

Rapha Centre

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Diagnostic Results: Ms SHARNA L BROOKES

Result IDs: (427984 427930 427784 427523 427522 427502 427496 427495 427494 427488 427487 427486 427485 427484 427483 427479 427478 427477 427476 427473)

Copper (Serum)

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Copper

Date 25/10/22
Time 0907
Lab No. 492054195

	Units	Reference
S-Copper	16.8	umol/L (13.0-25.0)

Comments on Collection 25/10/22 0907:

Testing performed at NATA laboratory accreditation number 1964

SS

Tests Completed: Copper (Serum), IHOR, IANDRO, LFT, Renal Function, Electrolytes, Iron Studies, Glucose Fasting, C Reactive Protein, Zinc (Plasma), Vitamin B12, Folate Serum, TFT, LH, FSH, Oestradiol, Progesterone, Prolactin, Testosterone, Insulin, INSULIN RESISTANCE, Active B12, DHEAS, SHBG, AND, VITAMIN D 25 OH, HbA1c, Cortisol AM, Thyroid Abs, FBC

Tests Pending :

Sample Pending :

Zinc (Plasma)

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Zinc

Date 25/10/22
Time 0907
Lab No. 492054195

	Units	Reference
P-Zinc	14.2	umol/L (9.0-19.0)

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Comments on Collection 25/10/22 0907:

Testing performed at NATA laboratory accreditation number 1964

SS

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Zinc (Plasma),Vitamin B12,Folate Serum,TFT,LH,FSH,
Oestradiol,Progesterone,Prolactin,Testosterone,
Insulin, INSULIN RESISTANCE,Active B12,DHEAS,SHBG,
AND,VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum)

Sample Pending :

SE-AND

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Androstenedione	16.1 H	nmol/L	(1.0-11.5)

AS

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Vitamin B12,Folate Serum,TFT,LH,FSH,Oestradiol,
Progesterone,Prolactin,Testosterone,Insulin,
INSULIN RESISTANCE,Active B12,DHEAS,SHBG,AND,
VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma)

Sample Pending :

SE- INSULIN RESISTANCE

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Insulin Resistance

Fasting Serum Glucose	4.5	mmol/L	(3.5 - 5.4)
Insulin Fasting	13	mU/L	(<20)
Glucose/Insulin Ratio	6.2		

Comments on Lab Id:492054195

(Normal > 10.0)

(Insulin Resistance < 4.5)

(Borderline 4.6 - 10.0)

A LOW Glucose:Insulin Ratio is indicative of Insulin Resistance.

Insulin resistance refers a condition where the tissues do not respond normally to insulin. This leads to an increase in insulin and problems with glucose metabolism. This may eventually lead to

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increased blood glucose levels (non-insulin dependant diabetes mellitus), and is widely regarded as a precursor to polycystic ovarian disease.

Note: This test is of little value in non-obese women whose Body Mass Index is less than 26 kg/m² or in established diabetes.

CL

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes, Iron Studies,Glucose Fasting ,C Reactive Protein, Vitamin B12,Folate Serum,TFT,LH,FSH,Oestradiol, Progesterone,Prolactin,Testosterone,Insulin, INSULIN RESISTANCE,Active B12,DHEAS,SHBG, VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),AND

Sample Pending :

SE-Insulin

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
S-Insulin	13	mU/L	(<20)

Comments on Collection 25/10/22 0907:

Insulin

High dose biotin (>5 mg/day) may artefactually decrease the result obtained by this method. If biotin interference needs to be excluded, please contact the Chemical Pathologist on 9371 4200.

CL

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes, Iron Studies,Glucose Fasting ,C Reactive Protein, Vitamin B12,Folate Serum,TFT,LH,FSH,Oestradiol, Progesterone,Prolactin,Testosterone,Insulin, INSULIN RESISTANCE,Active B12,DHEAS,SHBG, VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),AND

Sample Pending :

SE-Vitamin B12,SE-Active

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Vitamin B12

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Vitamin B12	202	pmol/L	(139-651)
Active B12	50	pmol/L	(23-100)

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Comments on Collection 25/10/22 0907:

Vitamin B12

Both B12 and active B12 are in the normal range.

Vitamin B12 deficiency is unlikely.

In line with Medical Benefits Schedule changes from 1st November 2014, people with low or equivocal vitamin B12 results (<340 pmol/L) will be routinely tested for holo-transcobalamin (active B12) to clarify their B12 status. Both tests are now Medicare rebatable. Those with vitamin B12 concentrations over 339 pmol/L are generally replete.

[Click here](#)

CA

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Vitamin B12,Folate Serum,TFT,LH,FSH,Oestradiol,
Progesterone,Prolactin,Testosterone,Active B12,DHEAS,
SHBG,VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Insulin,
INSULIN RESISTANCE,AND

Sample Pending :

SE- Iron Studies

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Iron Studies

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Iron	27	umol/L	(5-30)
Transferrin	44	umol/L	(25-45)
Saturation	31	%	(10-45)
Ferritin	24 L	ug/L	(30-200)

Comments on Collection 25/10/22 0907:

Iron Studies

Results consistent with iron deficiency.

GK

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Folate Serum,TFT,LH,FSH,Oestradiol,Progesterone,
Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH,
HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin,
INSULIN RESISTANCE,Active B12,AND

Sample Pending :

SE-IANDRO,SE-Testosterone

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

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Androgens

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Testosterone	1.6	nmol/L	(<2.0)
SHBG.	36	nmol/L	(30-120)
FAI	4		(<6)
DHEAS	8.5	umol/L	(2.68-9.23)
Free Testosterone	27.6	pmol/L	(1-34)

GK

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Folate Serum,TFT,LH,FSH,Oestradiol,Progesterone,
Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH,
HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin,
INSULIN RESISTANCE,Active B12,AND

Sample Pending :

SE-IHOR,SE-LH,SE-FSH,SE-O

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Hormones

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
FSH	5	U/L	
LH	7	U/L	
Oestradiol	183	pmol/L	
Progesterone	<1.0	nmol/L	
LH/FSH Ratio	1.40		

Reference	FSH	LH	Oestradiol	Progesterone
Limits	U/L	U/L	pmol/L	nmol/L
Follicular	2-10	2-10	110-450	<2
Mid-Cycle	5-22	10-80	550-1300	<6
Luteal	2-10	2-8	350-800	>6
Menopausal	>20	>15	<85	<0.5
Post Menopausal	>20	>15	<85	<0.5

Comments on Collection 25/10/22 0907:

FSH

Normal follicular pattern.

GK

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Folate Serum,TFT,LH,FSH,Oestradiol,Progesterone,
Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH,
HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin,
INSULIN RESISTANCE,Active B12,AND

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Sample Pending :

SE-Cortisol AM

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Cortisol

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Cort (6am-10am)	438	nmol/L	(150-535)

GK

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Folate Serum,TFT,LH,FSH,Oestradiol,Progesterone,
Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH,
HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin,
INSULIN RESISTANCE,Active B12,AND

Sample Pending :

ED-HbA1c

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

HbA1C

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
HbA1c (NGSP)	4.9	%	(<6.5)
HbA1c(IFCC)	30	mmol/mol	(<48)
Estimated Av Gluco	5.2	mmol/L	

Comments on Collection 25/10/22 0907:

HbA1c

HbA1c is now Medicare rebateable (once per year) for diagnosis of diabetes mellitus in high risk people. The diagnostic cut-off is HbA1c $\geq 6.5\%$ and/or 48 mmol/mol.

Queries: Dr A. Simpson, Dr K. Kahapola, Dr D. Bell and Dr P. Glendenning
(08)9371 4200.

HA

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,
Iron Studies,Glucose Fasting ,C Reactive Protein,
Folate Serum,TFT,LH,FSH,Oestradiol,Progesterone,
Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH,
HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin,
INSULIN RESISTANCE,Active B12,AND

Sample Pending :

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SE-VITAMIN D 25 OH

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
25OH Vit D	57	nmol/L	(50-150)

Comments on Collection 25/10/22 0907:

If at risk of falls or fractures suggest reassess Vitamin D at end of winter.

ANZBMS updated Position Statement Vitamin D and health in adults in Australia and New Zealand MJA 196 (11) 2012.

Vitamin D adequacy: >49 nmol/L at the end of winter (level may need to be 10-20 nmol/L higher at the end of summer, to allow for seasonal decrease).

Mild Deficiency	30-49	nmol/L
Moderate Deficiency	12.5-29	nmol/L
Severe Deficiency	< 12.5	nmol/L

Medicare rebates for vitamin D testing are available for patients at risk of Vitamin D deficiency such as all those with chronic lack of sun exposure.

As 37% of Vitamin D requests in our practice show deficiency, we presume that your patient complies with the funding criteria. If this is not the case, please contact our accounts dept.

SA

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes, Iron Studies,Glucose Fasting ,C Reactive Protein, Folate Serum,TFT,LH,FSH,Oestradiol,Progesterone, Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH, HbA1c,Cortisol AM,Thyroid Abs,FBC

Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin, INSULIN RESISTANCE,Active B12,AND

Sample Pending :

SE-Prolactin

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Prolactin

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Prolactin	258	mIU/L	(<425)

GK

Tests Completed: IHOR,IANDRO,LFT, Renal Function,Electrolytes,

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Iron Studies, Glucose Fasting, C Reactive Protein,
Folate Serum, TFT, LH, FSH, Oestradiol, Progesterone,
Prolactin, Testosterone, DHEAS, SHBG, VITAMIN D 25 OH,
HbA1c, Cortisol AM, Thyroid Abs, FBC
Tests Pending : Copper (Serum), Zinc (Plasma), Vitamin B12, Insulin,
INSULIN RESISTANCE, Active B12, AND
Sample Pending :

SE-TFT, SE-Thyroid Abs
Collection Date: 09:07 25/10/2022
Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Thyroid Function

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
TSH	1.70	mU/L	(0.4-4.0)
TPO Ab	<3.0	IU/mL	(<6)
TG Ab	<3.0	IU/mL	(<4)

Comments on Collection 25/10/22 0907:
TFT
Euthyroid levels.

CA

Tests Completed: IHOR, IANDRO, LFT, Renal Function, Electrolytes,
Iron Studies, Glucose Fasting, C Reactive Protein,
Folate Serum, TFT, LH, FSH, Oestradiol, Progesterone,
Prolactin, Testosterone, DHEAS, SHBG, VITAMIN D 25 OH,
HbA1c, Cortisol AM, Thyroid Abs, FBC
Tests Pending : Copper (Serum), Zinc (Plasma), Vitamin B12, Insulin,
INSULIN RESISTANCE, Active B12, AND
Sample Pending :

SE-Folate Serum
Collection Date: 09:07 25/10/2022
Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Serum Folate

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Serum Folate	8.1	ug/L	(>3.8)

Folate Serum Method and RI change as of 21-07-16.

CA

Tests Completed: IHOR, IANDRO, LFT, Renal Function, Electrolytes,
Iron Studies, Glucose Fasting, C Reactive Protein,
Folate Serum, TFT, LH, FSH, Oestradiol, Progesterone,

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Prolactin,Testosterone,DHEAS,SHBG,VITAMIN D 25 OH,
HbA1c,Cortisol AM,Thyroid Abs,FBC
Tests Pending : Copper (Serum),Zinc (Plasma),Vitamin B12,Insulin,
INSULIN RESISTANCE,Active B12,AND
Sample Pending :

SE-C Reactive Protein
Collection Date: 09:07 25/10/2022
Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
CRP	<1	mg/L	(<5)

Comments on Collection 25/10/22 0907:
C Reactive Protein

CA

Tests Completed: LFT, Renal Function,Electrolytes,Glucose Fasting ,
C Reactive Protein,FBC
Tests Pending : Copper (Serum),IHOR,IANDRO, Iron Studies,
Zinc (Plasma),Vitamin B12,Folate Serum,TFT,LH,FSH,
Oestradiol,Progesterone,Prolactin,Testosterone,
Insulin, INSULIN RESISTANCE,DHEAS,SHBG,AND,
VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs
Sample Pending :

SE-Glucose Fasting
Collection Date: 09:07 25/10/2022
Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Glucose/C-Peptide

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Gluc. Serum Fast.	4.5	mmol/L	(3.5-5.4)

Comments on Collection 25/10/22 0907:
Glucose Fasting
Diabetes unlikely.

CA

Tests Completed: LFT, Renal Function,Electrolytes,Glucose Fasting ,
C Reactive Protein,FBC
Tests Pending : Copper (Serum),IHOR,IANDRO, Iron Studies,
Zinc (Plasma),Vitamin B12,Folate Serum,TFT,LH,FSH,
Oestradiol,Progesterone,Prolactin,Testosterone,
Insulin, INSULIN RESISTANCE,DHEAS,SHBG,AND,

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VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs

Sample Pending :

SE- Renal Function,SE-Ele

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Renal Function

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Urea	4.9	mmol/L	(2.5-6.5)
Creatinine	61	umol/L	(45-85)
eGFR	>90		(>59)
Sodium	139	mmol/L	(135-145)
Potassium	4.4	mmol/L	(3.5-5.5)
Chloride	104	mmol/L	(95-110)
Bicarbonate	25	mmol/L	(20-32)

Renal Function eGFR calculated using CKD EPI from 21-05-13.

Comments on Collection 25/10/22 0907:

Renal Function

Note: eGFR units are mL/min/1.73m2.

CA

Tests Completed: LFT, Renal Function,Electrolytes,Glucose Fasting ,
C Reactive Protein,FBC

Tests Pending : Copper (Serum),IHOR,IANDRO, Iron Studies,
Zinc (Plasma),Vitamin B12,Folate Serum,TFT,LH,FSH,
Oestradiol,Progesterone,Prolactin,Testosterone,
Insulin, INSULIN RESISTANCE,DHEAS,SHBG,AND,
VITAMIN D 25 OH,HbA1c,Cortisol AM,Thyroid Abs

Sample Pending :

SE-LFT

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Liver Function

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
AST	24	U/L	(10-35)
ALT	37 H	U/L	(5-30)
ALP	90	U/L	(30-110)
GGT	19	U/L	(5-35)
Total Bilirubin	12	umol/L	(3-15)
Protein	71	g/L	(64-81)
Albumin	42	g/L	(35-46)
Globulin	29	g/L	(23-39)

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CA

Tests Completed: LFT, Renal Function, Electrolytes, Glucose Fasting ,
C Reactive Protein, FBC

Tests Pending : Copper (Serum), IHOR, IANDRO, Iron Studies,
Zinc (Plasma), Vitamin B12, Folate Serum, TFT, LH, FSH,
Oestradiol, Progesterone, Prolactin, Testosterone,
Insulin, INSULIN RESISTANCE, DHEAS, SHBG, AND,
VITAMIN D 25 OH, HbA1c, Cortisol AM, Thyroid Abs

Sample Pending :

ED-FBC

Collection Date: 09:07 25/10/2022

Off OCP 3 months, fatigue, labile mood, low Iron, Fhx Thyroid, PCOS

Haematology

Date	25/10/22		
Time	0907		
Lab No.	492054195	Units	Reference
Haemoglobin	134	g/L	(115-165)
RCC	4.5	$\times 10^{12}/L$	(3.8-5.8)
Haematocrit	0.41		(0.36-0.47)
MCV	92	fL	(80-100)
MCH	30	pg	(27-32)
MCHC	326	g/L	(310-360)
RDW	12.3		(10-15)
WCC	5.4	$\times 10^9/L$	(4.0-11.0)
Neutrophils	2.2	$\times 10^9/L$	(2.0-7.5)
Lymphocytes	2.4	$\times 10^9/L$	(1.2-4.0)
Monocytes	0.4	$\times 10^9/L$	(0.2-1.0)
Eosinophils	0.4	$\times 10^9/L$	(0.0-0.5)
Basophils	<0.1	$\times 10^9/L$	(0.0-0.1)
Platelets	279	$\times 10^9/L$	(150-400)

Comments on Collection 25/10/22 0907:

FBC

The full blood count parameters are within the acceptable ranges.

HA

Tests Completed: FBC

Tests Pending : Copper (Serum), IHOR, IANDRO, LFT, Renal Function,
Electrolytes, Iron Studies, Glucose Fasting ,
C Reactive Protein, Zinc (Plasma), Vitamin B12,
Folate Serum, TFT, LH, FSH, Oestradiol, Progesterone,
Prolactin, Testosterone, Insulin, INSULIN RESISTANCE,
DHEAS, SHBG, AND, VITAMIN D 25 OH, HbA1c, Cortisol AM, Thyroid Abs

Sample Pending :

Rapha Centre