

Ms. VARINDER KAUR

PID NO: P33724534700038

Age: 75 Year(s) Sex: Female



Reference: DR.VINAY CHOPRA

Sample Collected At:
DR VINAY KUMAR CHOPRA
DR VINAY KUMAR CHOPRA KOS
Diagnostic Lab 6349/I Nicholson Road
Ambala Cantt HRY 133001. 06-HR 13
Sample Processed At: Metropolis
Healthcare Ltd E-21, B1 Mohan Co-op Ind
Estate New Delhi-110044

VID: 240111107368518

Registered On: 28/10/2024 08:05 AM Collected On: 27/10/2024 8:04AM Reported On: 28/10/2024 02:08 PM

<u>Investigation</u>	Observed Value	<u>Unit</u>	Biological Reference Interval

Carrier .	
(10220N)	
(665.47.4393)	
(Call 201)	
2550	

SERUM, PROTEIN ELECTROPHORESIS

/C	_	r	m	١
			m	

(Serum)			
Total Protein (Biuret)	6.84		6.2-8.1
Serum Albumin	3.63	g/dL	3.57-5.42
Alpha 1 Globulin	0.36	g/dL	0.19-0.40
Alpha 2 Globulin	0.89	g/dL	0.45-0.96
Beta 1 Globulin	0.56	g/dL	0.30-0.59
Beta 2 Globulin	0.38	g/dL	0.20-0.53
Gamma Globulin	1.03	g/dL	0.71-1.54
Albumin, Globulin Ratio	1.13		1.1-2.2
"M" Band	<u>Present</u>		Absent

Comments: Adv: Immunofixation studies(I0262).

Interpretation:

Comment

- 1. Serum protein electrophoresis is commonly used to identify multiple myeloma & related disorders.
- 2. Electrophoresis is a method of separating proteins based on their physical properties & the pattern is dependent on the fractions of 2 types of protein: Albumin & Globulin (alpha1, alpha2, beta & gamma).

M-Band seen in Gamma region.

Components	Major Components	Interferences
Albumin	Albumin	Lipoproteins, Drugs, Bilirubin, Radiological contrast
Alpha1 - globulins	α-1 antitrypsin, α-1 acid glycoprotein	-
Alpha2 - globulins	α-2 macroglobulin, haptoglobin	Haptoglobin - haemoglobin complex
Beta globulins	Transferrin, β-lipoprotein, IgA, IgM & sometimes IgG with complement proteins – C3 & C4	Fibrinogen
Gamma globulins	IgG, IgA, IgM,IgD, IgE	CRP

Page 1 of 3

Dr. Chakshu Bansal M.D (Pathology)

(DMC Reg. No. - 66994)



Ms. VARINDER KAUR

PID NO: P33724534700038

Age: 75 Year(s) Sex: Female



Sample Collected At:
DR VINAY KUMAR CHOPRA
DR VINAY KUMAR CHOPRA KOS
Diagnostic Lab 6349/I Nicholson Road
Ambala Cantt HRY 133001. 06-HR 13
Sample Processed At: Metropolis
Healthcare Ltd E-21, B1 Mohan Co-op Ind

Reference: DR.VINAY CHOPRA

Registered On: 28/10/2024 08:05 AM Collected On: 27/10/2024 8:04AM Reported On: 28/10/2024 02:08 PM

VID: 240111107368518

<u>Investigation</u> <u>Observed Value</u> <u>Unit</u> <u>Biological Reference Interval</u>

Estate New Delhi-110044

Direct detection at 200 nm in capillaries yields relative concentrations (percentages) of individual protein zones.

Remarks:

- 1.In following conditions serum Immunofixation is required to confirm monoclonal gammopathy or to differentiate monoclonal and polyclonal disorders.
- (A) A well defined 'M' band
- (B) Non-discrete bands..
- (C) Chronic inflammatory pattern (decreased Albumin, increased Alpha, increased Gamma region), which may mask the monoclonal band.
- (D) Isolated increase in any region, with otherwise normal pattern.

2. SPE- Distortions/ Non-Discrete bands:

Distortions in Serum Protein Electrophoresis (SPE) usually affect curves of the gamma, beta, and alpha-2 peaks. Distortions are subtle, non-discrete bands which cannot be quantified & therefore not plotted on the graphs. These could be seen in the following situations:

- a) Patients on therapy for Multiple myeloma.
- b) Distortions at the point of sample application can be especially problematic when one is dealing with cryoglobulins (often precipitates at the origin).
- c) Monoclonal gammopathies involving any of beta-migrating immunoglobulins (produce subtle distortion of the transferrin or C3 band)
- d) Subtle distortions in the beta & gamma regions may indicate towards Ig D / Ig E gammaopathies.

Method: Capillary Electrophoresis

Dr. Chakshu Bansal M.D (Pathology) (DMC Reg. No. - 66994)

Page 2 of 3



Ms. VARINDER KAUR

PID NO: P33724534700038 Age: 75 Year(s)



Reference: DR.VINAY CHOPRA

Sample Collected At: DR VINAY KUMAR CHOPRA DR VINAY KUMAR CHOPRA KOS Diagnostic Lab 6349/I Nicholson Road Ambala Cantt HRY 133001. 06-HR 13 Sample Processed At: Metropolis Healthcare Ltd E-21, B1 Mohan Co-op Ind Estate New Delhi-110044

VID: 240111107368518

Registered On: 28/10/2024 08:05 AM Collected On: 27/10/2024 8:04AM Reported On: 28/10/2024 02:08 PM

Investigation

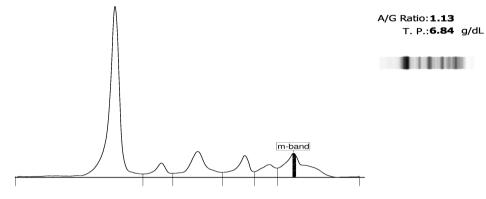
Observed Value

Unit

Biological Reference Interval

PROTEIN ELECTROPHORESIS

Date: 10/28/2024 Name: VARINDER KAUR Sample: 2 ID: **0525366990** Sex: Age : **75**



Fractions	%		Ref. %	Conc.	Ref. Conc.
Albumin	53.0	<	55.8 - 66.1	3.63	3.57 - 5.42
Alpha 1	5.2	>	2.9 - 4.9	0.36	0.19 - 0.40
Alpha 2	13.0	>	7.1 - 11.8	0.89	0.45 - 0.96
Beta 1	8.2	>	4.7 - 7.2	0.56	0.30 - 0.59
Beta 2	5.5		3.2 - 6.5	0.38	0.20 - 0.53
Gamma	15.1		11.1 - 18.8	1.03	0.71 - 1.54

Peaks	%	g/ai	
m-band	2.6	0.18	

Signature

-- End of Report --



Tests marked with NABL symbol are accredited by NABL vide Certificate no MC-2676; Validity till 04-04-2026

Page 3 of 3

Dr. Chakshu Bansal M.D (Pathology) (DMC Reg. No. - 66994)