## **Nutristasis Changes**

The Nutristasis unit provides analysis of endogenous vitamins in body fluids.

## **Nutristasis Reference Range changes**

Test	Change
	Serum B12 – age related reference ranges apply. Ethnicity and pregnancy (trimester specific) ranges are incorporated into comments where applicable
	0 – 1 yr old: 215 – 1389 ng/L (all ethnicities)
	2 - 5 yr old: 374 – 1494 ng/L (all ethnicities)
	6 – 9 yr old: 332 -1081 ng/L (all ethnicities)
	10 – 13 yr old: 253 – 871 ng/L (all ethnicities)
Serum B12	>14 yr: 225 – 1091 ng/L (Black and Black British ethnic group)
	> 14 yr: 182 – 692 ng/L (White and Asian ethnic group)
	For pregnancy, trimester specific serum B12 reference ranges apply:
	<ul> <li>First trimester 168-574 ng/L</li> <li>Second trimester 154-516 ng/L</li> <li>Third trimester 112-465 ng/L</li> </ul>
	Serum ferritin – sex and age related reference ranges apply
Serum ferritin	Females cut-offs 0-5 yrs - 12-150 ug/L ≥6 yrs- 15-150 ug/L  Males cut-offs 0-5 yrs - 12-200 ug/L ≥6 yrs- 15-200 ug/L
Serum folate	Reference range 3.1 -20.5 μg/L

## **Nutristasis Critical Phoning Limit Changes**

Test	Change	
Vitamin D	Vitamin D (25-OH Vitamin D) results >500 nmol/L will be communicated	

# **Nutristasis Test Profile and Name Changes**

Test	Change
Combined panels for serum B12, Ferritin, Folate	Combined panels for serum B12, Ferritin, Folate will no longer be available – these tests must be ordered separately

Vitamin B12	Vitamin B12 will be renamed as Vitamin B12 Total
Vitamin D	Vitamin D will be renamed as 25-OH Vitamin D

## Nutristasis Changes to automated comments and reflex rules

Test	Comment
	Samples with serum B12 <150 ng/L will be referred for intrinsic factor (IF) and gastric parietal cell (GPC) antibodies assay. The following comment will apply
	Vitamin B12 deficiency. Determine cause and give parenteral vitamin B12 replacement. Sample sent for IF and GPC antibodies assay.
Serum B12	Indeterminate B12 status (age dependent) will trigger the following comment Indeterminate B12 status. For vitamin B12 values between swill be adjusted for age > ng/l in this age group we recommend confirmatory analysis with serum methylmalonic acid (MMA), a functional marker of vitamin B12 deficiency, providing that renal function is normal. If you would like to proceed using the same specimen please contact us asap - 0204 513 7300. If MMA is raised, B12 deficiency can be confirmed. Determine cause and give oral or parenteral vitamin B12 replacement.  Replete comment Vitamin B12 replete. Elevated B12 comment Elevated B12 concentration. Comment for all females between 15-50 yrs. of age Please note, in pregnancy, trimester specific serum B12 reference ranges apply: first trimester 168-574 ng/L, second trimester 154-516 ng/L, third trimester 112-465 ng/L
	Samples with results >150 nmol/L will be sent for confirmatory analysis
Vitamin D (25-OH Vitamin D)	using LC-MS/MS technology (results for these samples will be available within 10 days). The following comment will apply.
	Result confirmed by LC-MS/MS.
Ferritin	Comment for results within the reference range Serum ferritin within the reference interval cannot exclude iron deficiency in the context of raised inflammatory markers or a history of acute or chronic disease; if applicable further investigation may be warranted. In individuals with infection or inflammation, a ferritin concentration below 70 µg/L may indicate iron deficiency.
	Comments for results above the reference range but ≤1000 ug/L Elevated ferritin concentration. Consider iron overload and other causes of elevated ferritin e.g. inflammation or infection. If asymptomatic, consider repeat serum ferritin and transferrin saturation in 3-6 months.
	Comments for results above the reference range but ≤10000 ug/L Grossly elevated ferritin concentration indicative of iron overload or other disease. Further clinical and laboratory evaluation is indicated to establish the diagnosis and underlying cause of the ferritin concentration.
	Comments for results above the reference range but >10000 ug/L

Grossly elevated ferritin concentration, can be associated with renal or liver disease, infection or malignancies. Consider also rare conditions such as Still disease or haemophagocytic lymphohistiocytosis. An additional comment for females 15-50 yrs old and ferritin result between 0-150 ug/L (Female) Ferritin concentration below 30 ug/L in pregnancy should prompt treatment in anaemic (Hb <110g/L in first trimester, <105g/L in second and third trimesters) pregnant women, non-anaemic pregnant women identified to be at increased risk of iron deficiency and in women with known haemoglobinopathy. Comment for low results Low serum folate concentration. This requires a cause investigation and treatment with folate supplements. Comment to results with serum folate between 3.1 - 5.9 ug/L Folate close to the lower limit of the reference range (3.1 to 5.9 µg/L) may require folate supplementation. Suggests a cause investigation and additional analyses e.g. serum/plasma homocysteine if renal function is normal or red cell folate. Folate Comment to results with serum folate between 6.0 - 20.0 ug/L Folate replete. Comment to results with serum folate >20 ug/L

High folate status.