



Advanced Methods to Deliver Consistent, Reliable Data

Validated bioanalytical methods list

Q² Solutions operates one of the world's largest and most respected bioanalytical laboratory networks. From 20+ years of experience we have developed numerous robust methods used to deliver the vital data you need. Beyond those listed below we can also develop customized methods to meet your specific challenge.

LC/MS/MS Methods

Compound/Metabolite	Range	Extraction Volume	Matrix/Anticoagulant
Acyclovir; Valaciclovir	10 – 1000 ng/mL	50 μ L	Human plasma/K ₃ EDTA
Amlodipine	0.05 – 5 ng/mL	20 μ L	Human plasma/K ₂ EDTA
D-Amphetamine; L-Amphetamine (chiral)	0.5 – 75 ng/mL	200 μ L	Human plasma/sodium EDTA
Amphetamine (achiral)	0.5 – 200 ng/mL	100 μ L	Human plasma/sodium EDTA
Aprepitant	10 – 10,000 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Asenapine and Desmethyiasenapine	0.02 – 20 ng/mL	200 μ L	Human plasma/K ₂ EDTA
Atorvastatin; o-Hydroxyatorvastatin; p-Hydroxyatorvastatin	0.25 – 25 ng/mL	200 μ L	Human plasma/sodium heparin and K ₃ EDTA
Azithromycin	1-1000 ng/mL	10 μ L	Human plasma/K ₂ EDTA
Bortezomib	0.1 – 25 ng/mL	50 or 100 μ L	Human plasma/K ₂ EDTA, K ₃ EDTA, and sodium heparin
Available soon: Budesonide	1 – 500 pg/mL	500 μ L	Human plasma/K ₂ EDTA
Bupropion; Hydroxybupropion	0.1 – 100 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Caffeine; Paraxanthine	20 – 20,000 ng/mL	100 μ L	Human plasma/K ₂ EDTA (surrogate matrix Bovine Serum Albumin (BSA) Phosphate Buffered Saline (PBS))
Capecitabine; 5'-DFCR/5'-DFUR/5-FU/FBAL	10 – 5000 ng/mL 50 – 25,000 ng/mL 2 – 1000 ng/mL 15 – 7500 ng/mL	100 μ L	Human plasma/sodium EDTA and K ₃ EDTA
Capecitabine/5-Fluorouracil	10 – 5000 ng/mL 2 – 1000 ng/mL	200 μ L	Human plasma/K ₃ EDTA
Carbamazepine/Carbamazepine 10,11-epoxide	20 – 5000 ng/mL 20 – 500 ng/mL	50 μ L	Human plasma/sodium EDTA
Chloroquine/Hydroxychloroquine/Desethylhydroxychloroquine	1-500 mg/mL	20 μ L	Human plasma/K ₂ EDTA
Clopidogrel/Clopidogrel Acid/Clopidogrel Active Metabolite (H4 diastereomer)	0.05 – 25 ng/mL 5 – 5000 ng/mL 0.05 – 50 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Clopidogrel Active Metabolite (H4 diastereomer only)	0.0706 – 70.6 ng/mL	200 μ L	Human plasma/K ₂ EDTA

LC/MS/MS Methods *continued*

Compound/Metabolite	Range	Extraction Volume	Matrix/Anticoagulant
Cyclosporine A	1 – 1000 ng/mL	20 μ L	Human blood/K ₂ EDTA
Cytarabine	25 – 1000 ng/mL	20 μ L	Human plasma/sodium heparin
Cytarabine/Ara-Uridine	0.5 – 1000 ng/mL 2 – 1000 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Cytarabine/Ara-Uridine	20 – 20,000 ng/mL 50 – 50,000 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Danazol	0.5 – 500 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Desipramine/2-Hydroxydesipramine	0.25 – 100 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Daunorubicin; Daunorubicinol	1 – 500 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Decitabine	0.5 – 500 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Dextromethorphan/Dextrorphan	0.01 – 5 ng/mL 0.5 – 250 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Digoxin	0.05 – 5 ng/mL	200 μ L	Human serum, Human plasma/K ₂ EDTA
Digoxin	0.1 – 20 ng/mL	200 μ L	Human serum
Digoxin	1 – 200 ng/mL	100 μ L	Human urine
Digoxin	5 – 1000 ng/mL	100 μ L	Human urine
Docetaxel	1 – 2500 ng/mL	200 μ L	Human plasma/K ₂ EDTA
Doxorubicin	1 – 500 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Duloxetine/Atomoxetine; S,S-Reboxetine	0.2 – 200 ng/mL 0.5 – 500 ng/mL	50 μ L	Human plasma/K ₃ EDTA
Available soon: Entecavir	25 – 15,000 pg/mL	1000 μ L	Human urine
Available soon: Entecavir	25 – 20,000 pg/mL	200 μ L	Human plasma/K ₂ EDTA
Epinephrine	0.5 – 10 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Erlotinib	1 – 3000 ng/mL	50 μ L	Human plasma/sodium EDTA
Available soon: Estriol	5 – 5000 pg/mL	500 μ L	Human plasma/K ₂ EDTA
5-Fluorouracil (5-FU)	2 – 10,000 ng/mL	100 μ L	Human plasma/sodium EDTA
5-Fluorouracil (5-FU)	10 – 10,000 ng/mL	100 μ L	Human plasma/sodium EDTA and K ₂ EDTA
Fenofibric Acid	20 – 10000 ng/mL	100 μ L	Human plasma/sodium EDTA
Fluconazole	10 – 10,000 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Flurbiprofen	10 – 5000 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Available soon: Fluticasone/Salmeterol	5 – 200 pg/mL	200 μ L	Human plasma/K ₂ EDTA
Gemcitabine	10 – 10,000 ng/mL	25 μ L	Human plasma/lithium heparin
Gemcitabine; 2',2'-Difluorodeoxyuridine	10 – 10,000 ng/mL	20 μ L	Human plasma/lithium heparin
Glyburide (total)	1 – 250 ng/mL	200 μ L	Human plasma/sodium heparin
Imatinib/N-Desmethyl Imatinib	100 – 10,000 ng/mL 50 – 5000 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Itraconazole; Hydroxy Itraconazole	1 – 1000 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Ketoconazole	10 – 10,000 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Lamivudine (as part of Combivir [®])	2 – 1000 ng/mL	200 μ L	Human plasma/sodium heparin
Lamivudine (as part of Combivir [®])	2 – 1000 ng/mL	200 μ L	Human urine
Losartan/Losartan Carboxylic Acid	1 – 500 ng/mL	20 μ L	Human plasma K ₂ EDTA
Lovastatin; Lovastatin Acid	0.25 – 100 ng/mL	500 μ L	Human plasma/sodium heparin
Lovastatin; Lovastatin Acid	0.25 – 125 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Lumefantrine	50 – 20,000 ng/mL	50 μ L	Human plasma/K ₂ EDTA

LC/MS/MS Methods *continued*

Compound/Metabolite	Range	Extraction Volume	Matrix/Anticoagulant
Metformin	10 – 2000 ng/mL	20 μ L	Human plasma/sodium heparin
Methotrexate (Low Range)/7-Hydroxymethotrexate	0.25 – 200 ng/mL 1 – 120 ng/mL	200 μ L	Human plasma/lithium heparin and K ₂ EDTA
Methotrexate (High Range)/7-Hydroxymethotrexate	1 – 1000 ng/mL 1 – 150 ng/mL	200 μ L	Human plasma/lithium heparin and K ₂ EDTA
Methotrexate	0.25 – 200 ng/mL	200 μ L	Human plasma/K ₂ EDTA
Methotrexate (Low Curve)	50 – 1000 ng/mL	20 μ L	Human urine
Methotrexate (High Curve)/7-Hydroxymethotrexate	1000 – 50,000 ng/mL 50 – 1000 ng/mL	20 μ L	Human urine
Methotrexate (Low Curve)/7-Hydroxymethotrexate	50 – 10,000 ng/mL 20 – 1000 ng/mL	20 μ L	Human urine
Methylphenidate; α -Phenyl- α -(2-Piperidyl)Acetic Acid	0.05 – 25 ng/mL	100 μ L	Human plasma/acid citrate dextrose
Metoprolol; α -Hydroxymetoprolol	0.500 – 250 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Midazolam; 1'-Hydroxymidazolam	0.1 – 100 ng/mL	100 μ L	Human plasma/sodium and lithium heparin
Midazolam; 1'-Hydroxymidazolam	0.1 – 100 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Montelukast	2 – 2000 ng/mL	20 μ L	Human plasma/sodium heparin and K ₂ EDTA
Montelukast/36-Hydroxy Montelukast	2 – 2000 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Moxifloxacin	25 – 5000 ng/mL	50 μ L	Human plasma/K ₂ EDTA, K ₃ EDTA, sodium EDTA, sodium heparin, and lithium heparin
Nisoldipine	0.02 – 20 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Omeprazole/5'-Hydroxyomeprazole; Omeprazole Sulfone	1 – 500 ng/mL 0.5 – 250 ng/mL	20 μ L	Human plasma/K ₂ EDTA and sodium heparin
Paclitaxel; 6-Hydroxypaclitaxel	10 – 5000 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Paliperidone	0.100 – 100 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Paroxetine	0.025 – 25 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Pemetrexed	10 – 5000 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Available soon: Remdesivir/Active Metabolite GS-441524	5-5000 ng/mL	50 μ L	Treated human plasma/K ₂ EDTA
Repaglinide	0.01 – 20 ng/mL	50 μ L	Human plasma/sodium heparin
Rifampicin (Rifampin)	10 – 5000 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Risperidone	0.1 – 100 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Ritonavir	10 – 5000 ng/mL	50 μ L	Human plasma/K ₃ EDTA
Rivastigmine	0.1 – 30 ng/mL	100 μ L	Human plasma/potassium oxalate/sodium fluoride
Rosiglitazone	5 – 3000 ng/mL	25 μ L	Human plasma/K ₃ EDTA
Rosuvastatin/Rosuvastatin Lactone; <i>N</i> -Desmethyl Rosuvastatin	0.5 – 100 ng/mL 0.5 – 50 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Sildenafil	1 – 1000 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Sildenafil; <i>N</i> -Desmethyl Sildenafil	1 – 1000 ng/mL	50 μ L	Human plasma/K ₂ EDTA
Simvastatin; Simvastatin Acid	0.1 – 30 ng/mL	200 μ L	Human plasma/K ₃ EDTA
Sunitinib/Desethyl Sunitinib	0.1 – 60 ng/mL 0.1 – 20 ng/mL	20 μ L	Human plasma/K ₂ EDTA
Telaprevir	50 – 20,000 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Tenofovir	2 – 1000 ng/mL	100 μ L	Human plasma/K ₂ EDTA
Tolbutamide; 4-Hydroxytolbutamide	50 – 50,000 ng/mL	20 μ L	Human plasma/K ₂ EDTA

LC/MS/MS Methods *continued*

Compound/Metabolite	Range	Extraction Volume	Matrix/Anticoagulant
Tolterodine; 5-Hydroxymethyl Tolterodine	0.2 – 50 ng/mL	100 µL	Human plasma/sodium heparin
Valproic Acid	1 – 100 µg/mL	100 µL	Human serum
Verapamil; Norverapamil	0.2 – 200 ng/mL	50 µL	Human plasma/K ₂ EDTA
R-Warfarin; S-Warfarin (chiral)	0.1 – 10 ng/mL	250 µL	Human PFF (non-protein bound)
R-Warfarin; S-Warfarin (chiral)	1 – 2500 ng/mL	100 µL	Human plasma (total)/sodium heparin
Zidovudine (as part of Combivir®)	2 – 1000 ng/mL	200 µL	Human plasma/sodium heparin
Zidovudine (as part of Combivir®)	2 – 1000 ng/mL	200 µL	Human urine
Ziprasidone	0.5 – 150 ng/mL	200 µL	Human plasma/sodium heparin

Immunoassay Biomarker Methods

Biomarker/ Analyte on ELISA platform	Quantitation Range	Assay Volume	Minimum Required Dilution (MRD)	Matrix
HER-2/neu	2.5 – 35 ng/mL	10 µL	1:50	Human serum
β-NGF (free)	1 – 500 pg/mL	25 µL	1:1 (no MRD)	Human serum
IGF-1 (total)	0.15 – 6 ng/mL	20 µL	1:100 (treated sample)	Human serum
IGF-1 (free)	0.15 – 6 ng/mL	10 µL	1:50 (untreated sample)	Human serum
sECAD	0.625 – 20 ng/mL	20 µL	1:20	Human serum
sEGFr	12.5 – 300 ng/mL	10 µL	1:50	Human serum
VEGF	50 – 1000 pg/mL	100 µL	1:2	Human plasma/sodium citrate

LC/MS Biomarker Methods

Biomarker Method Development and Validation Expertise

Amino Acids, Lipids, Neurotransmitters, Nucleotides, Hormones, Peptides, Proteins – immunoprecipitation, digestion, immunoaffinity LC/LC/nano LC/MS/MS

Biomarker Non-Proprietary Methods

Biomarker	Range	Volume Required	Matrix
9 Essential Amino Acid Panel	0.5 – 100 µg/mL	50 µL	Human plasma/K ₂ EDTA
4β-Hydroxycholesterol	2 – 300 ng/mL	50 µL	Human plasma/K ₂ EDTA
β-Nerve Growth Factor (NGF)	10 – 1280 pg/mL	200 µL	Human serum
Cholesterol	0.75 – 3.5 mg/mL	10 µL	Human plasma/K ₂ EDTA
Citrulline	300 – 40,000 ng/mL	20 µL	Human plasma/K ₂ EDTA
Digoxin	0.05 – 5 ng/mL	200 µL	Human plasma/K ₂ EDTA
7α-Hydroxy-4-cholesten-3-one (C4)	2 – 250 ng/mL	40 µL	Human serum
Kynurenine/Tryptophan	0.05 – 15 µg/mL 0.2 – 60 µg/mL	20 µL	Human plasma/K ₃ EDTA

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In Vitro ADME & Metabolite Identification services are also available by visiting: www.Q2LabSolutions.com/bioanalytical-adme-laboratories

