Laboratory Analysis Report

Name	: Mrs / Olena Zynovieva	Lab ID	: 20598081
MRN	: 50498-0	Emirates / Passport ID	:
Gender	: Female	Reference No	:
Age / DOB	: 36 Y / 27-11-1988	Reg Date	: 04-MAR-2025 09:32 AM
Client Name	: York Diagnostic Laboratories	Collection Date	: 04-MAR-2025 09:32 AM
Referred by	:	Reporting Date	: 04-MAR-2025 01:04 PM
		Nationality	: Ukraine

CLINICAL CHEMISTRY REPORT

Test	Result	Unit	Reference Range	Methodology
***Ferritin**	47.44	ng/mL	4.63 - 204.00	CMIA

The availability of sensitive methods for measuring serum ferritin have significantly advanced the ability to detect iron deficiency and overload. The clinical assessment of iron stores has historically relied on the determination of serum iron, total iron-binding capacity (TIBC) and percent transferrin (ratio of serum iron and TIBC) or direct examination of bone marrow.
Ferritin levels below 10 ng/mL have been reported as indicative of iron deficiency anemia. There are patients with iron deficiency anemia who have elevated or normal ferritin levels because of other causes, such as hepatocellular disease or iron therapy. The ferritin levels also can act as an acute-phase reactant protein and may be elevated in conditions not reflecting iron stores (e.g., acute inflammatory diseases, infections, metastatic cancer, lymphomas).

Adult patients' reference: Alinity kit insert B7P650, October 2020.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 4 days - 19 years).

***Kindly note the change in Methodology and Reference ranges effective from 11/01/2024.*

Transferrin Saturation

***Iron**	126	ug/dL	50 - 170	Ferene

This assay is used as an aid in the diagnosis and treatment of diseases such as iron deficiency anemia, hemochromatosis (a disease associated with widespread deposit in the tissues of two iron-containing pigments, hemosiderin and hemofuscin, and characterized by pigmentation of the skin), and chronic renal disease.

Iron dextran treatment can result in elevated total iron results. Use of the Iron assay for patients undergoing treatment with deferoxamine or other iron chelating compounds is not recommended. Transiently elevated iron levels can be observed post ingestion of supplements/vitamins that contain iron. Rifampicin levels above 5 mg/L may produce artificially low results with the Iron assay.

Adult patients' reference: Alinity kit insert B4T980, March 2022.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 1 year- 14 years).
***Kindly note the change in Methodology and Reference ranges effective from 08/02/2024.*

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Final Report

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CLINICAL CHEMISTRY REPORT

Test	Result	Unit	Reference Range	Methodology
Transferrin Saturation				
Total Iron Binding Capacity (TIBC)	352	ug/dL	240 - 450	Calculation

Total iron-binding capacity (TIBC) is an essential test used for the diagnosis of iron deficiency anemias and other disorders of iron metabolism. Iron binding capacity is the capacity of transferrin to bind with iron. TIBC is a surrogate for transferrin and has a direct relationship to it. TIBC is also used in iron overload scenarios to establish the diagnosis.

Reference: National Library of Medicine; Iron Binding Capacity- Article by Arjumand Faruqi, Shiva Kumar R. Mukkamalla;published in Jan 2023.

***Kindly note the change in Methodology and Reference ranges effective from 13/01/2024.*

Transferrin Saturation	35.8	%	15.0 - 50.0	Calculation

***Kindly note the change in Methodology and Reference ranges effective from 17/01/2024.*
Reference: Mosby's Diagnostic and Laboratory Test Reference- Fifteenth Edition.

***Transferrin**	324.0	mg/dL	180.0 - 382.0	Immunoturbidimetric

Transferrin is responsible for 50% to 70% of the iron binding capacity of serum. Indications for transferrin quantitation include: screening for nutritional status; differential diagnosis of anemia; and monitoring anemia treatment. Iron deficiency and iron overload are best diagnosed using a combination of iron, transferrin, and ferritin determinations. Transferrin levels are also elevated with increased estrogen due to pregnancy, oral contraceptives.

Adult patients' reference: Alinity kit insert B8P3I0, January 2020.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021 & Alinity kit insert B8P3I0, January 2020, (age 1-14 years).
***Kindly note the change in Methodology and Reference ranges effective from 10/02/2024.*

#Active B12 (Holo-Transcobalamin)	In Progress	pmol/L	25.1 - 165.0

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CLINICAL CHEMISTRY REPORT

End of Report

Sample Type : Serum - 25030035934

Verifed by : Jannice Dangani Verifed on : 04-MAR-2025 12:39 PM

* Tests marked with '*' are under ISO 15189:2012 scope of Accreditation

- Samples are processed on the same day of request unless indicated.(#)Result obtained from an external accredited laboratory
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HORMONES /ENDOCRINOLOGY REPORT

Test	Result	Unit	Reference Range	Methodology
***Thyroid Stimulating Hormone (TSH)**	1.38	ulU/mL	0.35 - 4.94	CMIA

The TSH assay is used as an aid in the assessment of thyroid status, diagnosis and treatment of thyroid disease. TSH levels are lower during pregnancy, especially during the 1st trimester. Based on recent clinical studies which have shown that even mildly elevated TSH during pregnancy is associated with adverse pregnancy outcomes, the American Thyroid Association has released clinical guidelines which recommend the use of assay-specific and trimester-specific reference intervals.

First Trimester : 0.1 - 2.5 uIU/mL
Second Trimester: 0.2 - 3.0 uIU/mL
Third Trimester: 0.3 - 3.0 uIU/mL

Adult patients' reference: Alinity kit insert B7P480, Feb 2018, Trimester specific reference ranges as per American Thyroid Association guidelines-2011.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Seventh Edition - 2021 (age 2 months - 20 years)

***Kindly note the age dependent reference range. The standard normal reference range for adult is 0.35 - 4.94 uIU/mL. Results to be interpreted in the light of patient age and clinical history.*

***Kindly note the change in Methodology and Reference ranges effective from 29/02/2024.*

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HORMONES /ENDOCRINOLOGY REPORT

Test	Result	Unit	Reference Range	Methodology
***Tri-iodothyronine - Free (FT3)**	4.30	pmol/L	2.43 - 6.01	CMIA

Free T3 assay is to be used as an aid in the assessment of thyroid status. Free T3 may also be important in monitoring patients on anti-thyroid therapy where treatment is focused on reducing the T3 production and the T4 conversion to T3. Serum free T3 may also be useful in assessing the severity of the thyrotoxic state.

Reference Range for Pregnant Women:
1st trimester 3.0 - 7.0 pmol/L
2nd trimester 3.0 - 5.5 pmol/L
3rd trimester 2.5 - 5.5 pmol/L

Adult patients' reference: Alinity kit insert B7P690, April 2020, Trimester specific reference ranges from Cotzias et al. Eur J Obstet Gynecol Reprod Biol.2008;137:61-6.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 4 days - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 18/01/2024.*

***Thyroxine- Free (FT4)**	14.27	pmol/L	9.01 - 19.05	CMIA

This assay is to be used as an aid in the assessment of thyroid status. Free T4 values provide the best indication of thyroid dysfunction, since free T4 is less sensitive to changes in the serum binding proteins.

Refence Range for pregnant women:
First Trimester: 10.3-15.5 pmol/L
Second Trimester: 7.7-12.9 pmol/L
Third Trimester: 6.4-10.3 pmol/L

Adult patients' reference: Alinity kit insert B7P700, Feb 2018 &Perinatology.com - Reference Values During Pregnancy.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 5 days - 19 years).

Kindly note the change in Methodology and Reference ranges effective from 26/01/2024.

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HORMONES /ENDOCRINOLOGY REPORT

End of Report

Sample Type : Serum - 25030035934

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Thyroid Antibody Profile

Test	Result	Unit	Reference Range	Methodology
Thyroid Peroxidase Ab (Anti-TPO)	0.11	IU/mL	Up to 5.61	CMIA
Thyroglobulin Ab (Anti-Tg)	1.48	IU/mL	Up to 4.11	CMIA

End of Report

Sample Type : Serum - 25030035934

Verified by : Jannice Dangani Verified time : 04-MAR-2025 12:39 PM

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Vitamin D, 25-OH

Test	Result	Unit	Reference Range	Methodology
***Vitamin D, 25-OH (Total)**	54.0	ng/mL	Deficiency: < 20 Insufficiency: 20 - 29 Sufficiency: 30 - 100 Potential toxicity: > 100	CMIA

Vitamin D is mainly produced in the skin from 7-dehydrocholesterol after exposure to sunlight.
Two forms of vitamin D are biologically relevant - vitamin D3 (Cholecalciferol) and vitamin D2 (Ergocalciferol). Both vitamins D3 and D2 can be absorbed from food, with vitamin D2 being an artificial source, but only an estimated 10-20% of vitamin D is supplied through nutritional intake.Both Vitamin D2 & D3 is converted in the liver to 25 OH Vitamin D which is the major storage form of vitamin D with a longer half-life compared to Vitamin D (1, 25 OH) which is the active form produced in the kidney. Therefore, 25-OH vitamin D is the analyte of choice for determination of the vitamin D levels status. Aside from the medications, the use of fortified food and nutritional supplement are used to treat vitamin D deficiency. Rich sources of Vitamin D include oily fish (Salmon & Mackerel,) as well as mushroom and certain vegetables.

For pediatric patient < 18 years the below values have been indicated:
(Deficient: < 12) (Insufficient: 12-<20) (Sufficient: >=20)

Although controversy exists regarding the optimal levels of Vitamin D, levels > 50 ng/ml have been associated with adverse events.
Pediatric Reference: American Academy of Pediatrics (AAP), Reference Range values for Pediatric care 2nd Edition.
New pediatric reference range effective from 20/05/2024.

For Adult patient > 18 years the below values have been indicated:
(Deficiency: < 20) (Insufficiency: 20 - 29) (Sufficiency: 30 - 100) (Potential toxicity: > 100)

Adult patients' reference: According to US Endocrine Society, Source: Adapted from "Recommendations of the Brazilian Society of Endocrinology and Metabology (SBEM) for the diagnosis of treatment.
***Kindly note the change in Methodology and Reference ranges effective from 10/01/2024.*

End of Report

Sample Type : Serum - 25030035934

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