

0.1M Citric acid-Sodium citrate buffer - pH range 3.0 – 6.2

Prepare a 0.1M solution of citric acid monohydrate, $C_6H_8O_7 \cdot H_2O$ (21.01g/l) and a 0.1M solution of trisodium citrate dihydrate, $C_6H_5O_7Na_3 \cdot 2H_2O$ (29.41g/l). Mix the volumes shown in the table.

Or dissolve the masses shown and make up to 100cm³ with water

| pH | 0.1M citric acid (cm ³) | | 0.1M trisodium citrate (cm ³) | |
|-----|--|--------------------------------|--|--------------------------------|
| | Volume of 0.1M solution (cm ³) | Mass in 100cm ³ (g) | Volume of 0.1M solution (cm ³) | Mass in 100cm ³ (g) |
| 3.0 | 82 | 1.72 | 18 | 0.53 |
| 3.2 | 77.5 | 1.63 | 22.5 | 0.66 |
| 3.4 | 73 | 1.53 | 27 | 0.79 |
| 3.6 | 68.5 | 1.44 | 31.5 | 0.93 |
| 3.8 | 63.5 | 1.33 | 36.5 | 1.07 |
| 4.0 | 59 | 1.24 | 41 | 1.21 |
| 4.2 | 54 | 1.13 | 46 | 1.35 |
| 4.4 | 49.5 | 1.04 | 50.5 | 1.49 |
| 4.6 | 44.5 | 0.93 | 55.5 | 1.63 |
| 4.8 | 40 | 0.84 | 60 | 1.76 |
| 5.0 | 35 | 0.74 | 65 | 1.91 |
| 5.2 | 30.5 | 0.64 | 69.5 | 2.04 |
| 5.4 | 25.5 | 0.54 | 74.5 | 2.19 |
| 5.6 | 21 | 0.44 | 79 | 2.32 |
| 5.8 | 16 | 0.34 | 84 | 2.47 |
| 6.0 | 11.5 | 0.24 | 88.5 | 2.60 |
| 6.2 | 8 | 0.17 | 92 | 2.71 |