

* NutriPATH Pathology NutriPath. 16 Harker Street, Burwood VIC 3125

Order ID 6389435
Lab ID 4125280
Patient ID P002447
Ext ID 25206-0001

KATE FRYER

Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

RECEIVED
25-Jul-25

EndoMAP

Specimen type - Urine, Dried

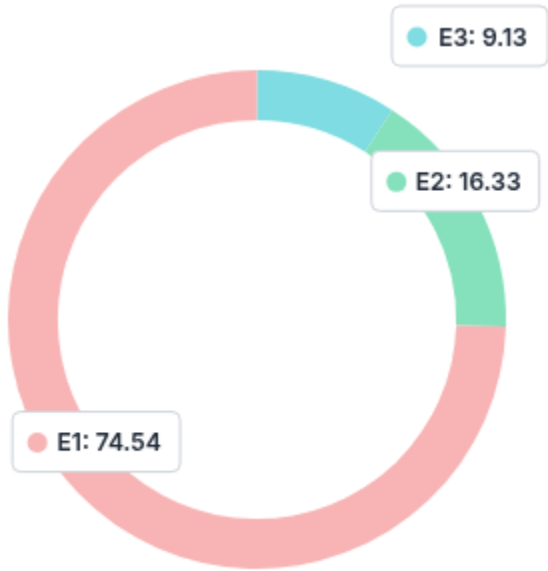
Collected

19-Jul-25 07.35am, 09.35am, 05.30pm, 08.35pm

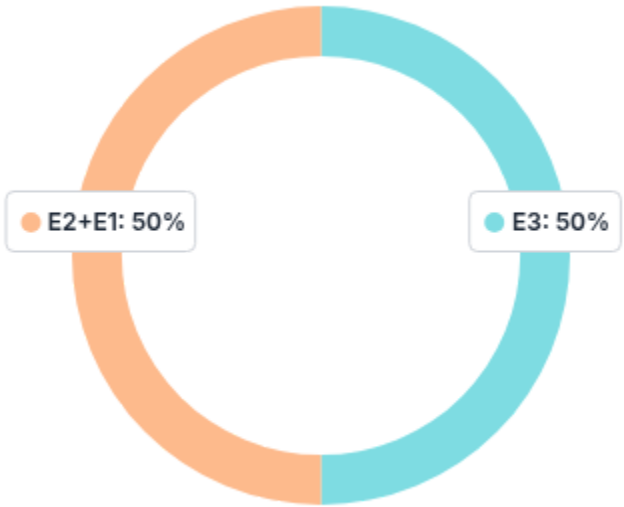
KEY STEROID HORMONES SUMMARY

SERVICE	RESULT	H/L	REFERENCE	UNITS
Estradiol (E2)	0.87		(0.40-1.80)	ug/gCR
Progesterone (serum equivalent)	4.30		(1.30-17.00)	ng/mL
Testosterone	5.80	H	(0.95-5.50)	ug/gCR

Estrogens Balance (as %)

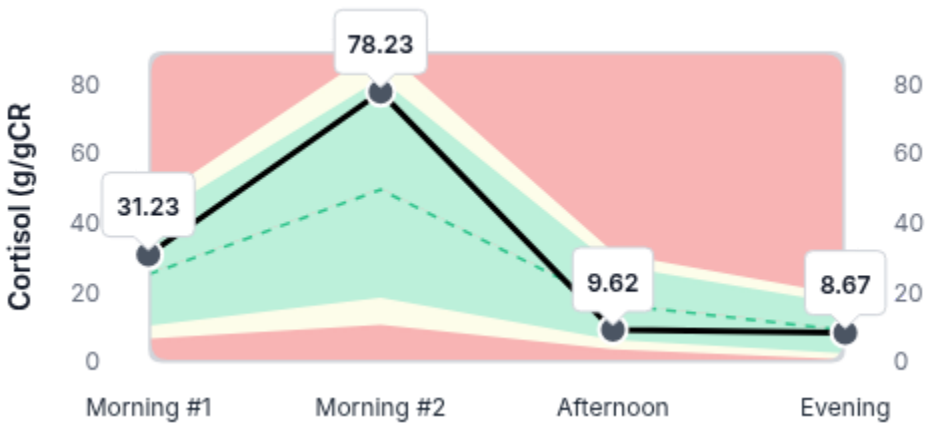


Healthy Estrogens Balance



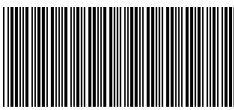
Adrenal Function - Free Cortisol

SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisol, AM #1	31.23		(7.00-45.00)	ug/gCR
Cortisol, AM #2	78.23		(11.00-90.00)	ug/gCR
Cortisol, Afternoon	9.62		(4.00-30.90)	ug/gCR
Cortisol, Evening	8.67		(1.00-18.72)	ug/gCR



Adrenal Function - Key Markers

SERVICE	RESULT	H/L	REFERENCE	UNITS
Total 24hr Cortisol	127.75		(39.26-200.00)	ug/gCR
Tetrahydrocortisol (THF)	453		(160-600)	ug/gCR
DHEA Prod'n (DHEA+Androst+Etioch)	2669.87		(500.00-3000.00)	ug/gCR
Metabolised Cortisol (THF + THE)	1824	H	(700-1700)	ug/gCR



* NutriPATH Pathology NutriPath. 16 Harker Street, Burwood VIC 3125

Order ID 6389435
Lab ID 4125280
Patient ID P002447
Ext ID 25206-0001

KATE FRYER

Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

RECEIVED
25-Jul-25

PRIMARY ESTROGENS

SERVICE	RESULT	H/L		REFERENCE	UNITS
● Estradiol (E2)	0.87			(0.40-1.80)	ug/gCR
● Estrone (E1)	3.99			(1.20-5.50)	ug/gCR
● Estriol (E3)	0.49			(0.30-2.10)	ug/gCR
● Estrogen Quotient - E3/[E2+E1]	0.10	L		(>0.25)	ratio

ESTROGEN METABOLISM - Phase 1

SERVICE	RESULT	H/L		REFERENCE	UNITS
● 2-OH Estradiol	0.38			(0.10-0.75)	ug/gCR
● 2-OH Estrone	2.36			(0.20-2.60)	ug/gCR
● 4-OH Estradiol	0.23			(0.03-0.40)	ug/gCR
● 4-OH Estrone	0.37			(0.05-0.80)	ug/gCR
● 16-OH Estrone	0.74			(0.10-1.10)	ug/gCR
● 2-OH(E1+E2)/16-OHE1	3.71			(1.20-5.60)	ratio

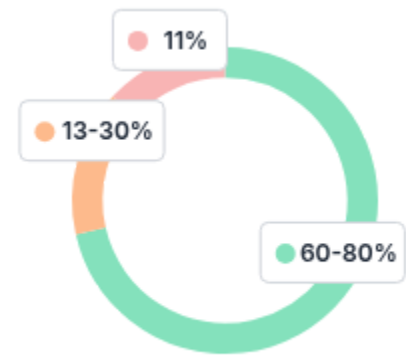
ESTROGEN METABOLISM - Phase 2

SERVICE	RESULT	H/L		REFERENCE	UNITS
● 2-MeOH Estradiol	0.06			(0.02-0.12)	ug/gCR
● 2-MeOH Estrone	0.38			(0.05-0.75)	ug/gCR
● 4-MeOH Estradiol	0.03			(<0.05)	ug/gCR
● 4-MeOH Estrone	0.01			(<0.05)	ug/gCR
● 2-MeOH E1/2-OH E1	0.16			(0.10-0.60)	ratio
● 4-MeOH E2/4-OH E2	0.12			(0.04-0.50)	ratio
● 4-MeOH E1/4-OH E1	0.04			(0.02-0.30)	ratio

Metabolism Ph1 %
(Hydroxylation)



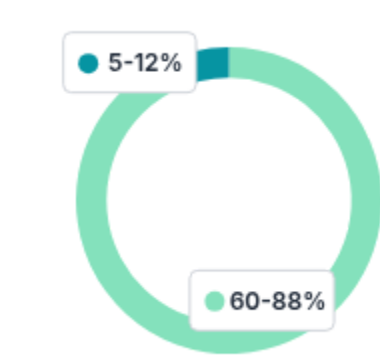
Healthy Ph1 %
Metabolism



Metabolism Ph2 %
(Methylation)



Healthy Ph2 %
Metabolism



RECEIVED
25-Jul-25

SERVICE	RESULT	H/L		REFERENCE	UNITS
DHEA	78.76			(15.00-135.00)	ug/gCR
DHEA-S	4168.1	H		(200.0-4000.0)	ug/gCR
Androstenedione	10.80			(3.00-14.50)	ug/gCR
Androsterone	1302	H		(150-1000)	ug/gCR
Etiocholanolone	1289	H		(250-1100)	ug/gCR
Testosterone	5.80	H		(0.95-5.50)	ug/gCR
Epi-Testosterone	1.71			(1.30-7.00)	ug/gCR
DiHydroxyTestosterone (DHT)	1.35			(0.25-2.50)	ug/gCR
5a-Androstanediol	2.03	L		(2.50-15.00)	ug/gCR



  **RCPA**
The Royal College of Pathologists of Australasia

NATA Accreditation: #20770



Order ID	6389435
Lab ID	4125280
Patient ID	P002447
Ext ID	25206-0001

Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

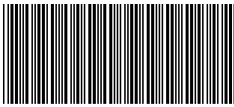
RECEIVED
25-Jul-25

SERVICE	RESULT	H/L	REFERENCE	UNITS
● DHEA Prod'n (DHEA+Androst+Etioch)	2669.87		(500.00-3000.00)	ug/gCR
● 5a-Reductase Activity (Androst/Etioch)	1.01		(0.60-2.20)	ratio
● Testosterone/Epi-Testosterone	3.40		(0.40-5.50)	ratio

[illegible]

SERVICE	RESULT	H/L		REFERENCE	UNITS
8-OH-deoxyguanosine	4.78	H		(<2.70)	mmol/molCR
Pyroglutamic Acid	10.12			(4.50-33.00)	mmol/molCR
Indoleacetic Acid	1.81			(<11.00)	mmol/molCR

[illegible]



* NutriPATH Pathology NutriPath. 16 Harker Street, Burwood VIC 3125

Order ID 6389435
Lab ID 4125280
Patient ID P002447
Ext ID 25206-0001

KATE FRYER

Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

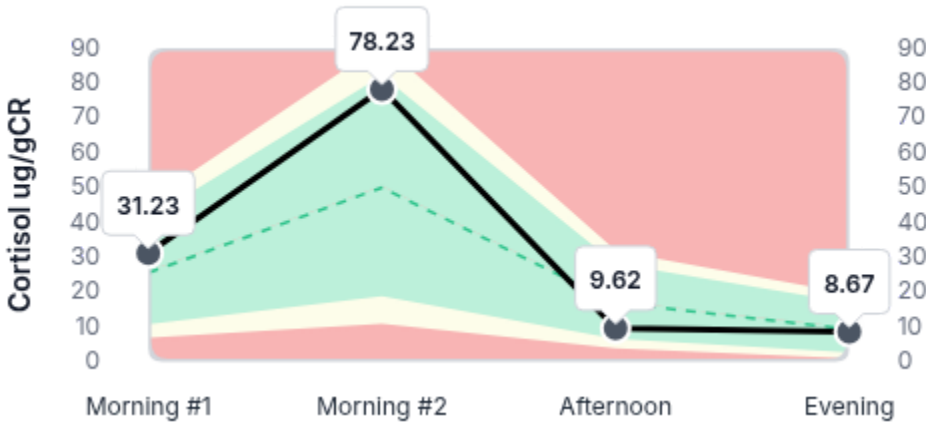
RECEIVED
25-Jul-25

URINARY GLUCOCORTICOIDS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Total 24hr Cortisol	127.75		(39.26-200.00)	ug/gCR
Total 24hr Cortisone	320.15		(130.50-488.35)	ug/gCR
Total Cortisol/Cortisone	0.40		(0.20-1.00)	ratio
Tetrahydrocortisol (THF)	453		(160-600)	ug/gCR
Tetrahydrocortisone (THE)	1371		(400-1450)	ug/gCR
Metabolised Cortisol (THF + THE)	1824	H	(700-1700)	ug/gCR
11b-HSD-Index (THF/THE)	0.33	L	(0.59-1.42)	ug/gCR

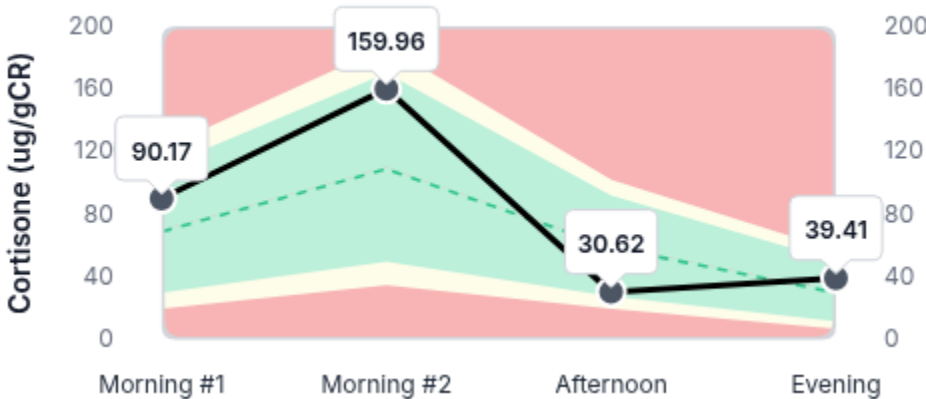
Free Cortisols

SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisol, AM #1	31.23		(7.00-45.00)	ug/gCR
Cortisol, AM #2	78.23		(11.00-90.00)	ug/gCR
Cortisol, Afternoon	9.62		(4.00-30.90)	ug/gCR
Cortisol, Evening	8.67		(1.00-18.72)	ug/gCR



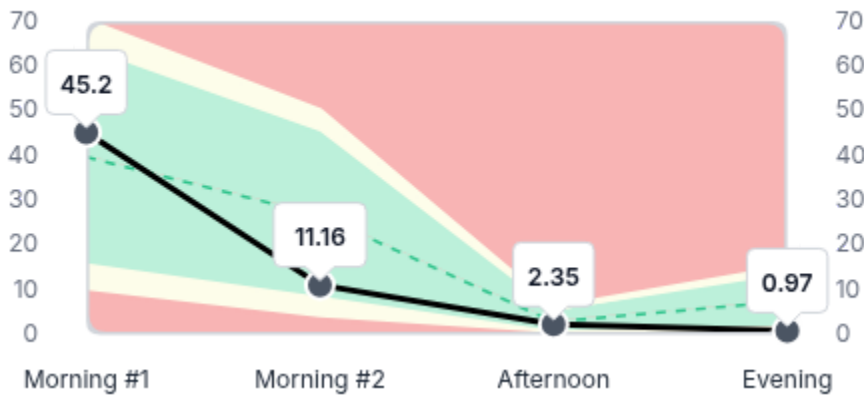
Free Cortisones

SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisone, AM #1	90.17		(20.00-120.00)	ug/gCR
Cortisone, AM #2	159.96		(35.00-185.00)	ug/gCR
Cortisone, Afternoon	30.62		(20.00-100.00)	ug/gCR
Cortisone, Evening	39.41		(7.00-55.00)	ug/gCR



URINARY MELATONINS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Melatonin, AM #1	45.20		(10.00-70.00)	ug/gCR
Melatonin, AM #2	11.16		(4.00-50.00)	ug/gCR
Melatonin, Afternoon	2.35		(0.50-6.00)	ug/gCR
Melatonin, Evening	0.97		(0.80-15.00)	ug/gCR





NUTRIPATH • PATIENT REPORT

16 Harker St, Burwood VIC, 3125 • info@nutripath.com.au • 1300 688 522

NATA

RCPA

The Royal College of Pathologists of Australasia

NATA Accreditation: #20770

25206-0001

* NutriPATH Pathology NutriPath. 16 Harker Street, Burwood VIC 3125

Order ID 6389435
Lab ID 4125280
Patient ID P002447
Ext ID 25206-0001

KATE FRYER
Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

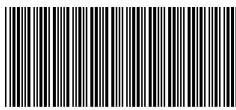
RECEIVED
25-Jul-25

Symptom Score

1. MILD	2. MODERATE	3. SEVERE
Cold body temperature	Anxious	Decreased stamina
Sensitivity to chemicals	Sugar craving	Morning fatigue
Rapid heartbeat	Stress	Memory lapse
Low blood sugar	Acne	Irritable
Panic attacks	Heart palpitations	
Decreased muscle size	Foggy thinking	
Increased urinary urge	Allergies	
Hearing loss	Weight gain - Hips	
Nervous	Increased body/facial hair	
Aches and pains	Water retention	
Tender breasts	Sleep disturbed	
Hair dry or brittle	Weight gain - Waist	
Constipation	Evening fatigue	
Bleeding changes	Mood swings	
Numbness - feet/hands		
Vaginal dryness		
Tearful		
Fibrocystic breasts		
Incontinence		
Premenstrual Dysphoric Disorder		

Symptom Categories

Estrogen & Progesterone Deficiency	13.33%	
Estrogen Dominance/Progesterone Deficiency	41.67%	
Low Androgens	36.67%	
High Androgens	55.56%	
Low Cortisol	44.44%	
High Cortisol	22.92%	
Hypometabolism	25.40%	
Metabolic Syndrome	33.33%	



* NutriPATH Pathology NutriPath. 16 Harker Street, Burwood VIC 3125

Order ID 6389435
Lab ID 4125280
Patient ID P002447
Ext ID 25206-0001

KATE FRYER
Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

RECEIVED
25-Jul-25

Urinary Estrogens Comment

ESTROGEN QUOTIENT LOW:

This ratio reflects the relative levels of estriol compared to other estrogens, indicating estrogen metabolism.

A low ratio suggests a dominance of estrone and estradiol over estriol, which may be linked to estrogen dominance, leading to symptoms such as mood swings, heavy periods, and fibroids. Consider further investigations such as serum TFT's.

Endocrine Disruptors Comment

ARSENIC ELEVATED:

Elevated urinary arsenic indicates recent or chronic exposure, particularly to inorganic forms. Arsenic interferes with steroid hormone receptor function and disrupts glucocorticoid and mineralocorticoid pathways. It impairs thyroid hormone synthesis and T3/T4 conversion, and may increase estrogen receptor activity, promoting estrogenic effects. Methylation support (folate, B12, betaine), water filtration, and dietary detoxification strategies are recommended.

Urinary Androgen Comment

Urinary DHEA-S is elevated, suggesting excessive adrenal androgen secretion. As a stable androgen precursor, high DHEA-S can contribute to androgen-dominant symptoms in premenopausal women, including acne, hirsutism, cycle irregularity, and subfertility. Common etiologies include PCOS or stress-driven HPA axis activation.

ANDROSTERONE ELEVATED:

Androsterone is a metabolite of testosterone and a marker of androgen metabolism. Elevated androsterone levels may be linked to increased testosterone production or excessive 5α-reductase activity, leading to symptoms like acne, hirsutism, and voice deepening.

ETIOCHOLANOLONE ELEVATED:

Etiocholanolone is a metabolite of testosterone and dihydrotestosterone (DHT), often used to assess androgenic activity. Elevated levels are commonly seen in conditions like PCOS or adrenal hyperplasia. Symptoms may include acne, hirsutism, and male-pattern baldness.

TESTOSTERONE ELEVATED:

Testosterone is the primary androgen hormone in women, crucial for muscle mass, libido, and overall vitality. Elevated testosterone can be linked to PCOS, adrenal hyperplasia, or exogenous androgen use. Symptoms include acne, hirsutism, male-pattern hair loss, and infertility.

ANDROSTANEDIOL LOW:

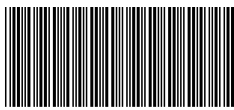
5α,3α-Androstenediol is a metabolite of dihydrotestosterone (DHT), used to assess androgen metabolism. Low 5α,3α-androstenediol levels may reflect reduced androgen activity, leading to symptoms like low libido, fatigue, and muscle loss.

Urinary Cortisol Comment

URINE CORTISOLS INTERPRETATION:

A urinary cortisol pattern where all four samples are within the normal range suggests a well-regulated hypothalamic-pituitary-adrenal (HPA) axis and normal cortisol production throughout the day. This indicates that the adrenal glands are responding appropriately to the body's daily physiological needs, with cortisol levels following a healthy circadian rhythm.

While this pattern is normal, it is still important to maintain healthy lifestyle practices to sustain balanced cortisol levels. Nutritional strategies include supporting adrenal health with a nutrient-dense diet, rich in vitamins, minerals, and antioxidants. Regular physical



* NutriPATH Pathology NutriPath. 16 Harker Street, Burwood VIC 3125

Order ID 6389435
Lab ID 4125280
Patient ID P002447
Ext ID 25206-0001

KATE FRYER

Sex: Female • 36yrs • 19-Mar-89
61 BRIDGMAN DRIVE, REEDY CREEK QLD 4227

RECEIVED
25-Jul-25

activity, stress management techniques like mindfulness or yoga, and maintaining a consistent sleep-wake schedule are all critical in preserving a balanced cortisol rhythm.

METABOLISED CORTISOL (THF & THE) ELEVATED:

Elevated total metabolised cortisol indicates increased overall adrenal glucocorticoid output and enhanced clearance. This often reflects long-term stress activation of the HPA axis, possibly with increased tissue resistance to cortisol's action. Chronic elevation may impair reproductive hormone synthesis, suppress thyroid function, and contribute to central adiposity and fatigue. Recommend reducing allostatic load, assessing co-impacted hormone systems, and supporting phase II liver detoxification.

11b-HSD INDEX (THF/THE) LOW:

A low THF/THE ratio suggests reduced 11β-HSD1 activity, leading to decreased conversion of cortisone to active cortisol in tissues such as the liver and fat. This reduces intracellular cortisol action, potentially mimicking cortisol deficiency at the cellular level despite normal systemic levels. Low 11β-HSD1 activity has been linked to increased fatigue, reduced inflammatory regulation, and impaired metabolism. Consider anti-inflammatory and adrenal support, as well as cofactor repletion (e.g., NAD+, zinc).

Urinary Cortisone Comment

URINE CORTISONES INTERPRETATION:

A normal cortisone rhythm across all samples suggests a healthy functioning HPA axis and optimal adrenal function. This indicates proper regulation of the stress response and circadian rhythm. When cortisone levels are within range and follow a typical diurnal pattern, it supports stable energy levels, balanced stress response, and overall hormonal health. No intervention is typically needed, as this represents healthy physiological regulation. If symptoms of fatigue or stress arise despite normal cortisone levels, other factors (such as poor sleep quality or nutrient deficiencies) may be investigated.

Urinary Melatonin Comment

URINE MELATONINS INTERPRETATION:

A normal melatonin pattern across all samples suggests a healthy, well-regulated circadian rhythm. This indicates that the body is producing melatonin at appropriate levels throughout the day, with peak production occurring during the night. A normal melatonin rhythm promotes restful sleep, better cognitive function, and hormonal balance. It is an indicator of a well-functioning hypothalamic-pituitary-gland axis and good sleep hygiene.

ACCREDITATION SCOPE: Please note that the above test is currently not under the laboratory's scope of accreditation.

8-HYDROXY-DEOXYGUANOSINE ELEVATED:

8-Hydroxy-2'-deoxyguanosine (8-OHdG) is a marker of oxidative DNA damage. Elevated levels indicate high oxidative stress burden, which can disrupt hormone synthesis, receptor sensitivity, and DNA transcription of hormone-regulating genes. Chronic oxidative stress is associated with impaired ovarian function, testosterone decline, and accelerated endocrine aging. Recommend antioxidant therapy (e.g., vitamins C and E, CoQ10, NAC) and evaluation of environmental or metabolic sources of oxidative load.

Methodology

Liquid Chromatography-Mass Spectrometry (LC-MS/MS/MS), Inductively Coupled Plasma Mass Spectrometry (ICP-MS)