8.8 | 10 | 0.29 | 90 | 0.76 |
| 9.4 | 9.1 | 20 | 0.57 | 80 | 0.67 |
| 9.5 | 9.4 | 30 | 0.86 | 70 | 0.59 |
| 9.8 | 9.5 | 40 | 1.14 | 60 | 0.50 |
| 9.9 | 9.7 | 50 | 1.43 | 50 | 0.42 |
| 10.1 | 9.9 | 60 | 1.72 | 40 | 0.34 |
| 10.3 | 10.1 | 70 | 2.00 | 30 | 0.25 |
| 10.5 | 10.3 | 80 | 2.29 | 20 | 0.17 |
| 10.8 | 10.6 | 90 | 2.58 | 10 | 0.08 |

Delroy & King, Biochem. J. 39, 245 (1945)