Laboratory Analysis Report

Name	: Ms / Olena Zynovieva	Lab ID	: 20615444
MRN	: 50498-0	Emirates / Passport ID	:
Gender	: Female	Reference No	:
Age / DOB	: 36 Y / 27-11-1988	Reg Date	: 18-AUG-2025 09:13 AM
Client Name	: York Diagnostic Laboratories	Collection Date	: 18-AUG-2025 09:13 AM
Referred by	:	Reporting Date	: 20-AUG-2025 07:07 PM
		Nationality	: Ukraine

CLINICAL CHEMISTRY REPORT

Test	Result	Unit	Reference Range	Methodology
***Glucose-Fasting**	93	mg/dL	Normal 70 - < 100 Diabetic Risk 100 - 125 Diabetic > or = 126	Hexokinase/G-6-PDH
Reference: American Diabetes Association, 2024 ***Kindly note the change in Methodology and Reference ranges effective from 02/04/2024.*				
***Glucose, Fasting (SI)**	5.16	mmol/L	Normal 3.89 - 5.55 Diabetic Risk 5.55 - 6.94 Diabetic > or = 6.99	Hexokinase/G-6-PDH
Reference: American Diabetes Association, 2024 ***Kindly note the change in Methodology and Reference ranges effective from 02/04/2024.*				
***Zinc, serum**	14.88	umol/L	9.18 - 18.40	Colorimetric
Kindly note changes in pediatric reference range effective 25-06-2024 (Reference Range Values for Pediatric Care-2nd Edition, American Academy Of Pediatric- AAP)				

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Dr. Ossama Al Babbili PhD, Germany
Managing Director
License No **DHA/LS/2992011/245185**

Dr. Samar Hourieh AM
Specialist Clinical Pathology
DHA - P - 0218044

Dr. M. Jay Al Khatib PhD, UK
Laboratory Director
License No DHA-P-0053297

Final Report

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CLINICAL CHEMISTRY REPORT

Test	Result		Unit	Reference Range	Methodology
Homocysteine	**3.20**	**L**	umol/L	4.44 - 13.56	CMIA

Test results to be interpreted in the light of clinical history & to be investigated further if necessary.

Homocysteine values can assist in the diagnosis and treatment of patients suspected of having hyperhomocysteinemia and homocystinuria. Studies have investigated the relationship between elevated homocysteine concentrations and cardiovascular disease (CVD), indicating homocysteine as an important marker for risk assessment. The majority of elevated homocysteine cases (two-thirds) in the general population are due to deficiency of folic acid, vitamin B6 and vitamin B12.
Patients taking methotrexate, carbamazepine, phenytoin, nitrous oxide, anticonvulsants or 6-azauridine triacetate may have elevated levels of homocysteine due to their effect on the metabolic pathway. Patients who are on drug therapy involving S-adenosyl-methionine may show falsely elevated levels of homocysteine.

Adult patients' reference: Alinity kit insert B9P280, July 2018.
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 15/01/2024.*

# Copper	In Progress		umol/L	12.6 - 24.3	Direct Colorimetric

End of Report

Sample Type : SERUM Zn - 25080004105 NaF-Plasma Fasting - 25080004102 Serum - 25080004104

Verifed by : Jannice Dangani Verifed on : 20-AUG-2025 03:19 PM

* Tests marked with '*' are under ISO 15189:2012 scope of Accreditation
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DHA - P - 0218044

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HORMONES /ENDOCRINOLOGY REPORT

Test	Result	Unit	Reference Range	Methodology
***Thyroid Stimulating Hormone (TSH)**	2.44	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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Managing Director
License No **DHA/LS/2992011/245185**

Dr. Samar Hourieh AM
Specialist Clinical Pathology
DHA - P - 0218044

Dr. M. Jay Al Khatib PhD, UK
Laboratory Director
License No DHA-P-0053297

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Laboratory Analysis Report

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HORMONES /ENDOCRINOLOGY REPORT

Test	Result	Unit	Reference Range	Methodology
***Tri-iodothyronine - Free (FT3)**	4.36	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)**	11.90	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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Managing Director
License No **DHA/LS/2992011/245185**

Dr. Samar Hourieh AM
Specialist Clinical Pathology
DHA - P - 0218044

Dr. M. Jay Al Khatib PhD, UK
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License No DHA-P-0053297

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Gender	: Female	Reference No	:
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HORMONES /ENDOCRINOLOGY REPORT

End of Report

Sample Type : Serum - 25080004104

Verifed by : Jannice Dangani Verifed on : 18-AUG-2025 02:34 PM

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Specialist Clinical Pathology
DHA - P - 0218044

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Laboratory Analysis Report

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*Liver Function Profile

Test	Result		Unit	Reference Range	Methodology
***Alanine Aminotransferase (ALT)**	19		U/L	Up to 34	NADH (without P-5'-P)

This assay is used as an aid in the diagnosis and treatment of certain liver diseases (e.g., viral hepatitis and cirrhosis. This enzyme is not only sensitive but also very specific in indicating hepatocellular disease. Specimens with Sulfasalazine levels greater than 50 mg/L may cause falsely depressed results with the Alanine Aminotransferase assay.

Adult patients' reference: Alinity kit insert B4T840, July 2021.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 1 year - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 06/02/2024.*

***Aspartate Aminotransferase (AST)**	19		U/L	11	-	34	NADH (without P-5'-P)

This test is used as an aid in the diagnosis and treatment of certain liver diseases. AST is most commonly used in conjunction with other laboratory findings ALT or LDH. Decreased AST levels may indicate vitamin B6 deficiency and uremia.

Adult patients' reference: Alinity kit insert B4T860, July 2021.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 15 days - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 07/02/2024.*

***Gamma Glutamyl Transferase (GGT)**	9		U/L	Up to 38			L-GG-3-carbox-4-nitrooanilide Substrate

The Gamma-Glutamyl Transferase2 assay is to be used primarily as an aid in the diagnosis and treatment of liver diseases such as alcoholic cirrhosis and primary and secondary liver tumors. Accordingly, elevated GGT should not be considered a highly-specific marker of hepatobiliary disease.

Adult patients' reference: Alinity kit insert B4T960, July 2021.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 15 days - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 28/01/2024*

***Alkaline phosphatase (ALP)**	**43**	**L**	U/L	46	-	122	Para-nitrophenyl Phosphate

Test results to be interpreted in the light of clinical history & to be investigated further if necessary.

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Managing Director
License No **DHA/LS/2992011/245185**

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Specialist Clinical Pathology
DHA - P - 0218044

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*Liver Function Profile

Test	Result		Unit	Reference Range	Methodology

Elevation in serum alkaline phosphatase is used as an aid to detect various hepatobiliary and bone diseases. In order to distinguish between liver or bone as the source, clinical findings and additional diagnostic tools, such as liver function tests (LFTs) including gamma-glutamyl transferase (GGT), aspartate aminotransferase (AST) and alanine aminotransferase (ALT), are used. Specimens from patients undergoing alkaline phosphatase replacement therapy (asfotase alfa) may exhibit positive interference with alkaline phosphatase assays. Day to day variation of total alkaline phosphatase is 5% to 10%. Postprandially alkaline phosphatase levels may increase, therefore it is preferred to measure alkaline phosphatase in a fasting state.

Adult patients' reference: Alinity kit insert B4T830, September 2021.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 1 day - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 25/01/2024.*

***Bilirubin total**	0.37		mg/dL	0.20	-	1.20	Diazonium Salt

Total bilirubin is elevated in hepatitis, cirrhosis, hemolytic disorders, several inherited enzyme deficiencies, and conditions causing hepatic obstruction. For patients undergoing evaluations involving the administration of indocyanine green (ICG), it is recommended that samples are drawn after ICG has been eliminated. In samples where the concentration of bilirubin is low, or where conjugated bilirubin is the predominant form, the Direct Bilirubin assay may report results that are greater than results obtained using the Total Bilirubin assay. Under these circumstances, report the Total Bilirubin results for both the Total Bilirubin and Direct Bilirubin assays.

Adult patients' reference: Alinity kit insert B4V510, February 2022.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 15 days - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 29/01/2024.*

***Bilirubin direct**	0.12		mg/dL	Up to 0.50			Diazo Reaction

Specimens with total bilirubin concentrations of 0.2 mg/dL or less occasionally gave a direct bilirubin result that slightly exceeded their respective total bilirubin result. This may be observed when nearly all reacting bilirubin is direct bilirubin. For patients undergoing evaluations involving the administration of indocyanine green (ICG), it is recommended that samples are drawn after ICG has been eliminated.

Adult patients' reference: Alinity kit insert B7P970, April 2022.
Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 15 days - 19 years).
***Kindly note the change in Methodology and Reference ranges effective from 22/01/2024.*

***Bilirubin - Indirect**	0.25		mg/dL	Up to 0.90			Calculation
***Total Protein**	**6.0**	**L**	g/dL	6.4	-	8.3	Biuret

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DHA - P - 0218044

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*Liver Function Profile

Test	Result	Unit	Reference Range	Methodology
Test results to be interpreted in the light of clinical history & to be investigated further if necessary.				
This assay is used as an aid in the diagnosis and treatment of a variety of diseases involving the liver, kidney, or bone marrow as well as other metabolic or nutritional disorders. High or low total protein may lead one to suspect pathologic variation of individual proteins and may indicate additional testing including serum protein electrophoresis, hematocrit, electrolytes, testing for specific proteins and other organ or disease specific markers. In very rare cases, gammopathy, in particular type IgM (Waldenstr?m's macroglobulinemia), may cause unreliable results. The Total Protein assay is susceptible to positive interference effects from dextran in the therapeutic concentration range.				
*Adult patients' reference: Alinity kit insert B4T810, February 2022. Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 15 days - 19 years). **Kindly note the change in Methodology and Reference ranges effective from 08/02/2024.*				
Albumin	3.5	g/dL	3.5 - 5.0	Bromcresol green
Albumin is used as an aid in the diagnosis and treatment of numerous diseases involving primarily the liver or kidneys. Elevated serum albumin levels are usually the result of dehydration. Decreased albumin levels are found in a wide variety of conditions, including kidney disease, liver disease, malabsorption, malnutrition, severe burns, infections, and cancer.				
*Adult patients' reference: Alinity kit insert B4U300, September 2020. Pediatric Reference range: Pediatric Reference Intervals - American Association of Clinical Chemistry; Eight Edition - 2021, (age 15 days - 19 years). **Kindly note the change in Methodology and Reference ranges effective from 01/02/2024.*				
Globulin	2.5	g/dL	2.0 - 3.5	Calculation

End of Report

Sample Type : Serum - 25080004104

Verified by : Jannice Dangani Verified time : 18-AUG-2025 03:02 PM

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*HbA1C

Test	Result	Unit	Reference Range	Methodology
***Glycosylated Haemoglobin (HbA1C)**	4.8	%	Non-Diabetic: 4.0 - 5.6 Diabetic Risk: 5.7 - 6.4 Diabetic: > or = 6.5 Diabetic Control: Good: < 7.0 Fair: 8.0 - 9.0 Poor: > 9.0	HPLC

End of Report

Sample Type : EDTA - 25080004103

Verified by : Hannah Flores Verified time : 18-AUG-2025 02:56 PM

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