



FARMOVS

Integrated research solutions

Bioanalytical Laboratory: Validated Assay Methods

CONTENT

3	OVERVIEW
4	OUR TECHNOLOGY
6	REGULATORY HISTORY
7	VALIDATED ASSAY METHODS
30	ANALYTES IN COMBINATION

CONTACT US:

E: business@farmovs.com

Visit our website: www.farmovs.com

OVERVIEW

FARMOVS is a South African specialty full-service clinical research organisation (CRO) that conducts ICHGCP compliant Phase I to III clinical trials. We have an excellent regulatory inspection history and long-standing relationships with our clients.

Below, other important facts about our clinical research site:

- ISO 15189 accredited Clinical Laboratory
- GLP certified Bioanalytical Laboratory
- Research Clinic with 90 beds and 8 private rooms for long-term studies
- Pharmacy and Pharmacy Depot
- Transit Laboratory for the handling of PK / PD sample processing and shipment
- Fully equipped kitchen with qualified staff to prepare meals for food-drug interaction studies
- On-site archive and secure document destruction

We have conducted more than 3,000 clinical trials for clients across the globe, ranging from small biotech firms to the largest pharmaceutical companies.

Take a visual tour to the FARMOVS facilities [here](#)

OUR TECHNOLOGY

FARMOVS OFFERS THE HIGHEST QUALITY BIOANALYTICAL SERVICES FOR QUALITATIVE AND QUANTITATIVE DRUG, METABOLITE, AND BIOMARKER ANALYSIS IN A VARIETY OF MATRICES.

STARLET

The Hamilton Microlab® STARLet



StarLet performs sample analysis in large quantities at a greater speed, cutting down on analysis time.

WIZZARD

Wizard2™ Gamma Counters



Analysis of antibody-bound activity of samples with superior counting efficiency, speed and accuracy.



AURORA

The newest member of the FARMOVS team is Aurora, a SCIEX Triple Quad™ 7500 LC-MS/MS mass analyzer. The SCIEX API 7500 is currently marketed as the most sensitive triple quadrupole mass spectrometer available, allowing for sub-picogram/ml quantification. Aurora increased the FARMOVS LC-MS/MS fleet to a total of 16 instruments ranging from API4000 to API7500.

Our LC-MS/MS technology and team of experienced Bioanalytical experts sets FARMOVS apart from other CROs, creating an exciting and favourable landscape for clients to explore new partners in research.

REGULATORY HISTORY



BIOANALYTICAL LABORATORY

580+ analytical methods

LC-MS/MS, HPLC, RIA & ELISA

Other ligand binding assay techniques

3,000+ pre-clinical and clinical trials

>100,000 samples per year

ICH, FDA and EMA compliant with proven audit history

Liquid-Liquid, SPE and other sample preparation techniques

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in **BOLD** = parent compound and/or prodrug

A Analyte in **red** = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Acamprosate	1.08 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Acarbose	0.32 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Acebutolol	5.56 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Diacetolol	20.9 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Aceclofenac	25.1 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Acetaminophen	0.16 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Acetazolamide	14.2 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Acetylsalicylic Acid	28.1 ng/ml	HPLC	Plasma	-70 °C	Normal Light
Salicylic Acid	40.0 ng/ml	HPLC	Plasma	-70 °C	Normal Light
Acyclovir	5.03 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
α-GST	2.50 ng/ml	ELISA	Urine	-20 °C	Normal Light
α-GST	0.74 ng/ml	ELISA	Serum	-20 °C	Normal Light
Alfuzosin	0.34 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Alendronate	1.95 ng/ml	HPLC	Urine	-20 °C	Normal Light
Allopurinol	0.35 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Oxypurinol	0.64 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Alprazolam	0.50 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Altizide	3.03 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Ambroxol	0.28 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Amiloride ☐	0.28 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Amiodarone	1.57 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
N-desethylamiodarone	6.96 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Amisulpride	2.40 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Amitriptyline	0.89 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Amlodipine	0.05 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Amodiaquine	0.16 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
N-Desethyl amodiaquine	1.56 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Amoxicillin ☐	78.1 ng/ml	HPLC UV	Plasma	-70 °C	Normal Light
Anagrelide	0.09 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Antipyrine	0.60 µg/ml	HPLC UV	Urine	-70 °C	Normal Light
4-OH-antipyrine	1.94 µg/ml	HPLC UV	Urine	-70 °C	Normal Light
Nor-Antipyrine	1.05 µg/ml	HPLC UV	Urine	-70 °C	Normal Light
Anti-Insulin Antibodies	200 ng/ml	RIPA	Serum	-20 °C	Normal Light
Aripiprazole	0.50 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Atenolol	13.0 ng/ml	HPLC	Plasma	-70 °C	Normal Light
Artesunate	1.56 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Dihydroartemisinin	3.91 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Atomoxetine	1.95 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
4-Hydroxyatomoxetine	0.09 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
N-desmethylatomoxetine	0.09 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Atovaquone	0.44 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Atropine	0.61 µg/ml	LC-MS/MS	Colic Mixture	-20 °C	Normal Light
Azathioprine	0.47 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
6-Mercaptopurine	0.47 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Baclofen	35.0 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Beclomethasone-di-propionate	39.1 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Beclomethasone-m-propionate	38.3 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Bedaquiline ☐	39.1 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Bedaquiline-M2 ☐	15.6 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Benfluorex	0.39 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Norfenfluramine	0.20 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
THEP	0.39 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Betamethazone	58.7 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Bezafibrate	0.10 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Bicalutamide	30.3 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Bindarit	0.10 µg/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Bisoprolol	0.88 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Bromazepam	1.56 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Budesonide	20.8 pg/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Buflomedil	0.15 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Bumetanide	0.39 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Bupropion	7.81 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Hydroxybupropion	7.65 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Buspirone	62.5 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
6-hydroxybuspirone	15.6 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Cabergoline	1.50 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Caffeine	5.80 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Paraxanthine	4.90 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Calanolide	22.3 ng/ml	HPLC	Plasma	-20 °C	Light Sensitive
Candesartan	2.49 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Capecitabine	7.81 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Captopril	23.3 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Carbamazepine	2.64 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Carbamazepine-10,11 -epoxide	5.15 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Carbamazepine-10,11 -diol	9.12 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Carbidopa	2.30 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Carvedilol	1.26 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
4-OH-phenylcarvedilol	0.15 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Cefaclor	0.05 µg/ml	HPLC UV	Plasma	-70 °C	Normal Light
Cefazolin	0.78 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Cefetamet	0.10 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Cefixime	100ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Cefotaxime	0.64 µg/ml	HPLC UV	Plasma/CSF	-70 °C	Normal Light
Desacety cefotaxime	0.47 µg/ml	HPLC UV	Plasma/CSF	-70 °C	Normal Light
Cefpodoxime	51.0 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Ceftriaxone	0.50 µg/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Cefuroxime	0.12 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Celecoxib	3.52 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Celiprolol	7.43 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Cephalexin	0.12 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Cephadrine	0.89 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Cetirizine	0.52 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Chlormadinone acetate	0.15 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Chlorpheniramine	1.21 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Chlorpromazine	20.0pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
7-hydroxychlorpromazine	20.0pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Chlorpropamide	1.40 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Chlorthalidone	0.05 µg/ml	HPLC UV	Whole Blood	-20 °C	Normal Light
Cicletanine	2.91 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Ciclesonide	40.0 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Desisobutyryl ciclesonide	8.0 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Cimetidine	34.5 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Cinnarizine	3.56 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Ciprofloxacin	0.06 µg/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Cisapride	0.88 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Citalopram	0.35 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Clarithromycin	7.30 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Clavulanic Acid ☐	9.77 ng/ml	HPLC UV	Plasma	-70 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Clofazimine	5.0 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Clomipramine	1.50 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Clopidogrel (active metabolite)	0.49 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Clozapine	15.0 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Codeine ☐	1.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Cortisol	1.16 ng/ml	GC-MS	Urine	-20 °C	Normal Light
6β-OH-cortisol	7.76 ng/ml	GC-MS	Urine	-20 °C	Normal Light
C-Peptide	0.07 nmol/L	RIA	Serum/Plasma	-70 °C	Normal Light
Cycloguanil	4.64 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Cyclosporine A	4.81 ng/ml	LC-MS/MS	Whole Blood	-70 °C	Light Sensitive
Cyproterone Acetate	0.55 ng/ml	GC-MS	Plasma	-20 °C	Normal Light
Daclatasvir	15.6 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Danazol	6.00 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Dapivirine	5.00 pg/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Deferasirox	0.39 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Deferiprone	0.20 µg/ml	LC-MS/MS	Serum	-70 °C	Normal Light
Deferiprone-gluconoride	0.13 µg/ml	LC-MS/MS	Serum	-70 °C	Normal Light
Dehydroepiandrosterone-S	18.4 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Desipramine	0.60 ng/ml	LC-MS/MS	Serum	-70 °C	Normal Light
2-OH-Desipramine	0.60 ng/ml	LC-MS/MS	Serum	-70 °C	Normal Light
Desipramine ☐	0.10 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
2-OH Desipramine ☐	0.10 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
2-OH Desipramine Glucuronide ☐	0.10 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Desmethylselegiline	1.09 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Methamphetamine	1.15 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Dexamethazone	1.17 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Dexamphetamine	0.47 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Dextromethorphan	2.50 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Dextrorphan	5.00 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Dextromethorphan ☐	0.1 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Dextrorphan ☐	0.1 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Dextrorphan Glucuronide ☐	1.0 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Dextropropoxyphene	0.15 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Nordextropropoxyphene	0.15 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Diacerein	50.7 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Rhein	50.7 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Diazepam	3.00 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Nor-Diazepam	3.00 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Diclofenac	0.10 ng/ml	LC-MS/MS	Plasma/Synovial	-20 °C	Normal Light
4-OH-Diclofenac	1.97 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Diclofenac	2.44 ng/ml	LC-MS/MS	Urine	-70 °C	Normal Light
4-OH-Diclofenac	2.44 ng/ml	LC-MS/MS	Urine	-70 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Diltiazem	2.34 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Desacetyldiltiazem	3.63 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
N-monodemethyldiltiazem	2.19 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Dimethylformamide	0.12 µg/ml	GC NPD	Plasma	-20 °C	Normal Light
Ethyl-N-methylcarbamate	1.11 µg/ml	GC NPD	Urine	-20 °C	Normal Light
N-methylformamide	1.12 µg/ml	GC NPD	Urine	-20 °C	Normal Light
Diminazene	100 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Dimiracetam	0.16 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Diphenhydramine	39.1 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Domperidone	0.33 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Donepezil	0.11 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Dothiepin	1.52 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Doxazosin	0.29 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Doxepin	0.64 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Desmethyldoxepin	0.18 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Doxycycline	15.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Duloxetine	0.40 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Dutasteride	0.125 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Ebastine	0.02 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Carebastine	0.94 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Efavirenz ☐	14.2 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Emodepside ☐	0.1 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Enalapril	0.78 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Enalaprilat	0.78 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Epinephrine	15.0 pg/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Norepinephrine	30.0 pg/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Ertapenem ☐	0.50 µg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Erythromycin	0.15 µg/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Escitalopram	0.51 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Estradiol	20.0 pg/ml	RIA	Serum	-20 °C	Normal Light
Estrone	10.0 pg/ml	RIA	Serum	-20 °C	Normal Light
Emtricitabine ☐	20.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Ethambutol	5.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Ethinyl estradiol ☐	5.00 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Exemestane	0.20 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Famotidine	0.59 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Faropenem	10.8 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Favipiravir ☐	0.391 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Fedovapagon	1.00 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Felodipine	0.02 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Fenbendazole	3.90 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Fencamfamine	7.78 ng/ml	GC NPD	Urine	-20 °C	Normal Light
Fenfluramine	7.60 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Fenofibric acid	47.2 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Fexofenadine	1.17 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Fibrino Peptide A	0.78 ng/ml	ELISA	Plasma	-70 °C	Normal Light
Finasteride	0.60 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Flecainide	39.9 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Flosequinan	30.7 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Fluconazole	6.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Flunitrazepam	0.15 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Fluoxetine	0.20 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Norfluoxetine	0.21 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Fluralaner	1.00 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Flurbiprofen (R-& S-)	0.04 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Fluspirilene	9.93 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Flutamide (hydro-)	3.10 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Fluticasone ☐	2.00 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Formamide	1.18 µg/ml	GC NPD	Urine	-20 °C	Normal Light
Formoterol	1.56 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Fosinoprilat	1.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Free Insulin Glargine	5.02µU/ml	RIA	Serum	-20 °C	Normal Light
Frovatriptan	0.04 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Furosemide	12.0 ng/ml	HPLC	Plasma	-20 °C	Light Sensitive
Fusidic Acid	97.6 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Gabapentin	78.7 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Galantamine	0.39 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Gemfibrozil	0.46 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Glibenclamide	0.78 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Gliclazide	4.40 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Glimepiride	0.25 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Glucagon	7.34 pmol/L	RIA	Plasma	-20 °C	Light Sensitive
Glycopyrrolate	1.17 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Granisetron	0.15 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
7-OH-Granisetron	0.04 ng/ml	LC-MS/MC	Plasma	-20 °C	Normal Light
Growth Hormone	1.00 ng/ml	RIA	Serum/Plasma	-20 °C	Normal Light
Guaifenesin ☐	20.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Haloperidol	12.5 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Hydrochlorothiazide ☐	0.18 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Hydrocortisone acetate	0.40 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Hydrocortisone	5.00 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Hydroxyflutamide	3.10 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Ibexafungerp	0.61 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Ibexafungerp	5.0 ng/ml	LC-MS/MS	Urine	-70 °C	Normal Light
Ibexafungerp	1.95 ng/ml	LC-MS/MS	Cervical Tissue	-20 °C	Normal Light
Ibexafungerp	2.97 ng/ml	LC-MS/MS	Vaginal Fluid	-20 °C	Normal Light
Ibuprofen (R-& S-) ☐	0.12 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Imatinib	5.0 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Indacaterol	5.00 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Indapamide	0.78 ng/ml	LC-MS/MS	Whole Blood	-20 °C	Normal Light
Indomethacin	33.7 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Indoramin	1.53 ng/ml	HPLC	Plasma	-20 °C	Light Sensitive
6-OH-Indoramin	2.25 ng/ml	HPLC	Plasma	-20 °C	Light Sensitive
Insulin - Glulisine	2.00 pg/ml	RIA	Serum/Plasma	-20 °C	Normal Light
Insulin - Human	5.00 µIU/ml	RIA	Serum	-20 °C	Normal Light
Insulin - Human (Free)	5.00 µIU/ml	RIA	Serum/Plasma	-20 °C	Normal Light
Insulin (Immunoreactive - free)	5.00 µIU/ml	RIA	Serum	-20 °C	Normal Light
Insulin - Lispro	5.00 µIU/ml	RIA	Plasma/Urine	-20 °C	Normal Light
Ipsapirone	1.50 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Iron	1.89 µg/ml	ICP	Plasma	-70 °C	Normal Light
Isoniazid	4.90 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Isosorbide-5-mononitrate	10.2 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Isotretinoin	7.79 ng/ml	HPLC UV	Plasma	-20 °C	Light Sensitive
4-oxo-Isotretinoin	7.82 ng/ml	HPLC UV	Plasma	-20 °C	Light Sensitive
Itraconazole	6.40 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
OH-Itraconazole	6.39 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Kanamycin	0.11 µg/ml	HPLC UV	Urine	-20 °C	Normal Light
Ketoconazole	0.16 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Ketoprofen	31.3 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Lamivudine ☐	32.7 ng/ml	LC-MS/MS	Plasma/DBS	-20 °C	Normal Light
Lansoprazole (R- & S-)	4.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
LAPS-Exendin-4	3.00 ng/ml	ELISA	Serum	-70 °C	Normal Light
LAPS-Exendin-4	2.00 ng/ml	ELISA	Urine	-70 °C	Normal Light
Leukotriene B4 (LTB4)	50 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Levodopa	5.53 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Levonorgestrel	0.26 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Lidocaine ☐	0.34 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Linezolid ☐	281 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Lisinopril	0.92 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Lofepamine	0.73 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Desipramine	2.48 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Loratadine	0.10 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Desloratadine	0.10 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Losartan	0.13 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
EXP-3174	0.13 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Lovastatin	0.13 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
β-OH-Lovastatic acid	0.26 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Mapracorat	11.1 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Maprotiline	1.08 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Medroxyprogesterone-17- acetate	0.05 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Mercaptopurine	0.73 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Meloxicam	8.05 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Melperone	0.78 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Mephenytoin (R-& S-)	11.9 ng/ml	LC-MS/MS	Urine	-20 °C	Normal Light
4-OH-Mephenytoin (R-& S-)	23.6 ng/ml	LC-MS/MS	Urine	-20 °C	Normal Light
Meropenem ☐	0.39 µg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Metaxalone	39.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Metformin	17.5 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Methamphetamine	1.15 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Methotrexate	1.5 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Methylamphetamine	1.15 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Methyldopa	34.8 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Methylsalicylic Acid	62.5 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Metoclopramide	3.15 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Metoprolol	15.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
α-OH-Metoprolol	1.62 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Metronidazole	91.2 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
MHPG	0.40 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Mianserin	1.67 ng/ml	HPLC ECD	Plasma	-20 °C	Normal Light
Midazolam	0.41 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
1-OH-Midazolam	0.08 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Mifepristone	31.3ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
22-Hydroxy Mifepristone	31.3 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
N-Demethyl Mifepristone	10.94 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Didemethyl Mifepristone	0.94 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Milnacipram	1.25 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Minocycline	10.3 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Mitotane	0.39 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Molsidomine	0.84 ng/ml	HPLC UV	Plasma	-70 °C	Light Sensitive
Linsidomine	0.70 ng/ml	HPLC UV	Plasma	-70 °C	Light Sensitive
Moclobemide	3.74 ng/ml	GC ECD	Plasma	-20 °C	Light Sensitive
Monic Acid (mupirocin)	50.1 ng/ml	LC-MS/MS	Urine	-20 °C	Light Sensitive
Montelukast	3.91 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Morphine	0.50 ng/ml	RIA	Plasma	-20 °C	Normal Light
Morphine-3-glucuronide	6.42 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Morphine-6-glucuronide	3.64 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Moxifloxacin ☐	12.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Moxonidine	20.5 pg/ml	GC-MS	Plasma	-20 °C	Normal Light
Mupirocin (Monic Acid)	0.50 ng/ml	LC-MS/MS	Plasma/Urine	-20 °C	Light Sensitive
Nabumetone metabolite (6-MNA)	0.07 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Naftidrofuryl	3.92 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Naloxone-3-glucaronide	0.96 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Naproxen	0.08 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Naratriptan	0.08 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Natamycin	2.00 ng/ml	LC-MS/MS	Wine	-20 °C	Normal Light
Nevirapine ☐	18.6 ng/ml	LC-MS/MS	Plasma/DBS	-20 °C	Normal Light
2-OH-Nevirapine	11.8 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
3-OH-Nevirapine	11.8 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
8-OH-Nevirapine	11.8 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
12-OH-Nevirapine	11.8 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
4-Carboxynevirapine	11.8 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Nicardipine	0.70 ng/ml	GC ECD	Plasma	-20 °C	Light Sensitive
Nicotine	0.47 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Cotinine	7.68 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Nifedipine	0.64 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Nimesulide	3.76 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Nimodipine	0.59 ng/ml	GC ECD	Plasma	-20 °C	Light Sensitive
Nitazoxanide	100 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Nitisinone	19.5 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Nitrofurantoin	0.78 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Nitroxoline	0.25 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Nizatidine	11.9 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Norethindrone ☐	0.25 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Norfloxacin	25.9 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Nortilidine	2.78 ng/ml	GC NPDP	Plasma	-20 °C	Normal Light
Nortriptyline	0.94 ng/ml	GC NPDP	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Ofloxacin	54.5 ng/ml	HPLC	Plasma	-20 °C	Light Sensitive
Olanzapine	0.16 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Omeprazole	0.39 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
5-OH-omeprazole	0.39 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Ondansetron	0.26 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Opipramol	0.47 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Deshydroxyethylpipramol	0.12 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Orphenadrine	0.55 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Osteocalcin	2.40 ng/ml	ELISA	Serum	-70 °C	Normal Light
Oxaborales	1.95 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Oxcarbazepine	7.82 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
10-OH-Carbazepine	23.7 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Oxaquin	10.3 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Oxfendazole ☐	2.54 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Oxybutynin (R- & S-)	0.06 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Desethyloxybutynin	0.10 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Desethyloxybutynin (R-& S-)	0.05 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Oxyclozanide ☐	0.20 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Pretomanid	4.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Paclitaxel (Total)	20.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Paliperidone	0.12 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Pantoprazole	5.38 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Paracetamol ☐	60.2 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Paroxetine	0.33 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Perindopril	0.08 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Perindoprilat	0.17 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Phentermine	18.7 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Phenylbutyrate	0.49 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Phenylephrine	9.00 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Phenylpropanolamine	10.0 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Phenytoin	40.0 ng/ml	HPLC UV	Plasma	-20 °C	Light Sensitive
Pipamperone	6.31 ng/ml	HPLC UV	Plasma	-70 °C	Normal Light
Piroxicam	1.24 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Pravastatin	0.78 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
3-hydroxypravastatin	0.78 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Praziquantel ☐	0.30 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Praziquantel (D-& L-)	5.86 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
4-hydroxypraziquantel (D-& L-)	19.5 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Prazosin	0.46 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Prednisone	3.18 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Prednisolone	2.59 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
3,20- Pregnane-dione	0.46 ng/ml	GC-MS	Plasma	-20 °C	Normal Light
Pretonamide ☐	0.391 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Prilocane ☐	0.20 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Progesterone	0.04 ng/ml	GC-MS	Plasma	-20 °C	Normal Light
Proguanil	14.63 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Promethazine	0.64 ng/ml	GC NPD	Plasma	-20 °C	Light Sensitive
Propranolol	3.50 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Prostate Specific Antigen (PSA)	0.50 nmol/L	RIA	Serum	-20 °C	Normal Light
Protrombin (F1+2)	0.04 nmol/L	ELISA	Plasma	-70 °C	Normal Light
Pseudoephedrine	1.56 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Pyrantel	15.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Pyrazinamide ☐	46.9 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Pyronaridine	0.977 ng/ml	LC-MS/MS	Blood	-20 °C	Normal Light
Quetiapine	0.12 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
N-desalkylQuetiapine	1.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Quinidine	80.0 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Racecadotril (prodrug-thiorphan)	4.05 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Ranitidine	14.6 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Rifampicin	586 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
DesacetylRifampicin	13.7 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Rilmenidine	0.21 ng/ml	LC-MS/MS	Plasma	-20 °C	Light Sensitive
Risperidone	39.1 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
9-OH-risperidone	39.1 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Roflumilast	1.16 ng/ml	GC-MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Roxithromycin	50.3 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Salbutamol (R-& S-)	25.0 pg/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Salmeterol ☐	4.00 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Sarolaner	0.50 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Scopolamine	2.00 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Selegiline (Desmethyl)	1.09 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Methamphetamine	1.15 ng/ml	GC ECD	Plasma	-20 °C	Normal Light
Serotonin	0.20 ng/ml	LC-MS/MS	CSF	-20 °C	Normal Light
5-HIAA	0.50 ng/ml	LC-MS/MS	CSF	-20 °C	Normal Light
Sertraline	0.10 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Sibutramine	0.05 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Mono-N-desmethyisibutramine	0.05 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Di-N-desmethyisibutramine	0.10 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Sofosbuvir ☐	2.5 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Spironolactone	0.47 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Canrenone	0.47 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
7α-thiomethylspiro lactone	1.25 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
6β-hydroxy-7α-thiomethyl-spiro lactone	3.13 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Stavudine ☐	5.76 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Sulindac	50.0 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Sulphamethizole	0.52 μ g/ml	HPLC UV	Urine	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Sulindac	50.0 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Sulphamethizole	0.52 μ g/ml	HPLC UV	Urine	-20 °C	Normal Light
Sulpiride	4.05 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Sumatriptan	0.63 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Suramin	1.00 μ g/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
T3 (total)	0.30 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
T4 (total)	10.0 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Tacrolimus	0.06 ng/ml	LC-MS/MS	Whole Blood	-70 °C	Normal Light
Tadalafil	0.50ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Tamsulosin	29.3 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
TBG	5.00 μ g/ml	RIA	Serum/Plasma	-20 °C	Normal Light
Telacebec	1.00 ng/ml	LC-MS/MS	Plasma/Urine	-70 °C	Light Sensitive
Telmisartan	2.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Tenovofir ☐	1.00 ng/ml	LC-MS/MS	Plasma/DBS	-20 °C	Normal Light
Terazosin	0.58 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Terbinafine	3.32 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Terfenadine Acid Metabolites	8.35 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Testosterone	0.70 nmol/L	RIA	Plasma/Serum	-20 °C	Normal Light
Tetracycline	43.3 ng/ml	HPLC UV	Plasma	-20 °C	Light Sensitive
Tissue Factor Pathway Inhibitor	0.64 ng/ml	ELISA	Plasma	-70 °C	Normal Light
Theophylline	10.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
3-methylxanthine	6.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Thiocolchicine (3-desmethyl)	0.39 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Thiorphan	4.05 ng/ml	LC-MS/MS	Plasma	-70 °C	Light Sensitive
Thrombin/Antithrombin (TAT)	2.00 µg/l	ELISA	Plasma	-70 °C	Normal Light
Tibolone	0.04 ng/ml	C-MS	Plasma	-20 °C	Normal Light
Ticlopidine	1.98 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Timolol	12.6 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light
Tizoxanide	100 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Tolbutamide	0.40 µg/ml	HPLC UV	Plasma	-20 °C	Normal Light
Tolterodine	46.9 pg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Topiramate	46.9 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Tramadol (R- & S-)	3.00 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
O-desmethyltramadol (R- & S-)	0.79 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Tranexamic acid	0.11 µg/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Trazodone	7.75 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
m-chlorophenylpiperazine	0.23 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Triamterene	2.50 ng/ml	HPLC	Plasma	-20 °C	Normal Light
p-OH-Triamterene	30.5 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Triazolam	0.20 ng/ml	GC NPD	Plasma	-20 °C	Normal Light
Trientine	10.0 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
N1-acetyltriethylenetetramine	10.0 ng/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Trimetazidine	1.52 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Trimipramine	0.12 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light

VALIDATED ASSAY METHODS

Key:

☐ Analyte also measured in combination with other drugs

A Analyte in BOLD = parent compound and/or prodrug

A Analyte in red = metabolite of the parent compound or active metabolite of the prodrug

DRUG	LLOQ	METHOD	MATRIX	TEMP	STORAGE
Ulifloxacin	0.10 mg/ml	LC-MS/MS	Plasma/Urine	-20 °C	Normal Light
Urapidil	13.3 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Valacyclovir	1.58 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Valsartan	24.5 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Venlafaxine	0.63 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
O-dimethylvenlafaxine	0.79 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Verapamil	4.02 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Norverapamil	2.01 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Von Willebrand Factor	5.50%	ELISA	Plasma	-70 °C	Normal Light
Warfarin (R- & S-)	2.34 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
7-OH-Warfarin	5.88 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Zidovudine ☐	20.0 ng/ml	LC-MS/MS	Plasma/DBS	-20 °C	Normal Light
Zolmitriptan	62.5 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
N-desmethylzolmitriptan	7.81 pg/ml	LC-MS/MS	Plasma	-70 °C	Normal Light
Zolpidem	1.98 ng/ml	HPLC	Plasma	-20 °C	Normal Light
Zonisamide	14.0 ng/ml	LC-MS/MS	Plasma	-20 °C	Normal Light
Zopiclone	4.06 ng/ml	HPLC UV	Plasma	-20 °C	Normal Light

ANALYTES IN COMBINATION

ANALYTES IN COMBINATION USING A SINGLE BIOANALYTICAL METHOD

- Paracetamol + Codeine + Ibuprofen
- Amoxicillin + Clavulanic Acid
- Salmeterol + Fluticasone
- Meropenem + Ertapenem
- Bedaquiline + Moxifloxacin + Pyrazinamide + Pretonamide
- Bedaquiline + Linezolid + Pretonamide
- Zidovudine + Lamivudine + Stavudine
- Tenofovir + Lamivudine
- Efavirenz + Emtricitabine + Tenofovir
- Guaifenesin + Paracetamol
- Iohexol + p-Aminohippuric Acid
- Zidovudine + Lamivudine + Nevirapine
- Amiloride + Hydrochlorothiazide
- Lidocaine + Prilocaine
- Oxfendazole + Oxyclosanide
- Praziquantel + emodepside
- Norethindrone + Ethinyl estradiol
- Amodiaquine + N-desethyl amodiaquine + Favipiravir + Sofosbuvir
- Dextromethorphan + Dextrophan + Dextrophan Glucuronide + Desipramine + 2-OH Desipramine + 2-OH Desipramine Glucuronide

CONTACT US

E: business@farmovs.com

T: +27(0)51 410 3111

www.farmovs.com

FARMOVS (Pty) Ltd
Pharmacology Building
University of the Free State
Nelson Mandela Drive
Bloemfontein
9301
South Africa