**Supplemental Digital Content 1, Supplementary Table 1**: Summary of the assay performance parameters for hydromorphone and cebranopadol

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| **Parameter** | **Hydromorphone** | **Cebranopadol** |
| Calibration range (pg/mL) | 50 to 50000 | 2.00 to 500 |
| LLOQ (pg/mL) | 50 | 2.00 |
| r2 (mean) | 0.997 | 0.997 |
| % CV at the LLOQ | 6.6 | 7.0 |
| Accuracy (%bias) at the LLOQ | 1.0 | 1.1 |
| % CV of QCs | ≤8.0 | ≤8.7 |
| Accuracy (%bias) of QCs | 0.4 to 5.0 | -1.4 to 2.5 |

CV = coefficient of variation; LLOQ = lower limit of quantification; QC = quality control; r2 = coefficient of determination.