# SpermoLyzer (Computer Assisted Semen Analysis)

The system follows WHO (2010) strict criteria for motility patterns & morphometric assessment of human semen.

Name	محمد عبدالله محمد الطائفي	Case no.	202210245
Age	25	Date	24/10/2022
Lab ID	110737	Ref. by	Dr.\بلقيس شريان

Physical Properties

Abstinence	4	2 - 5 days
Collection	Masturbation at lab	
Volume	6	>= 1.5 ml
pH	7.8	>= 7.2
Color	Grey Opalescent	
Odor	Normal	
Viscosity	High	
Liquefaction time	110	15 - 60 min.
Liquefaction State	Complete	

Chart: PR 47.27, NP 23.67, IM 29.06
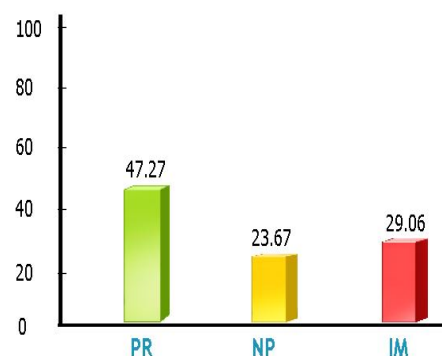
Test Result

Test	Result	Status	Reference values
Concentration	18.4	Passed	>= 15 million/ml
Total sperm count	110.4	Passed	>= 39 million/ejaculate
Progressive motility (PR)	47.27	Passed	>= 32 %
Rapid PR	29.04		
Slow PR	18.23		
Total motility (PR+NP)	70.94	Passed	>=40 %
Morphology index	9	Passed	>= 4 %

Agglutination grade

Agglutination	Nil
Agglutination grade	-
Non-specific Aggregation	Nil

Other Cells

White blood cells	1 - 2	< 5 /H.P.F
Red blood cells		< 5 /H.P.F
Spermatogenic cells	0 - 1	/HPF
Epithelial cells		/HPF

Comment

Normal seminal profile

The semen passed the WHO strict criteria for count and motility.

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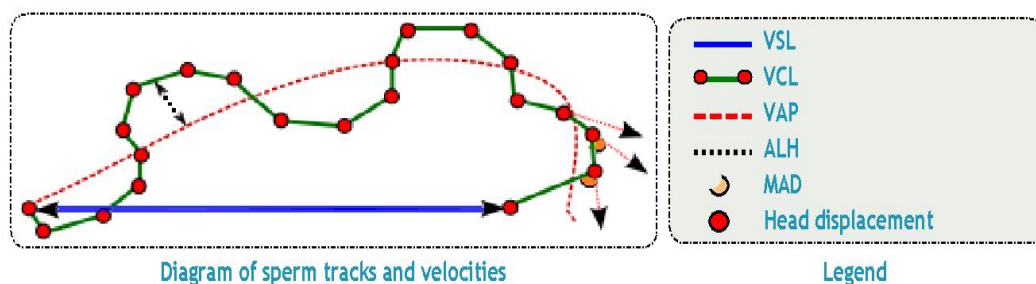## Motility report

Name	محمد عبدالله محمد الطايفي	Lab ID	110737							

Dynamic parameters (I)

Classification	Conc. (million/ml)	Total number (million)	Percentage (%)
Tested sperms	18.4	110.4	100
Total motility (PR+NP)	13.05	78.3	70.94
Progressive motility (PR)	8.7	52.2	47.27
Non progressive (NP)	4.36	26.16	23.67
Immotile (IM)	5.35	32.1	29.06

Progressive motility (PR)	Spermatozoa moving actively either linearly or in a large circle regardless of speed
Non progressive (NP)	All other patterns of motility with absence of progression, i.e. swimming in small circle, the flagellar force hardly displacing the head, or when only a flagellar beat can be observed.
Immotile (IM)	No movement

Dynamic parameters (II)

VCL (µm/s)	28.64	VSL (µm/s)	13.32	VAP (µm/s)	17.63
MAD (°)	43.36	ALH (µm)	5.02	BCF (Hz)	4.13
LIN (%)	46.18	WOB (%)	61.4	STR (%)	75.12

VCL	Curvilinear velocity	VSL	Straight line velocity	VAP	Average path velocity
MAD	Mean angular degree	ALH	Amplitude of lateral head displacement	BCF	Beat-cross frequency
LIN	Linearity (VSL/VCL)	WOB	Wobble (VAP/VCL)	STR	Straightness (VSL/VAP)

Diagram of sperm tracks and velocities

Legend

- VSL
- VCL
- VAP
- ALH
- MAD
- Head displacement

SpermoLyzer (Computer Assisted Semen Analysis)
Charts Report

Name	محمد عبدالله محمد الطايفي	Lab ID	110737

Progressive velocity (VSL)

%

- 100
- 80
- 60
- 52.42
- 40
- 20 — 19.04 — 16.26 — 11.54 — 0.74 — 0.00 — 0.00
- 0

>0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | >60   µm/s

Track speed (VCL)

%

- 100
- 80
- 60
- 39.37
- 40
- 20 — 7.19 — 13.74 — 10.00 — 12.12 — 8.09 — 9.51
- 0

>0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | >60   µm/s

Path velocity (VAP)

%

- 100
- 80
- 60
- 45.28
- 40
- 20 — 15.75 — 19.30 — 15.28 — 3.65 — 0.74 — 0.00
- 0

>0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | >60   µm/s

Sperm distribution

%

- 100
- 80
- 60
- 47.27
- 40
- 29.06
- 23.67
- 20
- 0

PR | NP | IM
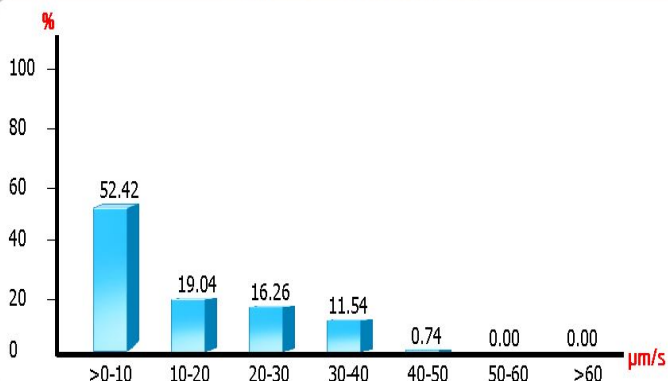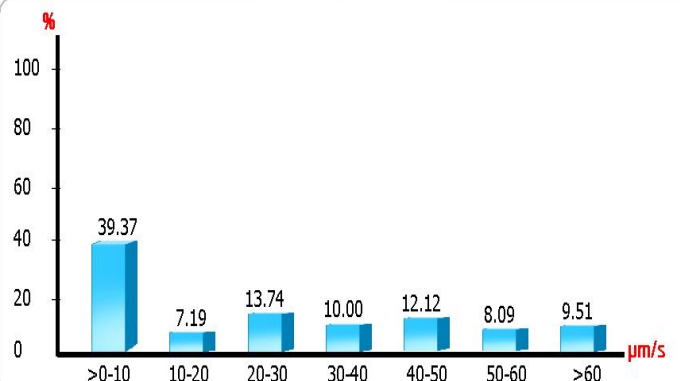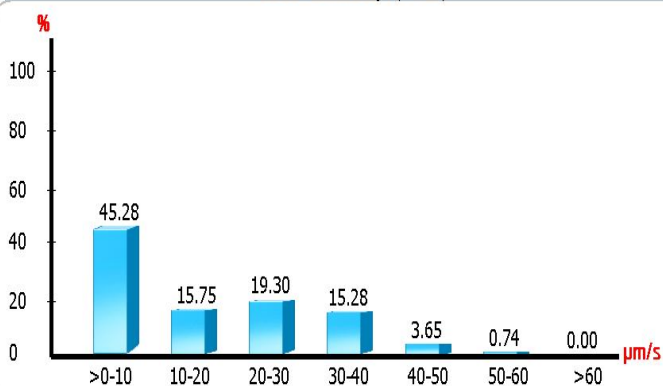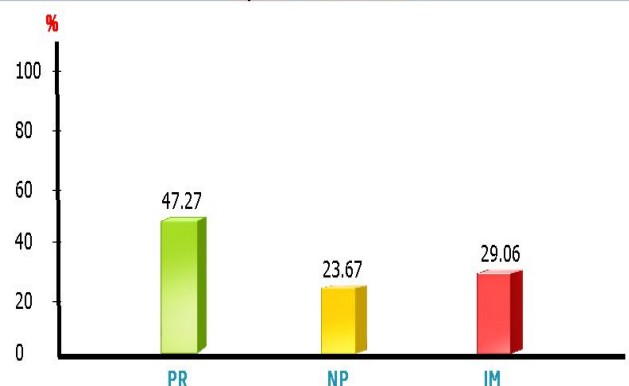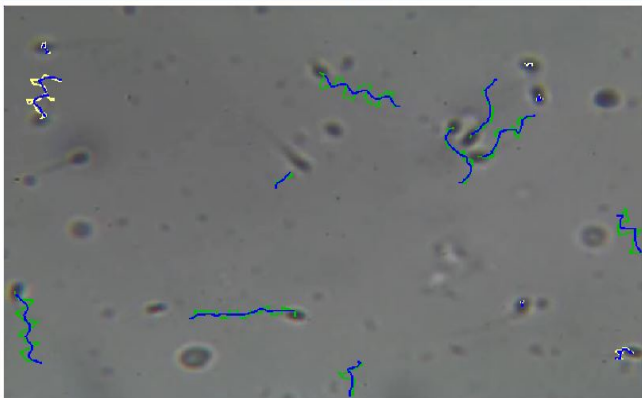
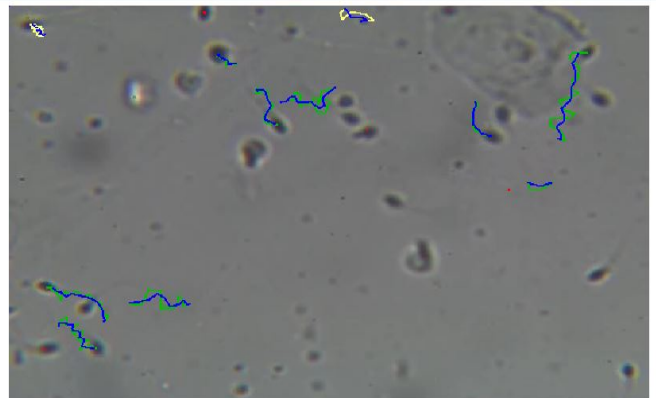## Track image (I)

Track image (II)

■ Progressive motility (PR)	■ Non progressive (NP)	■ Immotile (IM)