

Patient Name :	Bill Date :
DOB/Age/Gender :	Sample Collected :
Patient ID / UHID :	Sample Received :
Referred By :	Report Date :
Sample Type :	Barcode No :
Client :	Report Status :

Test Description	Value(s)	Unit(s)	Reference Range
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SPECIAL ASSAY REPORT

Protein Electrophoresis, Serum

TOTAL PROTEIN Method : Biuret	5.9	g/dL	6.4 - 8.3
Serum Albumin	3.25	g/dL	3.57 - 5.42
Alpha 1 Globulin	0.33	g/dL	0.19 - 0.40
Alpha 2 Globulin	0.83	g/dL	0.45 - 0.96
Beta 1 Globulin	0.39	g/dL	0.30 - 0.59
Beta 2 Globulin	0.38	g/dL	0.20 - 0.53
Gamma Globulin	0.72	g/dL	0.71 - 1.54
Albumin, Globulin Ratio	1.23		1.1-2.2
M Band	NO MONOCLONAL BAND SEEN		Absent

Note:-Please correlate clinically.

Interpretation:

Method : Capillary Electrophoresis.

Interpretation :

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 dependant on the fractions of 2 types of protein: Albumin & Globulin (alpha1, alpha2, beta & gamma).

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

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.



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- (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.



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Name :

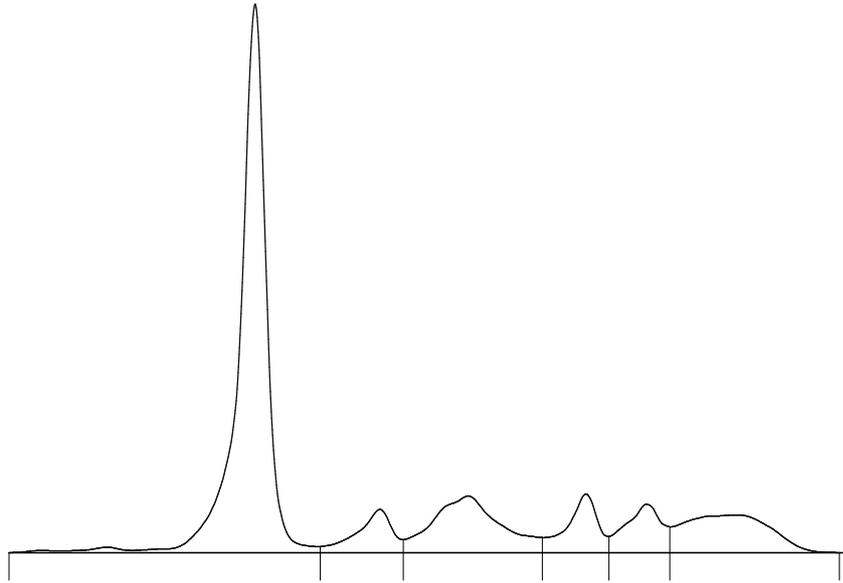
Date:

Sex :

ID:

Age :

Protein electrophoresis



Fractions	%		Ref. %	Conc.	Ref. Conc.
Albumin	55.1	<	55.8 - 66.1	3.25	3.57 - 5.42
Alpha 1	5.6	>	2.9 - 4.9	0.33	0.19 - 0.40
Alpha 2	14.1	>	7.1 - 11.8	0.83	0.45 - 0.96
Beta 1	6.6		4.7 - 7.2	0.39	0.30 - 0.59
Beta 2	6.4		3.2 - 6.5	0.38	0.20 - 0.53
Gamma	12.2		11.1 - 18.8	0.72	0.71 - 1.54

T. P.: 5.9 g/dL

A/G Ratio: 1.23

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2. It is to be presumed that the tests performed pertain to the specimen/sample attributed to the Customer's name or identification. It is presumed that the verification particulars have been cleared out by the customer or his/her representation at the point of generation of said specimen / sample. It is hereby clarified that the reports furnished are restricted solely to the given specimen only.
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