

PPD[®] LABORATORIES

Bioanalytical Lab Assay List

March 2018



Exploratory Biomarker Methods

Validated Methods



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
4 α - and 4 β -Hydroxycholesterol	Human Plasma	2 to 500 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMSC 546
6-Methoxy-2-Naphthylacetic acid <i>aka Nabumetone metabolite</i>	Human Plasma	0.5 to 100 μ g/mL	HPLC/FL	0.05 mL	EDTA	-20	Richmond	Inactive	LC 184
3-Hydroxymandelic Acid	Human Urine	100 to 5000 ng/mL	LC/MS/MS	0.05 mL	None	-70	Madison	Inactive	P957
17 α -Ethinyl Estradiol (EE) & Etonogestrel	Human Plasma	2 to 800 pg/mL 25 to 10,000 pg/mL	LC/MS/MS	0.5 mL	KOx / NaF	-70	Richmond Madison	Active	LCMSD 603 P1311
Abacavir & Lamivudine (3TC)	Human Plasma	2.5 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1165
Abiraterone	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1260
Acetaminophen & Oxycodone	Human Plasma	100 to 15,000 ng/mL 0.100 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1310
Acetaminophen & Hydrocodone	Human Plasma	100 to 15,000 ng/mL 0.1 to 50 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1213
	Human Plasma	100 to 15,000 ng/mL 0.1 to 50 ng/mL	LC/MS/MS	0.15 mL	K ₂ EDTA	-20	Madison	Active	P1305
Acetaminophen & Hydrocodone & Chlorpheniramine	Human Plasma	100 to 50,000 ng/mL 0.1 to 50 ng/mL 0.25 to 125 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1066

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Acetaminophen (Acetaminophen sulfate) (p-Acetamidophenyl-β-D-glucuronide)	Human Urine	0.2 to 200 µg/mL 0.5 to 500 µg/mL 1 to 1000 µg/mL	LC/MS/MS	0.025 mL	None	-20	Madison	Active	P851
	Human Plasma	0.1 to 50 µg/mL 0.1 to 50 µg/mL 0.5 to 100 µg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P852
Acyclovir	Human Plasma	5 to 1000 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 189
Adefovir	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1053
Albendazole (Sulfoxide & Sulfone Metabolites)	Cow Plasma	0.05 to 5 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Madison	Inactive	P562
Albuterol	Human Plasma	2 to 4000 pg/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Active	P951
	Human Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Active	P1147
	Human Urine	20 to 2000 ng/mL	LC/MS/MS	0.1 mL	None	-20	Madison	Inactive	P465
	Dog Plasma	0.2 to 20 ng/mL	LC/MS/MS	1.0 mL	Na Heparin	-20	Madison	Inactive	P464
	Rat Plasma	0.4 to 400 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Madison	Inactive	P463
Aliskiren	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1145
Alprazolam	Human Plasma	0.25 to 40 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Richmond	Active	LCMS 225
Alprazolam (α-Hydroxyalprazolam) (4-Hydroxyalprazolam)	Human Plasma	0.2 to 40 ng/mL	LC/MS/MS	0.3 mL	Na Heparin	-20	Madison	Inactive	P335

LIST OF VALIDATED METHODS March 2018

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Ambrisentan (4-Hydroxymethyl ambrisentan)	Human Plasma	1 to 400 ng/mL 0.25 to 100 ng/mL	LC/MS/MS	0.1 mL	Na Citrate	-20	Richmond	Active	LCMSC 498
	Human Plasma	1 to 500 ng/mL 0.25 to 125 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 498.1
	Human Plasma	1 to 500 ng/mL 0.25 to 125 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1513
Amitriptyline (Nortriptyline)	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Madison	Inactive	P558
	Rabbit Plasma	1 to 500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P647
Amitriptyline	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Inactive	LCMS 301
Amlodipine	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Richmond	Inactive	LCMS 151
Amoxicillin	Human Serum	50 to 25,000 ng/mL	LC/MS/MS	0.1 mL	None	-70	Richmond	Inactive	LCMS 141
	Human Plasma	50 to 25,000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-70	Richmond	Active	LCMSC 141.2
	Dog Plasma	50 to 25,000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Active	P1525
	Cat Plasma	50 to 25,000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Active	P1540
DL-Amphetamine	Human Plasma	0.5 to 50 ng/mL per enantiomer	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P1523
Apixaban	Human Plasma	5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1261
Apremilast	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Madison	Active	P1546

*Inactive methods may require additional time and/or fees prior to reactivation

**Total = Unconjugated + Conjugated Drug. Unless specifically noted, the free or unconjugated drug is measured.

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Aripiprazole (Dehydroaripiprazole)	Human Plasma	0.5 to 250 ng/mL 0.1 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 386
Asenapine (Desmethyiasenapine)	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1120
Atazanavir & Ritonavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA K ₂ EDTA	-20	Madison Richmond	Active	P1012 LCMSC 210.4
Atenolol	Human Whole Blood	10 to 1000 ng/mL	HPLC/FL	1.0 mL	Na Heparin	-20	Madison	Inactive	P161
Atovaquone	Human Plasma	0.025 to 10 µg/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMS 360
Atorvastatin (Ortho-hydroxyatorvastatin) (Para-hydroxyatorvastatin)	Human Plasma	0.1 to 75 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Richmond	Inactive	LCMS 120
	Human Plasma	0.1 to 75 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Active	P913
	Human Plasma	0.1 to 75 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Madison	Active	P1205
	Rat Plasma	0.1 to 75 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Richmond	Inactive	LCMS 120.3
Azacitadine	Human Plasma	1 to 2000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1040
Azelastine Desmethyiazelastine	Human Plasma	1 to 1000 pg/mL 0.1 to 100 pg/ mL	LC/MS/MS	1.0 mL	K ₃ EDTA	-20	Madison	Active	P1231
Azithromycin	Human Plasma	2.5 to 1000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMS 168
Azidothymidine (AZT)	Human Plasma	50 to 25,000 ng/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Richmond	Inactive	LC 96
	Human Urine	0.2 to 25 µg/mL	HPLC/UV	1.0 mL	None	-20	Richmond	Inactive	LC 96.1
Baclofen	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1341

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Balsalazide	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1201
(Beclomethasone-17-propionate) (Beclomethasone dipropionate)	Human Plasma	10 to 2500 pg/mL 5 to 1250 pg/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 333.1
Benazepril (Benazeprilat)	Human Plasma	10 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na ₂ EDTA	-20	Richmond	Inactive	LCMS 107
Bicalutamide	Human Plasma	10 to 1250 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 318
Bisoprolol	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 501
Boceprevir	Human Plasma	0.01 to 2 µg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA with 5% phosphoric acid	-20	Madison	Inactive	P1168
Bortezomib	Human Plasma with Formic Acid	0.5 to 500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Richmond Madison	Active	LCMS 509 P1538
	Human Plasma with Citric Acid	0.5 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-70	Madison	Active	P1247
Brompheniramine	Human Plasma	0.05 to 20 ng/mL	LC/MS/MS	0.1 mL	Li Heparin	-20	Richmond	Active	LCMSC 436
Budesonide	Human Plasma	10 to 2500 pg/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Madison	Active	P429
Bupivacaine	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1306
Buprenorphine (Norbuprenorphine) Naloxone	Human Plasma	20 to 10,000 pg/mL 20 to 10,000 pg/mL 2 to 1000 pg/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Madison	Active	P1160

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Bupropion (Hydroxybupropion) (Erthrohydrobupropion) (Threoxyhydrobupropion)	Human Plasma	0.5 to 200 ng/mL 1 to 400 ng/mL 0.5 to 200 ng/mL 0.5 to 200 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Madison	Active	P986
Bupropion (Hydroxybupropion)	Human CSF	0.5 to 200 ng/mL 1 to 400 ng/mL	LC/MS/MS	0.1 mL	None	-70	Madison	Active	P1253
(S)-Bupropion [(S,S)-Hydroxybupropion]	Human Plasma	0.5 to 200 ng/mL 2.5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1279
(R)-Bupropion (S)-Bupropion [(R,R)-Hydroxybupropion] [(S,S)-Hydroxybupropion]	Human Plasma	0.5 to 200 ng/mL 2.5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1347
Butalbital	Human Plasma	0.05 to 25 µg/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Richmond	Inactive	LC 196
	Human Plasma	0.1 to 10 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Madison	Inactive	P301
Caffeine (1,7-Dimethylxanthine)	Human Plasma	20 to 20,000 ng/mL	LC/MS/MS	0.15 mL	Na Heparin	-20	Richmond	Active	LCMSC 207
	Human Plasma	25 to 25,000 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1560
	Human Urine	50 to 50,000 ng/mL	LC/MS/MS	0.025 mL	None	-20	Madison	Active	P739
Canagliflozin	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1304

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Candesartan	Human Plasma	0.5 to 400 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 451
	Human Urine	10 to 5000 ng/mL	LC/MS/MS	0.05 mL	None	-20	Richmond	Active	LCMSC 451.1
Carbidopa & Levodopa	Human Plasma	0.5 to 250 ng/mL 5 to 2500 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-70	Madison	Active	P838
	Rat Plasma	25 to 5000 ng/mL 50 to 10,000 ng/mL	LC/MS/MS	0.02 mL	K ₂ EDTA	-70	Madison	Active	P1420
Carbidopa (3-O-MethylDopa) & Levodopa	Human Plasma	10 to 5000 ng/mL 400 to 25,000 ng/mL 10 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1571
Carbamazepine (Carbamazepine 10,11 Epoxide)	Human Plasma	0.05 to 50 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Inactive	P626
Carbamazepine, Free (unbound) (Carbamazepine 10,11 Epoxide)	Human Plasma Ultrafiltrate	0.1 to 20 µg/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Madison	Inactive	P238
(Carbamazepine 10,11 Epoxide)	Human Urine	0.1 to 20 µg/mL	HPLC/UV	0.25 mL	None	-20	Madison	Inactive	P257
(Monohydroxycarbazepine)	Human Plasma	1 to 50 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Inactive	P886
Carprofen	Dog Plasma	25 to 25,000 ng/mL	LC/MS/MS	0.03 mL	Li Heparin	-20	Madison	Active	P1082
Carvedilol	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Inactive	P789
Cefaclor	Human Plasma	0.1 to 25 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-70	Richmond	Inactive	LC 305
Cefadroxil	Human Serum	0.25 to 50 µg/mL	HPLC/UV	0.10 mL	None	-70	Richmond	Inactive	LC 52
	Human Urine	5 to 1000 µg/mL	HPLC/UV	0.05 mL	None	-20	Richmond	Inactive	LC 52.1



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Celecoxib	Human Plasma	5 to 2000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Active	LCMSD 417
Celiprolol	Human Plasma	10 to 2000 ng/mL	HPLC/UV	1.0 mL	Na Heparin	-20	Richmond	Inactive	LC 30
Cephalexin	Human Plasma	0.1 to 100 µg/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 382
Cetirizine	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 169
Chlorpheniramine	Human Plasma	0.25 to 50 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Active	LCMS 214
Chlorthalidone	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Active	LCMS 389.2
	Human Urine	10 to 5000 ng/mL	LC/MS/MS	0.1 mL	None	-20	Richmond	Active	LCMS 389.1
Chlorzoxazone (6-Hydroxychlorzoxazone)	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Inactive	LCMS 209
Clenbuterol	Horse Plasma	12.5 to 1000 pg/mL	LC/MS/MS	1.0 mL	Na Heparin	-20	Madison	Active	P1119
Cimetidine	Human Urine	5.0 to 5000 µg/mL	HPLC/UV	0.05 mL	None	-20	Richmond	Inactive	LC 358.1
	Human Plasma	0.01 to 10 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 358
Ciprofloxacin	Human Plasma	25 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 176

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Ciprofloxacin & Enrofloxacin	Dog Plasma	10 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1127
	Cat Plasma	10 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1256
Citalopram	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Richmond	Active	LCMS 332
Citalopram (Desmethylcitalopram)	Human Plasma	1 to 500 ng/mL 0.2 to 100 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Inactive	P787
	Human Plasma	1 to 500 ng/mL 0.2 to 100 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 332.2
Clarithromycin (14-Hydroxycarithromycin)	Human Plasma	20 to 10,000 ng/mL 5 to 2500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 179
Clavulanic Acid	Cat Plasma	0.1 to 10 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Active	P1553
	Dog Plasma	0.1 to 10 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Active	P1531
Clopidogrel (Clopidogrel Acid)	Human Plasma	0.2 to 200 ng/mL 10 to 10,000 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 271
Clorsulon	Cow Plasma	0.1 to 10 ng/mL	LC/MS/MS	1.0 mL	Na Heparin	-20	Madison	Inactive	P717
Cobicistat	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1211
Cocktail Assay, "Epilepsy"	Human Plasma		LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P837
Carbamazepine		0.1 to 50 µg/mL							
Lamotrigine		0.1 to 20 µg/mL							
Phenobarbital		0.1 to 50 µg/mL							
Phenytoin		0.1 to 30 µg/mL							
Topiramate		0.1 to 50 µg/mL							

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Cocktail Assay, "Antiviral" Darunavir Lopinavir Raltegravir Ritonavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison Richmond	Active	P1002
Codeine & Morphine (Morphine-3β-glucuronide) (Morphine-6β-glucuronide)	Human Plasma	1 to 100 ng/mL 0.2 to 20 ng/mL 2 to 200 ng/mL 0.5 to 50 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Active	LCMSC 396
Codeine & Morphine & Guaifenesin	Human Plasma	0.1 to 100 ng/mL 0.2 to 20 ng/mL 2 to 2000 ng/mL	LC/MS/MS	0.3 mL	Na Heparin	-20	Madison	Active	P919
Cortisol (6β-Hydroxycortisol)	Human Urine	1 to 200 ng/mL 6 to 1200 ng/mL	LC/MS/MS	0.1 mL	None	-70	Richmond	Active	LCMSC 355
(6β-Hydroxycortisol) (6β-Hydroxycortisone)	Human Urine	0.5 to 250 ng/mL	LC/MS/MS	0.05mL	None	-70	Richmond	Active	LCMSC 584.1
(6β-Hydroxycortisol) (6β-Hydroxycortisone)	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.05mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 584
Cortisol <i>aka Hydrocortisone</i> Cortisone	Human Urine	1 to 250 ng/mL	LC/MS/MS	0.05 mL	None	-70	Richmond	Active	LCMSC 472
	Human Serum	1 to 500 ng/mL 0.5 to 250 ng/mL	LC/MS/MS	0.05 mL	None	-70	Richmond	Active	LCMSD 472.1
	Human Plasma	1 to 500 ng/mL 0.5 to 250 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 472.2



LIST OF VALIDATED METHODS March 2018

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5- α -Tetrahydrocortisol (5- α -THF) 5- β -Tetrahydrocortisol (5- β -THF) Tetrahydrocortisone (THE)	Human Urine	20 to 5000 ng/mL	LC/MS/MS	0.05 mL	None	-70	Richmond	Active	LCMSC 471
Creatine (Creatinine)	Human Urine	5 to 250 μ g/mL 100 to 5000 μ g/mL	LC/MS/MS	0.025 mL	None	-20	Richmond	Active	LCMS 635
Cyclophosphamide	Human Plasma	0.25 to 50 μ g/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Richmond	Inactive	LC 232
Cyclosporin	Human Whole Blood	5 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 582
	Human Whole Blood	2 to 2000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond Madison	Active	LCMSC 582.1 P1429
D4T	Human Plasma	0.025 to 25 μ g/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 211
Dabigatran, Total	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1270
Dabigatran	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1266
Dalfampridine	Human Plasma	0.2 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1161
Dalteparin using Factor Xa	Human Plasma	0.04 to 0.5 IU/mL	Chromogenic	0.05 mL	Na Citrate	-70	Richmond	Inactive	ICD 324
Dalteparin using Factor IIa	Human Plasma	0.03 to 0.16 IU/mL	Chromogenic	0.02 mL	Na Citrate	-70	Richmond	Inactive	ICD 325
Danazol	Human Plasma	2 to 200 ng/mL	HPLC/UV	1.0 mL	Na Heparin	-20	Richmond	Inactive	LC 18
Darunavir See "Cocktail Assay Antiviral"	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison Richmond	Active	P1002

LIST OF VALIDATED METHODS March 2018

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Daunorubicin (Daunorubicinol)	Human Plasma	5 to 200 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 301
Dasatinib (Deshydroxyethyl dasatinib)	Human Plasma	0.2 to 200 ng/mL 0.05 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P1027
Decitabine	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1276
Deferasirox	Human Plasma	0.1 to 100 µg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1223
Deracoxib	Dog Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1094
Desipramine (2-Hydroxydesipramine)	Human Plasma	0.25 to 100 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMS 103
	Human Urine	10 to 2500 ng/mL 100 to 25,000 ng/mL	LC/MS/MS	0.05 mL	None	-70	Richmond	Active	LCMS 103.1
	Human Plasma	0.25 to 100 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P644

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Dexamethasone	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 328
	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSD 328
	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 328.1
	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1604
	SD Rat Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.03 mL	K ₃ EDTA	-20	Madison	Active	P1516
	Dog Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Active	P1517
	Dog Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Active	P1526
Dexlansoprazole	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1026
Dextromethorphan	Human Plasma	10 to 5000 pg/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Active	P732
Dextromethorphan (Dextrorphan)	Dog Plasma	2.5 to 500 ng/mL	HPLC/FL	0.2 mL	Na Heparin	-20	Madison	Inactive	P423
	Rat Plasma	5 to 1000 ng/mL	HPLC/FL	0.1 mL	Na Heparin	-20	Madison	Inactive	P422
	Human Plasma	0.05 to 50 ng/mL 0.8 to 800 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P668
Dextromethorphan, Total** & Unconjugated (Dextrorphan) (3-methoxymorphinan) (3-hydroxymorphinan)	Human Urine	0.001 to 1 µg/mL 0.020 to 20 µg/mL 0.001 to 1 µg/mL 0.01 to 10 µg/mL	LC/MS/MS	0.05 mL	None	-20	Madison	Active	P600
Dextromethorphan & Guaifenesin	Human Plasma	0.01 to 5 ng/mL 8 to 4000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P1285



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Dextromethorphan & Pseudoephedrine	Human Plasma	10 to 5000 pg/mL 0.8 to 400 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Active	P617
Dextromethorphan (Dextrophan) & Pseudoephedrine	Human Plasma	0.200 to 200 ng/mL 2.50 to 2500 ng/mL 2.50 to 2500 ng/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Richmond	Active	LCMSC 690
Diazepam (N-Desmethyldiazepam)	Human Plasma	2 to 1000 ng/mL 1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 466
Diclofenac	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Richmond	Active	LCMSC 368
	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Madison	Inactive	P1121
Dienogest	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1063
Digoxin	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond Madison	Active	LCMSC 455 P1419
	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 455.1
	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSD 455.2
	Human Plasma	0.01 to 10 ng/mL	LC/MS/MS	0.15 mL	K ₂ EDTA	-20	Richmond	Active	LCMSD 455.3
	Human Urine	0.2 to 200 ng/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMSD 455.4
Diltiazem (Desacetyldiltiazem) (Desmethyldiltiazem)	Human Plasma	0.1 to 200 ng/mL	LC/MS/MS	0.4 mL	Na Heparin	-70	Madison	Inactive	P672
Diphenhydramine	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Madison	Inactive	P912

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Dipyridamole	Human Plasma	20 to 20,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 625
Docetaxel	Human Plasma	10 to 5000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 216
Dolutegravir	Human Plasma	20 to 20,000 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison Richmond	Active	P1297 LCMSD 726
Donepezil	Human Plasma	0.2 to 50 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Richmond	Active	LCMS 203
	Human Plasma	0.2 to 100 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P983
	Rat Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.02 mL	K ₂ EDTA	-20	Madison	Active	P1054
Donepezil & Memantine	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1258
Doxazosin	Human Plasma	0.05 to 50 ng/mL	HPLC/FL	1.0 mL	Na Heparin	-20	Richmond	Inactive	LC 266
Doxepin (Desmethyldoxepin)	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P815
Doxorubicin	Human Plasma	1 to 200 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-70	Richmond	Inactive	LC 252
	Human Plasma	50 to 50,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1386
Doxycycline	Human Plasma	0.1 to 10 µg/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Richmond Madison	Active	LCMS 511 P1325
Dronedarone (N-Desbutyl Dronedarone)	Human Plasma	0.5 to 300 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1150

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Drospirenone & 17 α -Ethinyl Estradiol (EE)	Human Plasma	0.5 to 200 ng/mL 2 to 800 pg/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 545
Duloxetine	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-20	Madison	Active	P882
Dutasteride & Tamsulosin	Human Plasma	0.025 to 25 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1068
Dutasteride & Tamsulosin	Human Serum	25 to 25,000 pg/mL	LC/MS/MS	0.1 mL	None	-20	Madison	Active	P1130
Efavirenz	Human Plasma	0.1 to 25 μ g/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond Madison	Inactive Active	LCMSB 517 P1326
	Human Whole Blood	0.1 to 25 μ g/mL	DBS by LC/MS/MS	0.1-0.3 mL	K ₂ EDTA	Room Temp	Richmond	Inactive	LCMSB 517.1
Eicosapentaenoic Acid & Docosahexaenoic Acid (EPA & DHA)	Human Plasma	10 to 5000 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 618
Eicosapentaenoic Acid & Docosahexaenoic Acid (EPA & DHA), Total	Human Plasma	2 to 200 μ g/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 619
Eicosapentaenoic Acid Ethyl Ester Docosahexaenoic Acid Ethyl Ester (EPA-EE & DHA-EE)	Human Plasma	0.25 to 250 ng/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 633
Eltrombopag	Human Plasma	100 to 50,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 723
Elvitegravir	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1455

*Inactive methods may require additional time and/or fees prior to reactivation

**Total = Unconjugated + Conjugated Drug. Unless specifically noted, the free or unconjugated drug is measured.

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Emtricitabine & Tenofovir	Human Plasma	20 to 4000 ng/mL 5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 468
	Human Plasma	20 to 4000 ng/mL 5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P947
Enalapril (Enalaprilat)	Human Plasma	0.25 to 100 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Madison	Inactive	P435
	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Inactive	LCMS 31
	Dog Plasma	0.25 to 400 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Madison	Inactive	P532
Enoxaparin using Factor IIA	Human Plasma	0.03 to 0.16 IU/mL	Chromogenic	0.05 mL	Na Citrate	-70	Richmond	Inactive	ICD 327
Enoxaparin using Factor XA	Human Plasma	0.04 to 0.5 IU/mL	Chromogenic	0.05 mL	Na Citrate	-70	Richmond	Inactive	ICD 326
Enrofloxacin & Ciprofloxacin	Dog Plasma	10 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1127
	Cat Plasma	10 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1256
Enzalutamide (N-desmethyl enzalutamide)	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1342
Epinephrine	Human Plasma	0.05 to 8 ng/mL	HPLC/FL	1.0 mL	K ₃ EDTA	-20	Madison	Inactive	P981

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Erlotinib	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Active	LCMSC 390
	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 390.1
	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Madison	Active	P1008
	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Madison	Active	P1016
Erythromycin	Human Plasma	0.2 to 20 µg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond Madison	Active	LCMS 463
Estazolam	Human Plasma	0.1 to 30 ng/mL	LC/MS/MS	1.0 mL	Na Heparin	-20	Madison	Inactive	P336
17β-Estradiol, Total**	Human Serum	0.025 to 10 ng/mL	LC/MS/MS	0.1 mL	None	-70	Richmond	Inactive	LCMS 295
17β-Estradiol & Estrone	Human Serum	1 to 1000 pg/mL 5 to 5000 pg/mL	LC/MS/MS	0.5 mL	None	-20	Richmond	Active	LCMSC 350.2
	Human Serum	1 to 1000 pg/mL 5 to 5000 pg/mL	LC/MS/MS	0.25 mL	None	-70	Madison	Active	P1290
Estrone, Total**	Human Serum	20 to 5000 pg/mL	LC/MS/MS	0.5 mL	None	-70	Richmond	Inactive	LCMSC 351.3
Ethanol	Human Plasma	20 to 1000 µg/mL	GC/FID	0.1 mL	KOx / NaF	-20	Richmond	Active	GC 89
Etonogestrel & 17α-Ethinyl Estradiol (EE)	Human Plasma	25 to 10,000 pg/mL 2 to 800 pg/mL	LC/MS/MS	0.5 mL	KOx / NaF	-70	Richmond Madison	Active	LCMSD 603 P1311
17α-Ethinyl Estradio (EE) & Drospirenone	Human Plasma	2 to 800 pg/mL 0.5 to 200 ng/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 545
17α-Ethinyl Estradiol (EE) & Norethindrone	Human Plasma	2 to 500 pg/mL 50 to 25,000 pg/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Richmond	Active	LCMSC 255

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
17 α -Ethinyl Estradiol (EE) & Norgestrel	Human Plasma	2 to 500 pg/mL 50 to 25,000 pg/mL	LC/MS/MS	0.5 mL	KOx / NaF	-70	Richmond	Active	LCMSC 256
17 α -Ethinyl Estradiol 3-Sulfate	Human Plasma	50 to 10,000 pg/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Active	LCMSC 398
Etodolac	Human Plasma	0.2 to 50 μ g/mL	HPLC/UV	1.0 mL	Na Heparin	-20	Richmond	Inactive	LC 193
Etoposide	Human Plasma	0.02 to 20 μ g/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 515
Etoricoxib	Human Plasma	5 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P971
Etravirine & Ritonavir	Human Plasma	0.5 to 500 ng/mL 10 to 10,000 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison Richmond	Active	P1031
Exenatide	Human Plasma with Aprotinin	10 to 1000 pg/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 566
	Rat Plasma	50 to 5000 pg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMSF 566.1
Everolimus	Human Whole Blood	0.2 to 200 ng/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-20	Madison	Active	P1022
Ezetimibe	Human Plasma	0.2 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 439
	Human Plasma	0.2 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P945
Ezetimibe, Total	Human Plasma	1.0 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 440
	Human Plasma	1.0 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P944
Famotidine	Human Plasma	5 to 250 ng/mL	HPLC/UV	1.0 mL	Na Heparin	-20	Madison	Inactive	P255

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Fenofibric Acid	Human Plasma	0.05 to 30 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 235
	Human Plasma	0.05 to 30 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1043
Fentanyl	Human Plasma	25 to 10,000 pg/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMSB 186.5
	Human Plasma	5 to 2000 pg/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 186.4
	Human Plasma	5 to 5000 pg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1405
	Human Serum	10 to 2000 pg/mL	LC/MS/MS	0.1 mL	None	-20	Madison	Inactive	P869
	Dog Plasma	40 to 40,000 pg/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P966
	Artificial CSF	2 to 800 pg/mL	LC/MS/MS	0.15 mL	None	-20	Madison	Active	P1382
	Göttingen Minipig Plasma	5 to 5000 pg/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Active	P1491
Fentanyl (Norfentanyl)	Mouse Plasma	0.04 to 40 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P637
	Rat Plasma	0.04 to 40 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Inactive	P823
	Rabbit Plasma	0.04 to 40 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Inactive	P636
	Human Plasma	5 to 2000 pg/mL	LC/MS/MS	0.15 mL	K ₂ EDTA	-20	Madison	Active	P1159
Fentanyl (Norfentanyl) (DespropionylFentanyl)	Human Plasma	10 to 500 pg/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Madison	Active	P624



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Fexofenadine	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P1365
	Human Urine	0.05 to 10 µg/mL	LC/MS/MS	0.02 mL	None	-20	Madison	Inactive	P746
Fluconazole	Human Plasma	20 to 10,000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P791
Fingolimod	Human Whole Blood	0.025 to 10 ng/mL	LC/MS/MS	1.0 mL	K ₃ EDTA	-20	Madison	Active	P1224
Fingolimod Phosphate	Human Whole Blood	0.05 to 2.5 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1225
Firocoxib	Dog Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1490
	Dog Plasma	2.5 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1529
Flucytosine	Human Plasma	50 to 50,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1125
Flunixin	Horse Plasma	10 to 5000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Active	P1138
Fluoxetine (Norfluoxetine)	Human Plasma	0.25 to 100 ng/mL	LC/MS/MS	0.2 mL	Na Heparin K ₂ EDTA	-20	Richmond Madison	Active	LCMS 52 P1563
Flurbiprofen	Human Plasma	50 to 25,000 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Madison	Active	P1498
Fluticasone Propionate	Human Plasma	1.0 to 500 pg/mL	LC/MS/MS	1.0 mL	KOx / NaF	-20	Madison	Active	P817

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Fluticasone Furoate	Human Plasma	0.2 to 40 pg/mL	LC/MS/MS	1.0 mL	KOx / NaF	-20	Madison	Active	P1084
Fluticasone Propionate & Salmeterol	Human Plasma	1 to 200 pg/mL	LC/MS/MS	1.0 mL	KOx / NaF	-20	Madison	Active	P988
	Human Plasma	0.5 to 200 pg/mL	LC/MS/MS	0.5 mL	KOx / NaF	-20	Madison	Active	P1197
Fluvoxamine	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P658
Formoterol	Human Plasma	0.5 to 250 pg/mL	LC/MS/MS	0.5 mL	Li Heparin with Eserine hemisulfate	-20	Madison	Active	P860
	Human Urine	6.0 to 1200 pg/mL	LC/MS/MS	0.1 mL	None	-20	Madison	Active	P883
	Human Plasma	0.5 to 250 pg/mL	LC/MS/MS	0.5 mL	K ₃ EDTA with Eserine hemisulfate	-20	Madison	Active	P1296
Furosemide	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Active	LCMS 317.1
	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P1518
	Human Urine	0.2 to 50 µg/mL	LC/MS/MS	0.2 mL	None	-20	Richmond	Active	LCMS 317
GS331007 & Sofosbuvir	Human Plasma	10 to 5000 ng/mL 5 to 2500 ng/mL	LC/MS/MS	0.05 mL	Na F/KO	-70	Madison	Active	P1300

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Gabapentin	Human Plasma	0.05 to 10 µg/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 359
	Human Plasma	0.05 to 10 µg/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Madison	Active	P1522
	Human Plasma	50 to 50,000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Active	LCMS 359.3
Galanthamine	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 312
Gatifloxacin	Human Plasma	0.025 to 10 µg/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 285
Gefitinib	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 522
Gemfibrozil	Human Plasma	0.05 to 25 µg/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 56
	Human Plasma	0.05 to 50 µg/mL	HPLC/UV	0.5 mL	Na Heparin and EDTA	-20	Madison	Inactive	P115
Glimepiride	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 266
Glipizide	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMS 137
Glyburide	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 159
Glyburide <i>Lower range for pediatric studies</i>	Human Plasma	0.10 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMS 159.1
Guaifenesin	Human Plasma	8 to 4000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1172
	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.075 mL	Na Heparin	-20	Madison	Active	P973
	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.075 mL	K ₂ EDTA	-20	Madison	Active	P1465
Guaifenesin & Dextromethorphan	Human Plasma	8 to 4000 ng/mL 0.01 to 5 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P1285

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Guaifenesin & Codeine & Morphine	Human Plasma	2 to 2000 ng/mL 0.1 to 100 ng/mL 0.2 to 20 ng/mL	LC/MS/MS	0.3 mL	Na Heparin	-20	Madison	Active	P919
Haloperidol	Human Plasma	0.025 to 10 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Richmond	Active	LCMSC 95
Herceptin	Human Serum	0.5 to 200 µg/mL	GYROS	0.25 mL	None	-70	Richmond	Active	ICD 178
Hydrochlorothiazide	Human Plasma	2 to 200 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Active	LCMSD 205.5
	Human Urine	0.1 to 25 µg/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMSD 205.3
Hydrocodone (Hydromorphone)	Human Plasma	0.1 to 100 ng/mL 0.05 to 50 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond Madison	Active	LCMSC 492 P1437
	Rat Plasma	0.2 to 200 ng/mL 0.1 to 100 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 492.1
Hydrocodone (Hydromorphone)	Dog Plasma	10 to 1000 ng/mL 2 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 492.2
	Rabbit Plasma	0.2 to 200 ng/mL 0.1 to 100 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 492.3
	Mouse Plasma	0.2 to 200 ng/mL 0.1 to 100 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 492.8
Hydrocodone (Hydromorphone)	Human Dialysate	0.02 to 20 ng/mL 0.01 to 10 ng/mL	LC/MS/MS	0.3 mL	None	-20	Richmond	Active	LCMSD 492.5
	Human Urine	10 to 10,000 ng/mL 5 to 5000 ng/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMSC 492.4

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Hydrocodone (Hydromorphone) (Norhydrocodone)	Human Plasma	0.1 to 100 ng/mL 0.05 to 50 ng/mL 0.1 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 492.6
	Human Urine	10 to 10,000 ng/mL 5 to 5000 ng/mL 10 to 10,000 ng/mL	LC/MS/MS	0.025 mL	None	-20	Richmond	Active	LCMSC 492.7
	Human Plasma	0.1 to 100 ng/mL 0.05 to 50 ng/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Madison	Inactive	P623
	Hamster Plasma	1 to 400 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Inactive	P659
Hydrocodone & Acetaminophen	Human Plasma	0.1 to 50 ng/mL 100 to 15,000 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1213
	Human Plasma	0.1 to 50 ng/mL 100 to 15,000 ng/mL	LC/MS/MS	0.15 mL	K ₂ EDTA	-20	Madison	Active	P1305
Hydrocodone & Acetaminophen & Chlorpheniramine	Human Plasma	0.1 to 50 ng/mL 100 to 50,000 ng/mL 0.25 to 125 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1066
Ibuprofen	Human Plasma	0.2 to 50 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond Madison	Active	LCMSC 409 P1431
Ibuprofen Enantiomers	Human Plasma	0.1 to 25 µg/mL 0.1 to 25 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 561
IFN Gamma	Human Serum	31.3 to 1000 pg/mL	ELISA	0.2 mL	None	-70	Richmond	Inactive	ICD 278
IGF-1	Human Serum	10 to 1000 ng/mL	LC/MS/MS	0.1 mL	None	-70	Richmond	Active	LCMSC 558



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
IL-1 β	Human Serum	7.82 to 250 pg/mL	ELISA	0.4 mL	None	-20	Richmond	Inactive	ICD 151
IL-2	Human Serum	62.5 to 2000 pg/mL	ELISA	0.2 mL	None	-20	Richmond	Inactive	ICD 150
IL-4	Human Serum	31.3 to 2000 pg/mL	ELISA	0.1 mL	None	-70	Richmond	Inactive	ICD 277
IL-6	Human Serum	5 to 320 pg/mL	ELISA	0.2 mL	None	-20	Richmond	Inactive	ICD 141
IL-10	Human Serum	10 to 500 pg/mL	ELISA	0.3 mL	None	-20	Richmond	Inactive	ICD 142
Iloperidone (P-88)	Human Plasma	0.01 to 5 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1158
Imatinib	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1010
Ipilimumab	Human Plasma	1 to 100 μ g/mL	LC/MS/MS	0.03 mL	K ₂ EDTA	-70	Richmond	Active	LCMSF 872
Irbesartan	Human Plasma	2.5 to 2500 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 232
Ipratropium	Human Plasma	1 to 400 pg/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P1476
Isopropamide	Human Plasma	0.05 to 10 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P409
Itraconazole (2-Hydroxyitraconazole)	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1079
	Human Plasma	20 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1374
Ivermectin	Dog Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Active	P1254

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Ivermectin B1a	Horse Plasma	0.5 to 50 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Madison	Inactive	P575
	Horse Serum	0.50 to 50 ng/mL 0.84 to 1.68 ng/mL	HPLC/FL	2.0 mL	None	-20	Madison	Inactive	P389
	Pig Plasma	0.50 to 100 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Madison	Inactive	P646
	Cow Plasma	0.50 to 100 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Madison	Inactive	P479
	Dog Plasma	0.50 to 50 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Madison	Inactive	P457
	Dog Plasma	0.10 to 10 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Madison	Inactive	P715
Ivermectin B1b	Horse Plasma	0.10 to 10 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Madison	Inactive	P621
Ketamine (Norketamine)	Human Serum	5 to 5000 ng/mL 2.5 to 2500 ng/mL	LC/MS/MS	0.2 mL	None	-20	Madison	Inactive	P627
	Rabbit Plasma	10 to 10,000 ng/mL 5 to 5000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P648
	Rat Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Madison	Active	P1179
	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Inactive	P663
S-Ketamine & R-Ketamine S-Norketamine & R-Norketamine	Cat Plasma	20 to 8000 ng/mL 10 to 4000 ng/mL	LC/MS/MS	50 uL	Na Heparin	-20	Madison	Inactive	P703
	Rat Plasma	5 to 1000 ng/mL 1 to 200 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1163

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Ketoconazole	Human Plasma	0.1 to 20 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 202
	Human Plasma	0.1 to 20 µg/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 202.1
	Human Plasma	25 to 2500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 202.2
Ketoprofen	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 162
	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.4 mL	Na Heparin	-20	Madison	Active	P747
	Minipig Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P821
Ketoprofen, and Total**	Human Plasma	1.0 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P767
	Human Urine	5 to 5000 ng/mL	LC/MS/MS	0.025 mL	None	-20	Madison	Active	P768
Ketoprofen Enantiomers	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Active	P782
Ketorolac	Human Plasma	0.025 to 25 µg/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Richmond	Inactive	LC 207
Lacosamide	Human Plasma	0.1 to 20 µg/mL	LC/MS/MS	0.05mL	K ₂ EDTA	-20	Madison	Active	P1134
Lamivudine (3TC) & Abacavir	Human Plasma	2.5 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1165
Lamotrigine See Cocktail Assay "Epilepsy"	Human Plasma	0.1 to 20 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Inactive	P837
Lansoprazole	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.05mL	K ₃ EDTA	-20	Richmond	Active	LCMS 178
	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.05mL	K ₃ EDTA	-20	Madison	Active	P896
Laropiprant	Human Plasma	0.01 to 10 µM	LC/MS/MS	0.15 mL	Na Heparin	-20	Madison	Active	P1124

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Ledipasvir	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Madison	Active	P1393
Letrozole	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1287
Leucovorin Diastereomers (6S-5-Methyltetrahydrofolic Acid Diastereomers)	Human Serum requires 1 mg/mL ascorbic acid treatment	0.5 to 250 µg/mL 0.1 to 50 µg/mL	LC/MS/MS	0.05 mL	None	-70	Richmond	Inactive	LCMSC 387
Leuprolide	Human Serum	0.025 to 25 ng/mL	LC/MS/MS	0.2 mL	None	-20	Richmond	Active	LCMSC 245.1
Levetiracetam	Human Plasma	0.05 to 50 µg/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison	Active	P811
Levodopa & Carbidopa	Human Plasma	5 to 2500 ng/mL 0.5 to 250 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-70	Madison	Active	P838
	Rat Plasma	50 to 10,000 ng/mL 25 to 5000 ng/mL	LC/MS/MS	0.02 mL	K ₂ EDTA	-70	Madison	Active	P1420
Levodopa & Carbidopa (3-O-MethylDopa)	Human Plasma	10 to 5000 ng/mL 10 to 5000 ng/mL 400 to 25,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1571
Levofloxacin	Human Serum	25 to 15,000 ng/mL	HPLC/UV	0.5 mL	None	-20	Richmond	Inactive	LC 287
	African Green Monkey Plasma	0.03 to 15 µg/mL	HPLC/UV	0.05 mL	K ₂ EDTA	-20	Richmond	Inactive	LC 287.1
	Rabbit Plasma	0.1 to 50 µg/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMSB 554

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Lidocaine	Pig Plasma	2 to 500 ng/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Madison	Inactive	P634
	Rat Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Inactive	P667
	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Active	P871
	Hanford Minipig Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.03 mL	K ₂ EDTA	-20	Madison	Active	P1504
Linagliptin	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 642
Liraglutide	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 631
Lisdexamfetamine (d-amphetamine)	Human Plasma	0.1 to 100 ng/mL 0.2 to 200 ng/mL	LC/MS/MS	0.4 mL	K ₂ EDTA	-20	Madison	Active	P1051
Lisinopril	Human Plasma	0.5 to 400 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Active	P1206
	Human Urine	25 to 25,000 ng/mL	LC/MS/MS	0.025 mL	None	-20	Madison	Inactive	P694
	Rat Plasma	1.0 to 1000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P673
Loperamide	Human Plasma	10 to 10,000 pg/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P557
	Human Plasma	10 to 10,000 pg/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSC 310
Lopinavir See Cocktail Assay "Antiviral"	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison Richmond	Active	P1002
Loratadine (Descarboethoxyloratadine) (3-OHDescarboethoxyloratadine)	Human Plasma	0.025 to 10 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond Madison	Active	LCMS 188.1 P1391
Lorazepam	Human Plasma	0.5 to 50 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Active	LCMSC 142

*Inactive methods may require additional time and/or fees prior to reactivation

**Total = Unconjugated + Conjugated Drug. Unless specifically noted, the free or unconjugated drug is measured.

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Lorazepam, Total**	Human Plasma	2.5 to 500 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 294
Losartan (Acid Metabolite)	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.15 mL	Na Heparin	-20	Richmond	Active	LCMSC 208
	Human Urine	5 to 2000 ng/mL 2 to 2000 ng/mL	LC/MS/MS	0.1 mL	None	-20	Richmond	Inactive	LCMSC 208.1
	Human Urine	2 to 2000 ng/mL	LC/MS/MS	0.05 mL	None	-20	Madison	Active	P1556
Lovastatin (Lovastatin Acid)	Human Plasma	0.05 to 12.5 ng/mL 0.1 to 25 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-70	Richmond	Inactive	LCMS 267
	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-70	Madison	Active	P1240
Lurasidone	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1221
Meclocycline	Human Plasma	25 to 10,000 ng/mL	HPLC/UV	0.2 mL	K ₂ EDTA	-20	Richmond	Inactive	LC 337
Medroxyprogesterone Acetate	Human Serum	0.02 to 5 ng/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMSC 198
	Rabbit Plasma	0.025 to 5 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Richmond	Active	LCMSD 198.1
Memantine	Human Plasma	0.5 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1200
	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1093
Memantine & Donepezil	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1258
Mesalamine (N-acetyl-5-aminosalicylic acid)	Human Plasma	2 to 1000 ng/mL 5 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1191

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**Total = Unconjugated + Conjugated Drug. Unless specifically noted, the free or unconjugated drug is measured.

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Metformin	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Active	LCMS 153
	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond Madison	Inactive Active	LCMS 153.5 P1350
	Human Urine	10 to 10,000 µg/mL	HPLC/UV	0.05 mL	None	-20	Richmond	Inactive	LC 251.1
	Dog Plasma	1 to 1000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 153.4
Methadone	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 323
	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.025 mL	K ₃ EDTA	-20	Madison	Active	P1414
	Human Urine	25 to 1000 ng/mL	HPLC/UV	1.0 mL	None	-20	Richmond	Inactive	LC 238.2
Methadone Enantiomers	Human Plasma	5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 323.1
	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 323.2
Methotrexate (7-Hydroxymethotrexate)	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond Madison	Active	LCMSC 380.1 P1322
	Human Urine	0.05 to 25 µg/mL	LC/MS/MS	0.05 mL	None	-20	Richmond	Inactive	LCMSC 380.2
Methylphenidate	Human Plasma	0.25 to 25 ng/mL	LC/MS/MS	0.10 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 187
	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-70	Richmond	Active	LCMS 230.1
	Human Plasma	0.1 to 30 ng/mL	LC/MS/MS	0.1 mL	Na Heparin or K ₂ EDTA	-20	Madison	Inactive	P689
Methylphenidate (Ritalinic Acid)	Beagle Plasma	0.10 to 100 ng/mL 2.0 to 2000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 230

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Methylphenidate Enantiomers (Ritalinic Acid Enantiomers)	Human Plasma	0.05 to 50 ng/mL (D) 0.01 to 10 ng/mL (L) 1.0 to 1000 ng/mL (D) 1.0 to 1000 ng/mL (L)	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Inactive	P779
Methylphenidate Enantiomers	Human Plasma	0.05 to 50 ng/mL (D) 0.01 to 10 ng/mL (L)	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison	Active	P1234
Methylprednisone & Prednisone (Prednisolone)	Human Plasma	1 to 1000 ng/mL 0.5 to 500 ng/mL 0.5 to 500 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1149
Methyltestosterone	Human Plasma	5 to 30,000 pg/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSC 349
	Human Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSC 242
Metoprolol	Human Plasma	5 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P940
	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P1255
Metoprolol (α -Hydroxymetoprolol)	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1335
Metronidazole (1-Hydroxymetronidazole)	Human Plasma	10 to 1000 ng/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Madison	Inactive	P686
Mevalonic Acid	Human Plasma	0.5 to 20 ng/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Madison	Active	P758
	Human Urine	25 to 1000 ng/mL	LC/MS/MS	0.25 mL	None	-20	Madison	Inactive	P759

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Midazolam (1-Hydroxy midazolam)	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.3 mL	Na Heparin	-20	Richmond	Active	LCMSC 97
	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Active	P1024
	Human Urine	0.05 to 50 ng/mL 1 to 1000 ng/mL	LC/MS/MS	0.2 mL	None	-20	Madison	Inactive	P678
	Human Urine	0.05 to 50 ng/mL 2 to 2000 ng/mL	LC/MS/MS	0.2 mL	None	-20	Madison	Inactive	P870
(1-HydroxyMidazolam, Total**)	Human Urine	1 to 1000 ng/mL	LC/MS/MS	0.2 mL	None	-20	Richmond	Inactive	LCMS 228
Milbemycin Oxime (A3) (A4)	Cat Plasma	2 to 2000 ng/mL 4 to 4000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1303
	Dog Plasma	2 to 2000 ng/mL 4 to 4000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1318
Milnacipran	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1081
Minocycline	Human Plasma	0.02 to 10 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 63
	Human Serum	0.02 to 10 µg/mL	HPLC/UV	0.5 mL	None	-20	Richmond	Inactive	LC 63.1
	Human Saliva	0.02 to 10 µg/mL	HPLC/UV	0.5 mL	None	-20	Richmond	Inactive	LC 63.5
	Human Crevicular Fluid	10 to 2000 ng/µL	HPLC/UV	1.0 µL	None	-20	Richmond	Inactive	LC 360
Mirtazapine	Human Plasma	0.05 to 100 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMS 145

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
MMAE	Cyno Monkey Plasma	10 to 2000 pg/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 844
	Human Plasma	10 to 2000 pg/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-70	Richmond	Active	LCMSX 844.1
Mometasone Furoate	Human Plasma	0.25 to 25 pg/mL	LC/MS/MS	1.0 mL	K ₃ EDTA	-20	Richmond	Active	LCMSD 345.1
	Dog Plasma	10 to 1000 pg/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSD 345.4
	Rat Plasma	10 to 1000 pg/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSD 345.3
Montelukast	Human Plasma	5 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-80	Richmond	Active	LCMSC 385
Morphine (Morphine-3β-D-glucuronide) (Morphine-6β-D-glucuronide)	Human Plasma	0.1 to 25 ng/mL 2 to 500 ng/mL 0.5 to 125 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1286
Morphine (Morphine-3β-glucuronide) (Morphine-6β-glucuronide)	Human Plasma	0.5 to 50 ng/mL 10 to 1000 ng/mL 2 to 200 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Inactive	LCMS 454
Morphine (Morphine-6β-D-glucuronide)	Human Plasma	0.3 to 120 ng/mL 0.9 to 360 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1294
Morphine (Morphine-3β-glucuronide) (Morphine-6β-glucuronide) Codeine	Human Plasma	0.2 to 20 ng/mL 2 to 200 ng/mL 0.5 to 50 ng/mL 1 to 100 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Active	LCMSC 396
Morphine & Codeine & Guafenesin	Human Plasma	0.2 to 20 ng/mL 0.1 to 100 ng/mL 2 to 2000 ng/mL	LC/MS/MS	0.3 mL	Na Heparin	-20	Madison	Active	P919

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Moxifloxacin	Human Plasma	25 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond Madison	Inactive Active	LCMSB 276 P1317
Naloxone & Buprenorphine (Norbuprenorphine)	Human Plasma	2 to 1000 pg/mL 20 to 10,000 pg/mL 20 to 10,000 pg/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Madison	Active	P1160
Naloxone, Total	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Madison	Active	P1096
Naltrexone 6β-naltrexol & Oxycodone	Human Plasma	0.1 to 100 ng/mL 0.5 to 500 ng/mL 0.1 to 100 ng/mL	LC/MS/MS	0.15 mL	K ₂ EDTA	-20	Madison	Active	P1193
Naltrexone 6β-naltrexol	Human Plasma	0.01 to 2 ng/mL 0.1 to 20 ng/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-20	Madison	Active	P1230
	Human Plasma	5 to 5000 pg/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1404
	Göttingen Minipig Plasma	5 to 1000 pg/mL 5 to 100 pg/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Madison	Active	P1493
Naproxen	Human Plasma	0.1 to 100 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Active	LCMS 486
Navelbine aka Vinorelbine	Human Plasma	2 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMS 539
Nevirapine	Human Plasma	25 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond Madison	Active	LCMS 250 P1330
Niacin aka Vitamin B3, or nicotinic acid (Nicotinuric acid) aka NUA	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.25mL	Na Heparin	-70	Richmond	Active	LCMS 264
Niacin aka Vitamin B3, or nicotinic acid (Nicotinuric acid) aka NUA	Human Urine	0.02 to 20 µg/mL 0.2 to 200 µg/mL	LC/MS/MS	0.1 mL	None	-20	Richmond	Inactive	LCMSB 264.1

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
(1-Methyl-Nicotinamide) <i>aka</i> <i>NMA</i> (N-Methyl-2-Pyridone-5-carboxamide) <i>aka</i> <i>2PY</i>	Human Urine	0.5 to 250 µg/mL 2.5 to 250 µg/mL	LC/MS/MS	0.05 mL	None	-20	Richmond	Inactive	LCMS 274.1
(1-Methyl-Nicotinamide) <i>aka</i> <i>NMA</i> (N-Methyl-2-Pyridone-5-carboxamide) <i>aka</i> <i>2PY</i>	Human Plasma	0.1 to 10 µg/mL 0.2 to 20 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 274
(1-Methyl-Nicotinamide) <i>aka</i> <i>NMA</i> (N-Methyl-2-Pyridone-5-carboxamide) <i>aka</i> <i>2PY</i>	Human Plasma	0.1 to 10 µg/mL 0.2 to 20 µg/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMSB 274.2
(1-Methyl-Nicotinamide) <i>aka</i> <i>NMA</i> (N-Methyl-2-Pyridone-5-carboxamide) <i>aka</i> <i>2PY</i> , (N-Methyl-4-Pyridone-3-carboxamide) <i>aka</i> <i>4PY</i>	Rat Plasma	0.1 to 10 µg/mL 0.2 to 20 µg/mL 0.2 to 20 µg/mL	LC/MS/MS	0.025 mL	Li Heparin	-20	Richmond	Active	LCMSC 274.5
(1-Methyl-Nicotinamide) <i>aka</i> <i>NMA</i> (N-Methyl-2-Pyridone-5-carboxamide) <i>aka</i> <i>2PY</i> , (N-Methyl-4-Pyridone-3-carboxamide) <i>aka</i> <i>4PY</i>	Human Urine	1 to 250 µg/mL 2 to 500 µg/mL 2 to 500 µg/mL	LC/MS/MS	0.05 mL	None	-20	Richmond	Active	LCMS 274.6
Nicotine (Cotinine)	Human Plasma	0.5 to 100 ng/mL 2.5 to 500 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P538
Nilotinib	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1011
Nizatidine (N-Desmethylnizatidine)	Human Plasma	5 to 5000 ng/mL	HPLC/UV	1.0 mL	Na Heparin	-20	Richmond	Inactive	LC 264
Norelgestromin <i>aka</i> <i>17-desacetyl norgestimate</i>	Human Plasma	0.02 to 10 ng/mL	LC/MS/MS	0.5 mL	KOx / NaF	-70	Richmond	Active	LCMSC 372
Norethindrone & 17α-Ethinyl Estradiol (EE)	Human Plasma	50 to 25,000 pg/mL 2 to 500 pg/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Richmond	Active	LCMSC 255

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Norgestrel & 17 α -Ethinyl Estradiol (EE)	Human Plasma	50 to 25,000 pg/mL 2 to 500 pg/mL	LC/MS/MS	0.5 mL	KOx / NaF	-70	Richmond	Active	LCMSC 256
Octreotide	Human Plasma	0.025 to 25 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 296
	Human Serum	0.0286 to 28.6 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 296.4
	Monkey Plasma with Aprotinin	5 to 250 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-70	Richmond	Active	LCMSC 296.2
	Monkey Plasma with Aprotinin	0.1 to 25 ng/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-70	Richmond	Active	LCMSC 296.1
	Rabbit Plasma	1 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-70	Richmond	Active	LCMSC 296.3
Olanzapine (Desmethyloanzapine)	Human Plasma	0.025 to 25 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMS 84
Olopatadine	Human Plasma	0.05 to 60 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 697
Omeprazole	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 131
	Horse Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1025
Omeprazole (5-Hydroxyomeprazole) (Omeprazole sulphone)	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P749

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Omeprazole (5-Hydroxyomeprazole)	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Richmond	Active	LCMSC 131.2
	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1009
Omeprazole Acetylsalicylic Acid (Salicylic Acid)	Human Plasma	4 to 2000 ng/mL 20 to 10,000 ng/mL 100 to 50,000 ng/mL	LC/MS/MS	0.075 mL	NaF / KOx	-70	Madison	Active	P1353
Ondansetron	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA / K ₂ EDTA	-20	Madison	Active	P1434
Oxaprozin	Human Plasma	0.5 to 500 µg/mL	HPLC/UV	0.1 mL	Na Heparin	-20	Richmond	Inactive	LC243
Oxcarbazepine	Human Plasma	0.1 to 5 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Active	P850
(Monohydroxyoxcarbaz- epine <i>aka MHD</i>)	Human Plasma	1 to 50 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Inactive	P886
Oxybutynin Enantiomers (Desethyloxybutynin enantiomers)	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-70	Richmond	Active	LCMS 411
Oxybutynin	Human Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1301
Oxycodone	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1140
Oxycodone (noroxycodone) (oxymorphone) (noroxymorphone)	Human Plasma	0.02 to 10 ng/mL 0.02 to 10 ng/mL 0.02 to 10 ng/mL 0.05 to 10 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Active	P1227
Oxycodone & Acetaminophen	Human Plasma	0.1 to 100 ng/mL 100 to 15,000 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1310

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Oxycodone & Naltrexone 6β-naltrexol	Human Plasma	0.1 to 100 ng/mL 0.5 to 500 ng/mL	LC/MS/MS	0.15 mL	K ₂ EDTA	-20	Madison	Active	P1193
Oxymorphone	Human Plasma	10 to 1000 pg/mL	LC/MS/MS	0.5 mL	K ₃ EDTA	-20	Madison	Active	P820
Oxymorphone (6-OH-oxymorphone)	Human Plasma	0.025 to 5 ng/mL 0.01 to 2 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P1148
	Human Plasma	0.1 to 10 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P930
Paclitaxel (Taxol ®)	Human Plasma	0.1 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 163.2
	Human Plasma	10 to 5000 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-70	Richmond	Active	LCMSC 163.4
Paclitaxel (Taxol ®), Unbound	Human Plasma Ultrafiltrate	1 to 1000 ng/mL	LC/MS/MS	0.35 mL	Na Heparin	-70	Richmond	Active	LCMSC 637.3
Paclitaxel (Taxol ®), Total**	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-70	Richmond	Active	LCMSC 637.1
Paliperidone <i>Aka 9-hydroxyrisperidone</i>	Human Plasma	0.1 to 60 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1019
Paroxetine	Human Plasma	0.25 to 50 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Richmond	Active	LCMS 161
	Human Plasma	0.25 to 50 ng/mL	LC/MS/MS	0.2 mL	Na Heparin K ₃ EDTA	-20	Madison	Active	P776
Pazopanib	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1101
Pemoline	Human Plasma	25 to 5000 ng/mL	HPLC/UV	0.2 mL	Na Heparin	-20	Richmond	Inactive	LC258
Pentoxifylline (Hydroxypentifylline) (Carboxypropylpentifylline)	Human Plasma	5 to 1000 ng/mL 10 to 2000 ng/mL 10 to 2000 ng/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Madison	Inactive	P348

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Perampanel	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1299
Phenethylamine	Human Urine	1.13 to 501 ng/mL	LC/MS/MS	0.2 mL	None	-20	Madison	Inactive	P655
Phenobarbital See Cocktail Assay "Epilepsy"	Human Plasma	0.1 to 50 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Inactive	P837
Phenteramine & Topiramate	Human Plasma	0.1 to 100 ng/mL 5 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1194
Phenylbutazone	Horse Plasma	0.1 to 40 µg/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Madison	Inactive	P554
Phenylephrine, Total**	Human Plasma	5 to 1000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Madison	Inactive	P806
	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	Li Heparin	-70	Richmond Madison	Inactive Active	LCMS 257
	Human Urine	100 to 5000 ng/mL	LC/MS/MS	0.05 mL	None	-70	Madison	Active	P958
Phenylephrine (Phenylephrine Glucuronide)	Human Urine	2 to 200 ng/mL	LC/MS/MS	0.2 mL	None	-70	Madison	Active	P956
(3-Hydroxymandelic acid)	Human Urine	100 to 5000 ng/mL	LC/MS/MS	0.05 mL	None	-70	Madison	Inactive	P957
Phenylephrine	Human Plasma	10 to 2500 pg/mL	LC/MS/MS	0.25 mL	Li Heparin	-70	Richmond	Active	LCMSC 392.1
	Human Plasma	10 to 2500 pg/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-70	Madison	Active	P898
	Human Plasma	10 to 2500 pg/mL	LC/MS/MS	0.15 mL	Li Heparin	-70	Madison	Active	P1436

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Phenylpropanolamine	Human Plasma	5 to 1000 ng/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 181
	Human Plasma	5 to 500 ng/mL	HPLC/UV	1.0 mL	EDTA	-20	Madison	Inactive	P002
Phenytoin, Total**	Human Plasma	20 to 5000 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMSB 418
	Human Plasma	20 to 10,000 ng/mL	LC/MS/MS	0.025 mL	K ₃ EDTA	-20	Richmond	Inactive	LCMSB 418.1
	Human Plasma	20 to 10,000 ng/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Richmond	Active	LCMSC 418.2
Phenytoin Phenytoin, Total **	Human Plasma	0.05 to 15 µg/mL 0.1 to 30 µg/mL	LC/MS/MS	0.05 mL 0.025 mL	K ₂ EDTA	-20	Madison	Inactive	P639
(5-Hydroxyphenytoin)	Human Plasma	0.1 to 20 µg/mL	HPLC/UV	1.0 mL	Na Heparin	-20	Madison	Inactive	P281
Phenytoin (5-Hydroxyphenytoin)	Human Urine	0.1 to 40 µg/mL	HPLC/UV	0.5 mL	None	-20	Madison	Inactive	P642
(5-Hydroxyphenytoin), Total**	Human Urine	1 to 200 µg/mL	HPLC/UV	0.05 mL	None	-20	Madison	Inactive	P643
Pioglitazone	Human Plasma	25 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1085
Pioglitazone MIII,MIV Pioglitazone	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1596
Pioglitazone Keto Pioglitazone (MIII), Hydroxy Pioglitazone (MIV)	Human Plasma	25 to 2500 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1215

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Pitavastatin (Pitavastatin Lactone)	Human Plasma	1 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1187
	Dog Plasma	1 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P1503
	Rat Plasma	1 to 200 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-70	Madison	Active	P1545
Pravastatin	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Inactive	LCMS 47
Praziquantel	Dog Plasma	10 to 4000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P989
	Dog Plasma	2 to 2000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1065
	Cat Plasma	10 to 4000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P831
Prednisone (Prednisolone)	Human Plasma	0.5 to 1000 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P955
	Rat Plasma	0.25 to 250 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Madison	Active	P984
Prednisone & Methylprednisolone (Prednisolone)	Human Plasma	0.5 to 500 ng/mL 1 to 1000 ng/mL 0.5 to 500 ng/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-20	Madison	Active	P1149
Pregabalin	Human Plasma	20 to 20,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond Madison	Active	LCMSC 487 P1392
	Human Plasma	20 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1402
Procainamide (N-Acetylprocainamide)	Human Plasma	0.025 to 10 µg/mL	HPLC/UV	0.25 mL	Na Heparin	-20	Richmond	Inactive	LC 306

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Progesterone	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 431
	Rabbit Plasma	0.5 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 431.1
Proguanil	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 530
Propranolol	Human Plasma	1 to 600 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-70	Madison	Active	P1544
Propranolol (4-Hydroxypropranolol)	Human Plasma with Ascorbic Acid	0.5 to 250 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Richmond	Inactive	LCMSB 191
	Human Urine with Ascorbic Acid	1 to 250 ng/mL	LC/MS/MS	0.25 mL	None	-70	Richmond	Inactive	LCMSB 191.1
Propranolol, Total** (4-Hydroxypropranolol)	Human Plasma	2 to 600 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-70	Richmond	Inactive	LCMSB 281.2
	Human Plasma	2 to 600 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-70	Richmond	Active	LCMS 281.3
	Human Plasma	2 to 600 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-70	Madison	Active	P1520
Pseudoephedrine	Human Plasma	2.5 to 500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 201
	Human Plasma	2 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1470
Pseudoephedrine & Dextromethorphan	Human Plasma	0.8 to 400 ng/mL 10 to 5000 pg/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Active	P617
Pseudoephedrine & Dextromethorphan (Dextrorphan)	Human Plasma	2.50 to 2500 ng/mL 0.200 to 200 ng/mL 2.50 to 2500 ng/mL	LC/MS/MS	0.025 mL	Na Heparin	-20	Richmond	Active	LCMSC 690

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Quetiapine	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Inactive	LCMSB 430
Quinidine	Human Plasma	25 to 5000 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 330.1
Raltegravir See "Cocktail Assay Antiviral"	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison Richmond	Active	P1002
Raltegravir & Ritonavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1087
Ramipril (Ramiprilat)	Human Plasma	0.05 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-70	Richmond	Inactive	LCMS 311
Ranitidine	Human Plasma	2.5 to 2500 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Inactive	P873
Ranolazine	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P934
Ranolazine (RS-94827 Metabolite)	Human Plasma	2 to 2000 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P1015
Repaglinide	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 460
	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1510
Ribavirin	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 510
Rifabutin (25-O-DesacetylRifabutin)	Human Plasma	2 to 800 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison	Active	P587
Rifampin	Human Plasma	0.1 to 10 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P941
Rilpivirine (E-isomeric form)	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P1496

*Inactive methods may require additional time and/or fees prior to reactivation

**Total = Unconjugated + Conjugated Drug. Unless specifically noted, the free or unconjugated drug is measured.

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Risperidone (9-Hydroxyrisperidone)	Human Plasma	0.1 to 60 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1019
	Human Plasma	0.1 to 60 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P1411
	Human Serum	0.1 to 30 ng/mL	LC/MS/MS	1.0 mL	None	-20	Madison	Inactive	P361
	Human Urine	1 to 300 ng/mL	LC/MS/MS	0.2 mL	None	-20	Madison	Active	P1034
Ritonavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Richmond	Inactive	LCMS 210.2
Ritonavir See Cocktail Assay "Antiviral"	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison Richmond	Active	P1002
Ritonavir & Atazanavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA K ₂ EDTA	-20	Madison Richmond	Active	P1012 LCMSC 210.4
Ritonavir & Etravirine	Human Plasma	10 to 10,000 ng/mL 0.5 to 500 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison Richmond	Active	P1031
Ritonavir & Tipranavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1020
Ritonavir & Raltegravir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1087

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Rivaroxaban	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Madison	Active	P1014
	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1488
	Cyno Monkey Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	Na Citrate	-20	Madison	Active	P1110
Rizatriptan	Human Plasma	0.2 to 200 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Madison	Active	P845
Rivastigmine	Human Plasma	0.2 to 20 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1162
Roflumilast (Roflumilast N-Oxide)	Human Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSD 664
Ropinirole	Human Plasma	10 to 5000 pg/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Inactive	P736
	Minipig Plasma	10 to 5000 pg/mL	LC/MS/MS	0.2 mL	K ₃ EDTA	-20	Madison	Active	P1080
Ropinirole N-Despropylropinirole	Human Plasma	10 to 5000 pg/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1088
Ropinirole N-Despropylropinirole	Human Plasma	0.03 to 30 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1139
Rosiglitazone (N-Desmethylrosiglitazone)	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 322.1
Rosiglitazone	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 322
	Rat Plasma	2 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 322.2
Rosuvastatin (N-Desmethylrosuvastatin)	Human Plasma	0.1 to 100 ng/mL 0.05 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-70	Madison	Active	P922
	Human Plasma	0.1 to 100 ng/mL 0.05 to 50 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-70	Richmond	Active	LCMS 393.3



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Rotigotine	Human Plasma	2 to 1000 pg/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1209
Rufinamide	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1136
Ruxolitinib	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1302
Acetylsalicylic Acid (Salicylic Acid)	Human Plasma	0.02 to 10 µg/mL 0.1 to 50 µg/mL	LC/MS/MS	0.05 mL	KOx / NaF	-70	Richmond	Active	LCMSC 425
Acetylsalicylic Acid (Salicylic Acid) Omeprazole	Human Plasma	20 to 10,000 ng/mL 100 to 50,000 ng/mL 4 to 2000 ng/mL	LC/MS/MS	0.075 mL	KOx / NaF	-70	Madison	Active	P1353
Salmeterol	Human Plasma	1 to 100 pg/mL	LC/MS/MS	1.0 mL	KOx / NaF	-20	Madison	Active	P798
Salmeterol & Fluticasone Propionate	Human Plasma	1 to 200 pg/mL	LC/MS/MS	1.0 mL	KOx / NaF	-20	Madison	Active	P988
Salmon Calcitonin	Human Plasma	5 to 500 pg/mL	LC/MS/MS	0.3 mL	K ₂ EDTA	-70	Richmond	Active	LCMSD 540.1
Saxagliptin (5-hydroxysaxagliptin)	Human Plasma	0.1 to 100 ng/mL 0.2 to 200 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-70	Madison Richmond	Active	P1174.01
Selegiline (N-Desmethylselegiline) (Amphetamine) (Methamphetamine) (Phenethylamine)	Human Plasma	0.01 to 5 ng/mL 0.04 to 20 ng/mL 0.05 to 25 ng/mL 0.05 to 25 ng/mL 0.01 to 5 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P985
Sertraline	Human Plasma	0.2 to 80 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P570
Sertraline (Desmethylsertraline)	Human Plasma	0.5 to 200 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 98.1
Sildenafil (Desmethylsildenafil)	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.25 mL	Na Heparin & K ₃ EDTA	-70	Richmond	Inactive	LCMS 231

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**Total = Unconjugated + Conjugated Drug. Unless specifically noted, the free or unconjugated drug is measured.

Shaded entries are NEW to our list

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Simvastatin (Simvastatin Acid)	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Active	P980
Sitagliptin	Human Plasma	1 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1133
Sofosbuvir & GS331007	Human Plasma	5 to 2500 ng/mL 10 to 5000 ng/mL	LC/MS/MS	0.05 mL	Na F/KO	-70	Madison	Active	P1300
Solifenacin	Human Plasma	0.1 to 25 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-20	Madison	Active	P950
Sotalol	Human Plasma	10 to 2000 ng/mL	HPLC/FL	0.5 mL	EDTA	-20	Madison	Inactive	P403
Sparfloxacin	Human Plasma	0.025 to 20 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 332
Sufentanil	Human Plasma	1 to 250 pg/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-70	Richmond	Active	LCMSC 239
	Human Urine	5 to 1000 pg/mL	LC/MS/MS	0.25 mL	None	-70	Richmond	Active	LCMSC 239.1
Sumatriptan	Human Plasma	0.2 to 100 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 174
	Pig Plasma	0.2 to 100 ng/mL	LC/MS/MS	0.25 mL	K ₂ EDTA	-20	Richmond	Active	LCMS 174.3
	Mouse Plasma	0.2 to 100 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 174.4
Sunitinib (N-Desethylsunitinib)	Human Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 457
Tacrolimus	Human Whole Blood	0.25 to 100 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond Madison	Inactive Active	LCMS 356 P1384
	Human Whole Blood	0.1 to 100 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 356.2
	Human Whole Blood	10 to 4000 pg/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Madison	Active	P1399
	Dog Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P750

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Tacrolimus	Pig Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P969
Tamsulosin	Human Plasma	0.05 to 25 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P682
Tamsulosin & Dutasteride	Human Plasma	0.025 to 25 ng/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-20	Madison	Active	P1068
Tapentadol	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1129
Telaprevir	Human Plasma	0.1 to 20 µg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1153
(S)-Telaprevir	Human Plasma	0.1 to 20 µg/mL	LC/MS/MS	0.1 mL	K ₂ EDTA with 5% H ₃ PO ₄	-20	Madison	Active	P1177
Telmisartan	Human Plasma	2 to 1000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 408
Tenofovir & Emtricitabine	Human Plasma	5 to 1000 ng/mL 20 to 4000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 468
	Human Plasma	5 to 1000 ng/mL 20 to 4000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P947
Terazosin	Human Plasma	0.5 to 200 ng/mL	HPLC/FL	0.3 mL	Na Heparin	-20	Richmond	Inactive	LC 270
Teriparatide	Human Plasma	10 to 500 pg/mL	LC/MS/MS	0.2 mL	K ₂ EDTA	-70	Richmond	Inactive	LCMSE 661
	Rat Plasma	200 to 20,000 pg/mL	LC/MS/MS	0.05 mL	Na Heparin	-70	Richmond	Active	LCMSE 661.1
Terfenadine (Fexofenadine)	Human Plasma	0.05 to 50 ng/mL 0.5 to 500 ng/mL	LC/MS/MS	0.5 mL	Na Heparin	-20	Madison	Inactive	P473
Terconazole	Balb/c Mouse Plasma	1 to 100 ng/mL	LC/MS/MS	0.025 mL	K ₃ EDTA	-20	Richmond	Active	LCMSC 217.1

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LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Testosterone (Dihydrotestosterone)	Human Serum	50 to 10,000 pg/mL 10 to 5000 pg/mL	LC/MS/MS	0.15 mL	None	-20	Richmond	Inactive	LCMSC 260.6
	Human Serum	25 to 12,500 pg/mL 10 to 5000 pg/mL	LC/MS/MS	0.25 mL	None	-70	Richmond	Active	LCMSD 260.9
	Human Serum	0.1 to 50 ng/mL 0.05 to 10 ng/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMSC 260.10
	Rabbit Serum	25 to 12,500 pg/mL 50 to 10,000 pg/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMSD 260.7
Testosterone, Free (unbound)	Human Serum Ultrafiltrate	1 to 200 pg/mL	LC/MS/MS	0.2 mL UF from 0.5 mL serum	None	-20	Richmond Madison	Active	LCMSC 247
Theophylline	Human Plasma	0.05 to 25 µg/mL	HPLC/UV	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 9
	Human Serum	0.05 to 25 µg/mL	HPLC/UV	0.5 mL	None	-20	Richmond	Inactive	LC 9.1
Ticagrelor (Deshydroxyethylticagrelor)	Human Plasma	10 to 1000 ng/mL 5 to 500 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1238
Tiotropium	Human Plasma	0.507 to 203 pg/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-70	Madison	Active	P1086
	Human Plasma	0.2 to 100 pg/mL	LC/MS/MS	0.5 mL	K ₂ EDTA	-70	Madison	Active	P1250
Tipranavir & Ritonavir	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1020
TNF-α	Human Serum	15.6 to 1000 pg/mL	ELISA	0.4 mL	None	-20	Richmond	Inactive	ICD 134

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Tobramycin	Human Plasma	10 to 400 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Inactive	P790
	Human Urine	100 to 20,000 ng/mL	LC/MS/MS	0.05 mL	None	-20	Madison	Inactive	P769
Tolbutamide	Human Plasma	0.1 to 100 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 226
Tolbutamide (Carboxytolbutamide) (4-Hydroxytolbutamide)	Human Urine	5 to 1000 ng/mL 0.6 to 300 µg/mL 0.3 to 150 µg/mL	LC/MS/MS	0.02 mL	None	-20	Madison	Active	P738
	Human Plasma	0.1 to 100 µg/mL 5 to 5000 ng/mL 2.5 to 2500 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P737
Topiramate	Human Plasma	10 to 10,000 ng/mL	LC/MS/MS	0.1mL	K ₂ EDTA	-20	Richmond	Active	LCMS 470
	Human Plasma	5 to 5000 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1144
Topiramate (See Cocktail Assay "Epilepsy")	Human Plasma	0.1 to 50 µg/mL	LC/MS/MS	0.1 mL	Na Heparin	-70	Madison	Inactive	P837
Topiramate & Phenteramine	Human Plasma	5 to 5000 ng/mL 0.1 to 100 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1194
Trametinib	Human Plasma	0.25 to 100 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 671
Trepstinil	Human Plasma	0.025 to 10 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Madison	Active	P1313
	Rat Plasma	0.1 to 50 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1439

LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Triamcinolone	Human Plasma	0.01 to 2.5 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-70	Richmond	Inactive	LCMSC 315
	Human Plasma	1 to 1000 ng/mL	LC/MS/MS	0.1 mL	K ₃ EDTA	-70	Richmond	Inactive	LCMS 315.1
Triamterene (Hydroxytriamterene Sulfate)	Human Plasma	0.5 to 100 ng/mL 5 to 1000 ng/mL	HPLC/FL	0.5 mL	Na Heparin	-20	Richmond	Inactive	LC 109
	Human Urine	0.10 to 5 µg/mL 1 to 50 µg/mL	HPLC/FL	0.1 mL	None	-20	Richmond	Inactive	LC 109.1
Triazolam	Human Plasma	0.1 to 25 ng/mL	LC/MS/MS	0.1 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 662
Ulipristal	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Active	P1226
	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.025 mL	K ₂ EDTA	-20	Madison	Active	P1278
Valganciclovir (Ganciclovir)	Human Plasma	1 to 500 ng/mL 10 to 5000 ng/mL	LC/MS/MS	0.05 mL	Na Citrate	-70	Richmond	Active	LCMSC 410
Valproic Acid	Human Plasma	2 to 100 µg/mL	LC/MS/MS	0.05 mL	Na Heparin	-20	Madison	Active	P885
Vancomycin	Human Plasma	0.1 to 100 µg/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Richmond	Active	LCMSC 645
Venlafaxine (O-Desmethylvenlafaxine)	Human Plasma	2 to 200 ng/mL	LC/MS/MS	0.5 mL 0.2 mL	K ₂ EDTA	-20	Richmond Madison	Active	LCMS 531 P1570
Verapamil (Norverapamil)	Human Plasma	1 to 500 ng/mL	HPLC/FL	1.0 mL	Na Heparin	-20	Madison	Inactive	P072
Verapamil Enantiomers (Norverapamil Enantiomers)	Human Plasma	0.5 to 250 ng/mL	LC/MS/MS	0.4 mL	Na Heparin	-20	Madison	Active	P671



LIST OF VALIDATED METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
Vinorelbine	Human Plasma	2 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-70	Richmond	Active	LCMS 539
Voriconazole (Voriconazole-N-Oxide)	Human Plasma	10 to 5000 ng/mL	LC/MS/MS	0.1 mL	Na Heparin	-20	Madison	Active	P968
Warfarin Enantiomers, (unbound)	Human Plasma Ultrafiltrate	0.5 to 25 ng/mL	LC/MS/MS	0.05 mL	EDTA	-20	Madison	Active	P921
Warfarin Enantiomers	Human Serum	5 to 1000 ng/mL	LC/MS/MS	0.5 mL	None	-20	Madison	Inactive	P381
	Human Plasma	5 to 1000 ng/mL	LC/MS/MS	0.25 mL	Na Heparin	-20	Richmond	Inactive	LCMSB 194
	Human Plasma	5 to 1500 ng/mL	LC/MS/MS	0.2 mL	Na Heparin	-20	Madison	Active	P1044
S-warfarin (7-OH-S-warfarin)	Human Plasma	5 to 1500 ng/mL 5 to 1000 ng/mL	LC/MS/MS	0.2 mL	Na Citrate	-20	Madison	Active	P832
Zolpidem	Human Plasma	0.5 to 500 ng/mL	LC/MS/MS	0.05 mL	K ₂ EDTA	-20	Madison	Inactive	P844
Zonisamide	Human Plasma	10 to 5000 ng/mL	LC/MS/MS	0.25 mL	K ₃ EDTA	-20	Richmond	Active	LCMS 313
	Human Serum	10 to 5000 ng/mL	LC/MS/MS	0.25 mL	None	-20	Richmond	Active	LCMS 313.1



LIST OF EXPLORATORY BIOMARKER METHODS March 2018

Compound (Metabolite)	Matrix	Calibration Range	Method	Sample Volume	Anti-Coagulant	Storage Temp °C	Lab Site	Method Status*	Method I.D.
AB 1-40 AB 1-42	Human CSF	29.3 to 15,000 pg/mL 2.93 to 1500 pg/mL	MSD	0.05 mL	None	-70	Richmond	Active	ICDBM 29
CXCL4	Human Plasma	0.781 to 50 ng/mL	ELISA	0.02 mL	K ₂ EDTA	-70	Richmond	Active	ICDBM 30
Eotaxin-3	Human Plasma	1.95 to 500 pg/mL	MSD	0.1 mL	Na Heparin	-70	Richmond	Active	ICDBM 16
IL-6	Human Plasma	0.35 to 2652 pg/mL	ELLA	0.025 mL	K ₂ EDTA	-70	Richmond	Active	ICDBM 32
Periostin	Human Serum	0.0313 to 2 ng/mL	ELISA (Shino-Test)	0.02 mL	None	-70	Richmond	Active	ICDBM 33
pTau	Human CSF	15.61 to 500 pg/mL	ELISA (Innotest)	0.075 mL	None	-70	Richmond	Active	ICDBM 28
sHER-2	Human Serum	12.9 to 7260 pg/mL	ELLA	0.01 mL	None	-70	Richmond	Active	ICDBM 19
TARC (thymus and activation-regulated chemokine)	Human Serum	31.2 to 2000 pg/mL	ELISA	0.1 mL	None	-70	Richmond	Active	ICDBM 15
Tau	Human CSF	18.75 to 1200 pg/mL	ELISA (Innotest)	0.025 mL	None	-70	Richmond	Active	ICDBM 27