



Orion ORP Standard Values at Temperature for Orion Electrodes and Others

Orion 967901 (475 mL)
Orion 967961 (60 mL)

| Orion ORP Standard - Values for Orion Electrodes | | Orion | Orion | Orion |
|--|---------|--------|--------|---------|
| | | 9180 | 9179 | 9180 |
| | | 9678 | | 9678 |
| | | 9778 | | 9778 |
| Orion Fill Solution Used | | 900011 | Gel | 900001* |
| Temp, C | Eh (mV) | E (mV) | E (mV) | E (mV) |
| 0 | 438 | 218 | 222 | 176 |
| 5 | 435 | 218 | 223 | 176 |
| 10 | 431 | 219 | 223 | 175 |
| 15 | 428 | 219 | 224 | 175 |
| 20 | 424 | 219 | 224 | 174 |
| 25 | 420 | 220 | 224 | 173 |
| 30 | 415 | 220 | 224 | 172 |
| 35 | 411 | 220 | 224 | 171 |
| 40 | 406 | 220 | 224 | 170 |
| 45 | 401 | 220 | 224 | 169 |
| 50 | 396 | 220 | 224 | 167 |
| * Using 900001 fill solution for dilute samples (total ionic strength < 0.2M). | | | | |

| Orion ORP Standard - Universal Values | | | | | | |
|---------------------------------------|---------|----------|---------|-----------|-----------|-----------|
| Electrode Reference | Ag/AgCl | Ag/AgCl | Ag/AgCl | Ag/AgCl | Ag/AgCl | Calomel |
| Fill Solution Used | 3M KCl | 3.5M KCl | 4M KCl | sat'd KCl | sat'd KCl | sat'd KCl |
| Temp, C | Eh (mV) | E (mV) | E (mV) | E (mV) | E (mV) | E (mV) |
| 0 | 438 | | | 218 | | |
| 5 | 435 | | | 218 | | |
| 10 | 431 | 211 | 216 | 219 | 219 | 177 |
| 15 | 428 | 212 | 216 | 219 | 219 | 177 |
| 20 | 424 | 211 | 216 | 219 | 220 | 176 |
| 25 | 420 | 211 | 215 | 220 | 221 | 176 |
| 30 | 415 | 210 | 214 | 220 | 221 | 174 |
| 35 | 411 | 209 | 214 | 220 | 222 | 173 |
| 40 | 406 | 208 | 213 | 220 | 222 | 172 |
| 45 | 401 | | | 220 | | |
| 50 | 396 | | | 220 | | |
| Ag/AgCl - silver/silver chloride | | | | | | |



Orion ORP Standard

Cat. No. 967901 or 967961

mV versus Temperature Tables for Orion Electrode Systems

| degrees C | Orion Electrode Compared to Normal/Standard Hydrogen Electrode (NHE/SHE) | Orion Electrode with Cat. No. 900011 Filling Solution System | Orion Electrode with Cat. No. 900001 Filling Solution System |
|-----------|--|--|--|
| 0 | 438 | 218 | 176 |
| 1 | 437 | 218 | 176 |
| 2 | 437 | 218 | 176 |
| 3 | 436 | 218 | 176 |
| 4 | 435 | 218 | 176 |
| 5 | 435 | 218 | 176 |
| 6 | 434 | 218 | 176 |
| 7 | 433 | 218 | 176 |
| 8 | 433 | 218 | 175 |
| 9 | 432 | 219 | 175 |
| 10 | 431 | 219 | 175 |
| 11 | 430 | 219 | 175 |
| 12 | 430 | 219 | 175 |
| 13 | 429 | 219 | 175 |
| 14 | 428 | 219 | 175 |
| 15 | 428 | 219 | 175 |
| 16 | 427 | 219 | 174 |
| 17 | 426 | 219 | 174 |
| 18 | 425 | 219 | 174 |
| 19 | 424 | 219 | 174 |
| 20 | 424 | 219 | 174 |
| 21 | 423 | 219 | 174 |
| 22 | 422 | 219 | 174 |
| 23 | 421 | 219 | 173 |
| 24 | 420 | 220 | 173 |
| 25 | 420 | 220 | 173 |
| 26 | 419 | 220 | 173 |
| 27 | 418 | 220 | 173 |
| 28 | 417 | 220 | 172 |
| 29 | 416 | 220 | 172 |
| 30 | 415 | 220 | 172 |
| 31 | 414 | 220 | 172 |
| 32 | 413 | 220 | 172 |
| 33 | 412 | 220 | 171 |
| 34 | 412 | 220 | 171 |
| 35 | 411 | 220 | 171 |
| 36 | 410 | 220 | 171 |
| 37 | 409 | 220 | 171 |
| 38 | 408 | 220 | 170 |