

Bioanalytical LC-MS/MS Assays

We have developed and validated numerous assays for non-proprietary molecules across a broad range of species and matrices. A selection of our extensive bioanalytical LC-MS/MS method experience is presented in the following list, but it's not exhaustive.

If your analyte of interest isn't listed, please contact us and we can discuss setting up assays to support your project requirements.

Analyte name	Calibration curve range (LLOQ-ULOOQ)	Species	Matrix	Anticoagulant	Sample volume (µL)	Storage temperature
Abiraterone	0.1 - 400 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Albuterol	4 - 2000 pg/mL	Human	Plasma	K ₂ EDTA	200	-80 or -20
L-Albuterol	4 - 2000 pg/mL	Human	Plasma	K ₂ EDTA	200	-80 or -20
Aldosterone	5 - 500 pg/mL	Human	Plasma	K ₂ EDTA	300	-80
Aldosterone	0.1 - 50 ng/mL	Human	Urine	N/A	100	-80
Amoxicillin	50 - 20000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Amphotericin B (Encapsulated)	100 - 50000 ng/mL	Dog	Plasma	K ₂ EDTA	100	-80 or -20
Amphotericin B (Free)	10 - 3000 ng/mL	Dog	Plasma	K ₂ EDTA	100	-80 or -20
Amphotericin B (Encapsulated)	100 - 50000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Amphotericin B (Free)	10 - 3000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Amtriptyline & Nortriptyline	0.1/0.05 - 50/25 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Androstenedione	0.1 - 100 ng/mL	Human	Plasma	K ₂ EDTA	200	-20
Angiotensin I (Plasma Renin Activity)	0.2 - 200 ng/mL	Human	Plasma	K ₂ EDTA	100	To be confirmed
Apremilast	5 - 1000 pg/mL	Human	Plasma	N/A	50	N/A
Aripiprazole Olanzapine Quetiapine Risperidone Paliperidone	5 - 500 ng/mL 0.2 - 100 ng/mL 5 - 500 ng/mL 0.1 - 100 ng/mL 0.2 - 100 ng/mL	Human	Plasma	K ₂ EDTA	100	-20
Atorvastatin 2-Hydroxy Atorvastatin 4-Hydroxy Atorvastatin	20 - 20000 pg/mL 20 - 20000 pg/mL 10 - 1000 pg/mL	Human	Plasma	K ₂ EDTA	100	-20
Baloxavir	1 - 80 ng/mL	Human	Plasma	K ₂ EDTA	500	N/A
Beraprost sodium	5 - 500 pg/mL	Human	Plasma	K ₂ EDTA	400	-80 or -20
Bile Acids (19 analytes)	1 - 500 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Bile Acids (19 analytes)	1 - 500 ng/mL	Human	Urine	K ₂ EDTA	50	-80 or -20
Budesonide	10 - 10000 pg/mL	Human	Plasma	NaF / KOx	250	-20
Budesonide	5 - 1000 pg/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Budesonide/Formoterol	3/1 - 300/100 pg/mL	Human	Plasma	K ₂ EDTA	50	N/A
Buprenorphine Norbuprenorphine	2 - 1000 pg/mL 5 - 1000 pg/mL	Human	Plasma	K ₂ EDTA	400	-20
C4 (7-hydroxy-4-cholensten-3-one)	2 - 500 ng/mL	Human	Plasma	Lithium Heparin	100	-20
Calcitriol	20 - 400 pg/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Candesartan/amlidipine	1/0.05 - 200/10 ng/mL	Human	Plasma	K ₂ EDTA	200	-80 or -20

Analyte name	Calibration curve range (LLOQ-ULOOQ)	Species	Matrix	Anticoagulant	Sample volume (µL)	Storage temperature
Cannabidiol	1 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Carbamazepine	5 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Carbamazepine	50 - 50000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Cinacalcet	0.1 - 50 ng/mL	Human	Plasma	K ₂ EDTA	100	N/A
Ciprofloxacin	100 - 4500 ng/mL	Human	Plasma	Lithium Heparin	50	-20
Cisplatin	10 - 500 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Clopidogrel Clopidogrel acid	10 - 5000 pg/mL 30 - 4000 ng/mL	Human	Plasma	Lithium Heparin	100	-80
Clozapine	5 -1000 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Colchicine	10 - 10000 pg/mL	Human	Plasma	K ₂ EDTA	150	-80 or -20
Cortisol	1 - 500 ng/mL	Human	Plasma	K ₂ EDTA	200	-20
Cortisol	0.2 - 20 ng/mL	Human	Saliva	N/A	200	-20
Cortisol	0.6 - 300 ng/mL	Human	Urine	N/A	200	-20
Cortisol 11-Deoxycortisol Corticosterone 11-Deoxycorticosterone	1 - 250 ng/mL 20 - 2000 pg/mL 50 - 25000 pg/mL 20 - 1000 pg/mL	Human	Plasma	K ₂ EDTA	200	-80
Cyclosporin A Tacrolimus Sirolimus	1 - 500 ng/mL 0.1 - 50 ng/mL 0.1 - 50 ng/mL	Human	Whole Blood	K ₂ EDTA	50	-80
Cytarabine (encapsulated)	100 - 10000 ng/mL	Human	Plasma	N/A	400	-80 or -20
Cytarabine (free)	10 - 2000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Daunorubicin/Cytarabine (Total)	44.8/100 - 4480/10000 ng/mL	Human	Plasma	K ₂ EDTA	25	N/A
Daunorubicin (encapsulated)	44.8 - 44800 ng/mL	Human	Plasma	K ₂ EDTA	400	N/A
Daunorubicin (free)	0.5 - 500 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Desmosine	0.25 - 100 nM (~0.13 - ~53 ng/mL)	Human	Urine	N/A	300	-20
Desmosine Isodesmosine	30 - 2000 pM (~16 - ~1050 pg/mL)	Human	Serum	N/A	500	-20
Dexmedetomidine	20 - 5000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Diazepam	0.5 - 500 ng/mL 2 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	50 500	-20 -80 or -20
Desmethyldiazepam	0.1 - 100 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Diclofenac	20 - 2000 ng/mL	Human	Plasma	K ₂ EDTA	600	-80 or -20
Digoxin	10 - 5000 pg/mL	Human	Plasma	Lithium Heparin	100	-20
Doxorubicin (total)	50 - 50000 ng/mL	Dog	Plasma	K ₂ EDTA	25	-80 or -20
Doxorubicin (encapsulated)	50 - 50000 ng/mL	Dog	Plasma	K ₂ EDTA	25	-80 or -20
Doxorubicin (free)	1 - 400 ng/mL	Dog	Plasma	K ₂ EDTA	150	-80 or -20
Doxorubicin (total)	50 - 50000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Doxorubicin (encapsulated)	50 - 50000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Doxorubicin (free)	1 - 400 ng/mL	Human	Plasma	K ₂ EDTA	150	-80 or -20
Duloxetine	1 - 500 ng/mL 0.1 - 100 ng/mL	Human	Plasma	Lithium Heparin	100 50	-20 N/A
DSPC	500 - 50000 ng/mL	Rat	Plasma	K ₂ EDTA	25	N/A

Analyte name	Calibration curve range (LLOQ-ULOOQ)	Species	Matrix	Anticoagulant	Sample volume (µL)	Storage temperature
Eldcalcitol	10 - 300 pg/mL	Human	Serum	N/A	40	-80 or -20
Epinastine	0.1 - 40 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
EPA & DHA (Total)	1 - 1000 ug/mL	Human	Plasma	K ₂ EDTA	25	N/A
EPA & DHA (Free)	0.1 - 100 ug/mL	Human	Plasma	K ₂ EDTA	400	N/A
Enoxacin	5 - 5000 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Entacapone	2 - 2000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Estradiol	5 - 1000 pg/mL	Human	Serum	N/A	500	-20
Ethambutol	100 - 40000 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Ethinylestradiol Levonorgestrel	10 - 2000 pg/mL 0.1 - 20 ng/mL	Human	Plasma	Sodium Heparin	300	-20
Febuxostat	5 - 2500 ng/mL	Human	Plasma	K ₂ EDTA	50	-80,20
Fluconazole	50 - 4000 ng/mL	Human	Plasma	Lithium Heparin	50	-20
Fluconazole	50 - 50000 ng/mL	Human	Plasma	K ₂ EDTA	20	-20
Fluticasone Propionate	1 - 500 pg/mL 0.5 - 200pg/mL	Human	Plasma	NaF/KOx	500	-20
Fluticasone Propionate (High Range) Salmeterol	5 - 1000 pg/mL 1 - 250 pg/mL	Human	Plasma	NaF/KOx	500	-20
Fluticasone Propionate (Low Range) Salmeterol	1 - 250 pg/mL	Human	Plasma	NaF/KOx	500	-20
Fluticasone forate glycopoyoride Indacaterol	2 - 500 ng/mL 2 - 500 ng/mL 4 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	600	-80 or -20
Fluoxetine	0.1 - 25 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Fluvastatin	1 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Fluvoxamine	5 - 1200 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Formoterol	0.250 - 125 pg/mL	Human	Plasma	NaF/KOx	500	-20
Furosemide	10 - 5000 ng/mL	Human	Plasma	Lithium Heparin	100	-20
Gabapentin	50 - 25000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Gemfibozil Gemfibrozil 1-O-β-glucuronide	50 - 25000 ng/mL	Human	Plasma	K ₂ EDTA	20	-20
Gemfibrozil & metabolite	0.1 - 50ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Glucagon	15 - 250 pg/mL	Human	Plasma	K ₃ EDTA	200	-80
Glycopyrrate	2 - 800 pg/mL	Human	Plasma	K ₂ EDTA	500	N/A
Guanfucin	1 - 500 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
D-glucose	20 - 2000ug/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Hydromorphone Naloxone Hydromorphone-3β-Glucuronide Naloxone-3β-Glucuronide	10 - 2500 pg/mL 100 - 2500 pg/mL 100 - 25000 pg/mL Low range: 100 - 25000 pg/mL High range: 1000 - 250000 pg/mL	Human	Plasma	K ₂ EDTA	200	-20
4β-Hydroxycholesterol	1 - 500 ng/mL	Human	Plasma	K ₂ EDTA	50	-80

Analyte name	Calibration curve range (LLOQ-ULOOQ)	Species	Matrix	Anticoagulant	Sample volume (µL)	Storage temperature
Ibuprofen	1 - 100 µg/mL	Human	Plasma	Lithium Heparin	50	-20
Ibuprofen	0.2 - 100ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Ibuprofen (R and S)	0.1 - 50 µg/mL	Human	Plasma	Lithium Heparin	50	-80
Indacaterol glycopyoride	4 - 1000 pg/mL 2 - 500 pg/mL	Human	Plasma	K ₂ EDTA	500	-80 or -20
Indacaterol	2 - 500 pg/mL	Human	Plasma	K ₂ EDTA	500	N/A
Insulin-Aspart	0.1 - 50 ng/mL	Human	Plasma	K ₂ EDTA	250	-80 or -20
Ipratropium	4 - 2000 pg/mL	Human	Plasma	K ₂ EDTA	400	-80 or -20
Irinotecan (Free)	2 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Irinotecan (encapsulated)	100 - 75000 ng/mL	Human	Plasma	K ₂ EDTA	78	-80 or -20
Irinotecan (total)	100 - 75000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Irinotecan (Free)	2 - 1000 ng/mL	Dog	Plasma	K ₂ EDTA	100	-80 or -20
Irinotecan (encapsulated)	100 - 75000 ng/mL	Dog	Plasma	K ₂ EDTA	75	-80 or -20
Irinotecan (total)	100 - 75000 ng/mL	Dog	Plasma	K ₂ EDTA	25	-80 or -20
Isoniazid	50 - 10000 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Itraconazole Hydroxyitraconazole	5 - 2000 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Itraconazole & OH-Itraconazole	1 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	200	-80 or -20
Lacosamide	100 - 20000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Lamotrigine	50-25000ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Levetiracetam	100-40000ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Levodopa Carbidopa 3-OMD	50 - 7500 ng/mL 10 - 1500 ng/mL 200 - 30000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80
Levofloxacin	20 - 20000 ng/mL	Human	Plasma	Sodium Heparin	50	-80
Levofolinic acid Methotrexate Levomefolic Acid	10 - 10000 ng/mL 5 - 5000 ng/mL 10- 10000 ng/mL	Human	Plasma	K ₂ EDTA	200	-80 or -20
Linagliptin	0.1 - 10 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Linezolid	50 - 20000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Lorazepam	0.5 - 50 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
LTE4 (Leukotriene E4)	8 - 500 pg/mL	Human	Urine	N/A	1000	-80
LTE4	10 - 1000 ng/mL	Human	Urine	K ₂ EDTA	50	-80 or -20
Menaquinone-7	0.5 - 400ng/mL	Human	Plasma	K ₂ EDTA	400	-80 or -20
Metformin	2 - 1000ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Metoprolol	1 - 500ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Metronidazole	50 - 1000ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Mesalazine	2 - 1000ng/mL	Human	Plasma	K ₂ EDTA	200	-80 or -20
Midazolam 1-OH Midazolam 4-OH Midazolam	0.1 - 100 ng/mL	Human	Plasma	K ₂ EDTA	100	-20
MMAE	40 - 10000 pg/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Montelukast	2 - 600 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20

Analyte name	Calibration curve range (LLOQ-ULOOQ)	Species	Matrix	Anticoagulant	Sample volume (µL)	Storage temperature
Morphine Morphine-3-Glucoronide Morphine-6-Glucoronide	0.1 - 100 ng/mL 5 - 3000 ng/mL 1 - 500 ng/mL	Human	Plasma	K ₂ EDTA	100	-20
Moxifloxacin	50 - 5000 ng/mL	Human	Plasma	Lithium Heparin	50	-20
Naloxone Naloxone-3β-Glucoronide	30 - 25000 pg/mL	Human	Plasma	K ₂ EDTA	200	-20
Naproxen	0.25 - 100 µg/mL	Human	Plasma	K ₂ EDTA	50	-20
Nateglinide	100 - 10000 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Octeotide	0.01 - 25 ng/mL	Human	Plasma	K ₂ EDTA	300	-80 or -20
Olmsartan Modoxomil	1 - 1000ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Olodacaterol	0.4 -100 pg/mL	Human	Plasma	K ₂ EDTA	500	-80 or -20
Omeprazole	1 - 500 ng/mL	Human	Plasma	Lithium Heparin	100	-80
Oxcarbazepine & Eslicarbazepine	10 - 5000ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Paclitaxel	10 – 10000 ng/mL	Human	Plasma	K ₂ EDTA	25	-20
Palonosertan	20 - 20000 pg/mL	Monkey	Urine	N/A	50	N/A
Palonosertan	20 - 20000 pg/mL	Monkey	CSF	N/A	50	N/A
Palonosertan	20 - 20000 pg/mL	Monkey	Plasma	N/A	50	N/A
Paracetamol	Low Range: 50 - 5000 ng/mL High Range: 200 - 20000 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Paracetamol Pseudoephedrine	50 - 5000 ng/mL 2 - 500 ng/mL	Human	Plasma	Lithium Heparin	100	-20
Paroxetine	0.05 - 50 ng/mL	Human	Plasma	K ₂ EDTA	50	-20
Perampanel	2 - 2000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Phenobarbital	5 - 5000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Phenytoin	20 - 10000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Posaconazole	5 - 5000 ng/mL	Human	Plasma	Lithium Heparin	50	-20
Prasugrel (R-138727/R95913)	0.5/0.5 - 200/200 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Pravastatin	0.5 - 250 ng/mL	Human	Plasma	K ₂ EDTA	100	-20
Pregabalin	20 - 20000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
8-Iso Prostaglandin F2alpha	25 - 20000 pg/mL	Human	Urine	N/A	1000	-20
Repaglinide 3-Hydroxy Repaglinide	0.1 - 50 ng/mL	Human	Plasma	K ₂ EDTA	100	-80
Rifampicin	20 - 20000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80
Rifapicin	0.1 - 40 ug/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Rimonabant	1 - 600 ng/mL	Human	Plasma	Lithium Heparin	50	-20
Ritonavir Lopinavir	4 - 3200 ng/mL 20 - 16000 ng/mL	Human	Plasma	K ₂ EDTA	100	-20
Rosiglitazone	1 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Rosuvastatin	0.2 - 100 ng/mL	Human	Plasma	K ₃ EDTA	200	-80
Rufinamide	10-10000ng/mL	Human	Plasma	K ₂ EDTA	20	-80 or -20

Analyte name	Calibration curve range (LLOQ-ULOOQ)	Species	Matrix	Anticoagulant	Sample volume (µL)	Storage temperature
Scopolamine Physostigmine	0.05 - 25 ng/mL 0.1 - 50 ng/mL	Human	Plasma	Lithium Heparin (with Neostigmine as stabiliser)	100	-80
Semaglutide	1 - 200ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
Simvastatin Simvastatin Acid	0.1 - 50 ng/mL	Human	Plasma	Lithium Heparin	100	-80
SN-38	0.2 - 20 ng/mL	Human	Plasma	K ₂ EDTA	100	-80 or -20
SN-38	0.2 - 20 ng/mL	Dog	Plasma	K ₂ EDTA	100	-80 or -20
D-Sorbitol	50 - 5000 ng/mL	Human	Blood	K ₂ EDTA	100	-80 or -20
D-Sorbitol	50 - 5000 ng/mL	Human	RBC	K ₂ EDTA	100	-80 or -20
Tacrolimus	10 - 10000 ng/mL	Human	Blood	K ₂ EDTA	50	N/A
Telmisartan	2 - 1000 ng/mL	Human	Plasma	K ₂ EDTA	50	N/A
Tenofovir	0.3 - 50 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Teprenone	0.4 - 200 ng/mL	Human	Plasma	K ₂ EDTA	400	-80 or -20
Tenofovir Alafenamide	1 - 500 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Testosterone	0.05 - 30 ng/mL	Human	Serum	N/A	100	-20
Testosterone	2 - 1000 pg/mL	Human	Plasma	K ₂ EDTA	500	-80 or -20
Testosterone Dihydrotestosterone	20 - 10000 pg/mL	Human	Serum	N/A	500	-20
Testosterone Undecanoate Dihydrotestosterone Undecanoate	1 - 500 ng/mL 1.5 - 250 ng/mL	Human	Serum	N/A	200	-20
Ticlopidine	2 - 2000 ng/mL	Human	Serum	N/A	20	-20
Tiotropium	0.25 - 50 pg/mL 0.1 - 20 pg/mL 0.1 - 50 pg/mL 0.2 - 50 pg/mL	Human	Plasma	K ₂ EDTA	200	-20
Tiotropium/Olodaterol	0.2/0.4 - 50/100 ng/mL	Human	Plasma	K ₂ EDTA	600	-80 or -20
Tobramycin	5 - 500 ng/mL	Human	Plasma	Lithium Heparin	50	-80
Tolvaptan	1 - 1000 ng/mL	Human	Plasma	Sodium Heparin	50	-20
Topiramate	10 - 10000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
Umeclidinium/Vilanterol	10 - 2000 pg/mL	Human	Plasma	K ₂ EDTA	500	N/A
Valproic Acid	2 - 100 ug/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20
VK1 (trans, Cis)-low range	0.1/0.1 - 50/50 ng/mL	Human	Plasma	K ₂ EDTA	400	-80 or -20
VK1 (trans, Cis)-high range	10/10 - 3000/3000 ng/mL	Human	Plasma	K ₂ EDTA	50	-80 or -20
Warfarin (R and S)	10 - 2000 ng/mL	Human	Plasma	K ₂ EDTA	1000	-20
Zonisamide	100 - 50000 ng/mL	Human	Plasma	K ₂ EDTA	25	-80 or -20