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| **Analyte(s)** | **Indication** | **Matrices** | **Prep** | **Solid Phase** | **E-M** | **Interf** | **IS** | **ME (%)** | **RT (min)** | **LLOQ** | **Ref** |
| Nimorazole | Radiosensitizer | r-plasma | PPT | C18 (50×4.6mm, 2.7µm) | ISO | ESI(+) | AN | NEG | 1.5 | 0.25 ng/mL | 4 |
| JI-101 | Multi-kinase inhibitor | h-plasma  h-urine | SPE | C18 (50×2.1 mm, 5 µm) | ISO | ESI(+) | AN | 98 | 2.0 | 1.57 ng/mL  0.97 ng/mL | 5 |
| LBH589 | HDAC inhibitor | m-plasma  m- tissue | LLE | C18 (50×2.1mm, 1.7µm)  UPLC | ISO | ESI(+) | AN | NEG | 2.0 | 2.5 ng/mL  35.7 ng/mg | 6 |
| Vinorelbine | Vinca alkaloid | h-plasma | LLE | C18 (50×2.1mm, 3µm) | ISO | ESI(+) | AN | 95.8-106.7 | 2.0 | 0.1 ng/mL | 7 |
| Cerivastatin | Inhibitor of HMG-CoA reductase | h-plasma | LLE | C18 (100×3mm, 3.5µm) | ISO | ESI(+) | AN | NEG | 2.0 | 0.01 ng/mL | 8 |
| Osimertinib | Tyrosine kinase inhibitor | r-plasma | PPT | C18 (50×2.1 mm, 3 µm) | GRA | ESI(+) | AN | 90.1-97.3 | 2.5 | 1 ng/mL | 9 |
| Anastrazole | Aromatase inhibitor | h-plasma | SPE | C18 (50×4.6 mm, 5 μm)  UPLC | ISO | ESI(+) | AN | 97.5 | 2.5 | 0.3 ng/mL | 10 |
| SZ-685C | Marine anticancer agent | r-plasma | LLE | C18 (100×2.1mm,3µm) | ISO | ESI(-) | AN | 94.3 | 2.5 | 5 ng/mL | 11 |
| CLR1401 | Anticancer candidate | r-plasma | LLE | C18 (50×3.0mm, 5µm) | GRA | ESI(+) | IL | 80.0-86.0 | 2.8 | 2 ng/mL | 12 |
| Veliparib (ABT-888) | PARP-1 & 2 inhibitor | h-plasma | PPT | C18 (100×2.1mm,3µm) | ISO | ESI(+) | AN | UNK | 3.0 | 5 nmol/L | 13 |
| Docetaxel | Anticancer drug | h-plasma | LLE | C8 (50×2.1mm, 5µm) | ISO | ESI(+) | AN | UNK | 3.0 | 5 ng/mL | 14 |
| Aucubin | Natural compound | r-plasma | PPT | DiamonsilW C18(2) | ISO | ESI(+) | AN | 90.8-91.0 | 3.0 | 10 ng/mL | 15 |
| HCQ | Inhibitor of autophagy | h-blood | PPT | C8 (50×2.1mm, 5µm) | ISO | ESI(+) | IL | 93.0-100.6 | 3.0 | 5ng/mL | 16 |
| Sunitinib | Tyrosine kinase inhibitor | h-plasma | LLE | C18 (50×2.1mm, 3.5µm) | ISO | ESI(+) | AN | UNK | 3.0 | 0.2 ng/mL | 17 |
| DZNep | Methylation inhibitor | m-plasma | LLE | HILIC (100×2.1 mm, 1.7µm) UPLC | GRA | ESI(+) | AN | 84-87 | 3.0 | 5 ng/mL | 18 |
| SN-38 | Anticancer drug | h-plasma | PPT | C18(50×2.0mm, 4µm) | GRA | ESI(+) | AN | UNK | 3.0 | 0.05 ng/mL | 19 |
| Vincristine | Anticancer drug | h-plasma | PPT | C18 (50×2.1mm, 5µm) | ISO | APCI(+) | AN | UNK | 3.0 | 0.1 ng/mL | 20 |
| MS-275 | HDAC inhibitor | h-plasma | LLE | C18(50×2.1 mm, 3.5μm) | GRA | ESI(+) | AN | UNK | 3.0 | 0.5 ng/mL | 21 |
| trans-resveratrol | Natural compound | m-plasma  m-brain | LLE | C18 (100×1 mm, 5 μm) | ISO | ESI(-) | AN | 93.8-100.6 | 3.0 | 5 ng/mL | 22 |
| ZD6474 | Tyrosine kinase inhibitor | h-plasma  h-fluid | LLE | C18(50×2.1 mm, 2.6µm) | ISO | ESI(+) | IL | 98.0 | 3.0 | 0.25 ng/mL  0.25 ng/mL | 23 |
| Crizotinib | Tyrosine kinase inhibitor | r-plasma | PPT | Zorbax XDB C18  (2.1 × 50 mm, 3.5 μm) | GRA | ESI(+) | AN | 94.3 - 96.2 | 3.5 | 1 ng/mL | 24 |
| cabozantinib | Tyrosine kinase inhibitor | r-plasma | LLE | C18 (50 × 2 mm, 5 μm) | ISO | ESI(+) | AN | 105-115 | 3.5 | 0.5 ng/mL | 25 |
| KPS-A | Natural compound | r-plasma | PPT | C18(2.1×50 mm, 3.5μm) | GRA | ESI(+) | AN | 93-96 | 3.5 | 0.5 ng/mL | 26 |
| Clofarabine  triphosphate | Metabolite of clofarabine | h-PBMC | PPT | CN(100×4.6 mm, 5 μm) | GRA | ESI(+) | AN | 91-105 | 3.5 | 1.25 ng/107 cells | 27 |
| Paclitaxel | Antimicrotubule agent | r-plasma  r-tissue | LLE | C8 (50 × 2.1 mm, 5 μm) | ISO | ESI(+) | IL | 70.9-82.7 | 3.5 | 0.5 ng/mL  1.5 ng/g | 28 |
| EDL-155 | Anticancer agent | r-plasma | PPT | C8 (50×2.1 mm, 3.5μm) | GRA | ESI(+) | AN | 98.6 | 3.5 | 0.1 ng/mL | 29 |
| Henatinib | Kinase inhibitor | h-plasma  h-urine | PPT | C18(50×2.1 mm, 2.5μm) | ISO | ESI(+) | AN | 90.5-100.9 | 3.5 | 0.1 ng/mL  1 ng/mL | 30 |
| Ceritinib | ALK inhibitor | h-plasma  h-brain | PPT | C18 (50×2.1mm, 2.7μm) | GRA | ESI(+) | IL | 92-109 | 3.6 | 1 ng/mL | 31 |
| Methergine | chemosensitizer for cancer | h-plasma | LLE | C18(100×2.1mm,2.7μm) | ISO | ESI(+) | AN | 61-66 | 4.0 | 0.025 ng/mL | 32 |
| Letrozole | Aromatase inhibitor | h-plasma | SPE | C18(100×2.1mm,3.5μm) | ISO | ESI(+) | AN | NEG | 4.0 | 0.25 ng/mL | 33 |
| Deacetyl mycoepoxydiene | Marine anticancer agent | r-plasma | PPT | C18(150×2.1 mm, 5μm) | ISO | ESI(+) | AN | 95.5-97.8 | 4.0 | 5 ng/mL | 34 |
| Sorafenib | Kinase inhibitor | h-plasma | PPT | SymmetryShield RP8  (50 × 2.1 mm, 3.5μm)  (0.1%FA:ACN) | ISO | ESI(+) | IL | 98.6 | 4.0 | 5 ng/mL | 35 |
| QBH-196 | c-Met tyrosine kinase inhibitor | r-plasma | LLE | C18(50 × 2.1mm,2.6µm) | GRA | ESI(+) | AN | 80-115 | 4.0 | 8 ng/mL | 36 |
| Fenretinide | Chemopreventive agent | m-plasma | PPT | C18(50 × 2.1 mm, 5μm) | GRA | APCI(+) | AN | 100.8-108.7 | 4.5 | 0.5 ng/mL | 37 |
| PM01183 | Antineoplastic agent | Animal  plasma | SPE | C18(30 × 2.1 mm, 3μm) | GRA | ESI(+) | IL | 88-103 | 5.0 | 0.1 ng/mL | 38 |
| JCC76 | Antitumor agent | r-plasma | LLE | C18 (40×2.0 mm, 5μm) | ISO | ESI(-) | AN | 90.8-96.9 | 5.0 | 0.3 ng/mL | 39 |
| Megestrol acetate | Hormonal therapy | h-plasma | LLE | C18(50×2.0mm, 3µm) | ISO | ESI(+) | AN | 92.3-95.8 | 5.0 | 1.0 ng/mL | 40 |
| Berbamine | Natural compound | r-plasma | PPT | C18(150×2.0 mm, 5μm) | GRA | ESI(+) | AN | 97.2-98.5 | 5.5 | 1 ng/mL | 41 |
| Peri-plocymarin | potential anti-cancer agent | r-plasma  r-tissue | LLE | C18(2.1×150mm,3.0μm) | ISO | ESI(+) | AN | 95.8-105 | 6.0 | 0.5 ng/mL | 42 |
| ABL | potential anti-cancer agent | r-plasma | PPT | C18(50×4.6 mm, 3.0μm) | ISO | ESI(+) | AN | 104-108 | 6.0 | 1.6 ng/mL | 43 |
| Cisplatin | Anticancer drug | r-tissue | LLE | C18(50×2.1mm, 1.8 μm) | ISO | ESI(+) | AN | 89-104 | 6.0 | 5 ng/mL | 44 |
| EC-18 | Anti-cancer agent | r-plasma  m-plasma | PPT | C18(150×2 mm, 4.0μm) | GRA | ESI(+) | IL | 77.9-89.0 | 7.0 | 50 ng/mL | 45 |
| Z-endoxifen | Anti-estrogen | h-serum | PPT | C18(150×2.1mm,2.6µm) | GRA | ESI(+) | IL | NA | 7.0 | 1 ng/mL | 46 |
| 5-azacytidine | Anticancer agent | h-plasma | SPE | C18(250×2.1mm, 4µm) | ISO | ESI(+) | AN | 51-55 | 7.0 | 5 ng/mL | 47 |
| RGB-286638 | Protein kinase inhibitor | h-plasma  h-urine | LLE | C18(50×2.1mm, 5µm) | GRA | ESI(+) | IL | 146-151 | 7.0 | 2 ng/mL  2 ng/mL | 48 |
| Azurin p28 | Anticancer peptide | m-ser | PPT | C18(100×2 mm, 5 µm) | GRA | ESI(+) | AN | UNK | 7.5 | 100 ng/mL | 49 |
| Apogossypol | Bcl-2 inhibitor | m-plasma | PPT | C18(100×2mm, 4µm) | GRA | ESI(+) | AN | UNK | 7.5 | 10 ng/mL | 50 |
| Methotrexate | Anticancer drug | h-saliva | SPE | C18(150×2.0mm,2.2μm) | GRA | ESI(+) | AN | 96-104 | 8.0 | 1.0 ng/mL | 51 |
| CSUOH0901 | COX-2 inhibitor | r-plasma | PPT | C18(50 ×2.0 mm, 5μm) | GRA | ESI(+) | AN | 90.1-94.5 | 8.0 | 0.5 ng/mL | 52 |
| Abbreviation: Prep: sample preparation; S-Ph(M-Ph): Solid phase (Mobile phase); E-M: Elution mode; Interf: Interface; IS: Internal standard; RT:Run time; LLOQ:Lower limit of quantitation; Ref: Reference number; h: human; m:mouse; r:rat; d:dog; LLE: liquid-liquid extraction; SPE: solid phase extraction; PPT: protein precipitation; ISO: isocratic elution; GRA: gradient elution; AN: analogue internal standard; IL: isotope labeled internal standard; LBH589: Panobinostat; HCQ:Hydroxychloroquine; DZNep:3-Deazaneplanocin A; EDL-155: 1,2,3,4-tetrahydroisoquinoline; JCC76: Cyclohexanecarboxylic acid [3-(2,5-dimethyl-benzyloxy)-4-(methanesulfonyl-methyl-amino)-phenyl]-amide; ZD6474: vandetanib; PR104: (A: alcohol; H: hydroxylamine; M: amine; G: O-glucuronide); CA4P: combretastatin A4 phosphate; CA4: combretastatin A4; CA4G: combretastatin A4 glucuronide; ABL:1-O-acetylbritannilactone; KPS-A: kalopanaxsaponin A; QBH-196: N1-(3-fluoro-4-{6-methoxy- 7-[3-(4-methylpiperidin-1-yl) propoxy] quinolin-4-yloxy}phenyl)-N4-(2,4- difulurobenzylidene) semicarbazided; NEG: negligible matrix effect; SIG: significant matrix effect; UNK: unknown; | | | | | | | | | | | |