

表 1. 各种常用缓冲溶液的缓冲范围

| Buffer | pK_a at 20 °C | $\Delta pK_a / ^\circ C$ | pH range | Solubility in water at 0 °C |
|-------------------------|-----------------|--------------------------|-----------------|-----------------------------|
| MES | 6.15 | -0.011 | 5.5-6.7 | 0.65 M |
| Bis-tris methane | 6.60 | - | 5.8-7.2 | |
| ADA | 6.62 | -0.011 | 6.0-7.2 | - |
| ACES | 6.76 | - | 6.1-7.5 | |
| Bis-tris propane | 6.80 | - | 6.3-9.5 | - |
| PIPES | 6.82 | -0.0085 | 6.1-7.5 | - |
| MOPSO | 6.95 | -0.015 | 6.2-7.6 | 0.75 M |
| MOPS | 7.15 | -0.013 | 6.5-7.9 | 3.0 M |
| BES | 7.17 | -0.016 | 6.4-7.8 | 3.2 M |
| TES | 7.5 | -0.020 | 6.8-8.2 | 2.6 M |
| HEPES | 7.55 | -0.014 | 6.8-8.2 | 2.25 M |
| DIPSO | 7.6 | -0.015 | 7.0-8.2 | 0.24 M |
| TAPSO | 7.6 | -0.018 | 7.0-8.2 | 1.0 M |
| TEA | 7.8 | - | 7.3-8.3 | - |
| HEPPS | 8.1 | -0.015 | 7.3-8.7 | Large |
| Tricine | 8.15 | -0.021 | 7.4-8.8 | 0.8 M |
| Tris | 8.2 | - | 7.0-9.1 | - |
| Bicine | 8.35 | -0.018 | 7.6-9.0 | 1.1 M |
| TAPS | 8.55 | -0.027 | 7.7-9.1 | Large |
| AMP | 9.7 | - | 9.0-10.5 | - |
| AMPSO | 9.0 | - | 8.3-9.7 | - |
| CAPSO | 9.6 | - | 8.9-10.3 | - |
| CAPS | 10.4 | - | 9.7-11.1 | - |