



Document Code: QMS-AND-UM-3	Version No: 8	 The Hewitt Fertility Centre
Document Title: Andrology Laboratory User Manual Leighton Hospital		
Date of issue: 20.05.2022	Date of review: 20.05.2024	
Owner: R. Gregoire	Author: S Brooks	

Ward 25, Leighton Hospital


ANDROLOGY SERVICES

USER MANUAL



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1 INTRODUCTION

This manual describes the policies, procedures and repertoire of the Andrology Laboratory, situated within Ward 25, at Leighton Hospital. This department is manned part-time by staff from the Hewitt Fertility Centre at the Liverpool Women's Hospital. We work towards the standards outlined by WHO 2010 Examination and Processing of Human Semen, Laboratory Guidelines for Post Vasectomy Analysis 2016, ISO16190:2003 Medical Laboratories Requirement for Safety and ISO 15189:2012 Medical laboratories – Requirements for quality and competence.


2 CONTACT DETAILS

The address of the Andrology Laboratory is:

Andrology Laboratory
Ward 25
Leighton Hospital
Middlewich Road
Crewe
CW1 4QJ
Tel: 01270 612212
Fax:01270 273497

The Andrology Laboratory is under the management of Dr Rachel Gregoire (Scientific Director) (ISO 15189:2012 4.1.14) as Person Responsible for Hewitt Fertility Centre (HFEA Centre No. 0007 and HFEA Centre No 0344). The Laboratory is staffed by 2 Clinical Andrologists, 2 Biomedical Andrologists, 1 Trainee Biomedical Andrologist and 2 STP Trainees. It is supported by a Medical Laboratory Assistant and a Scientific Administrative Assistant. Quality management is under the supervision of Ms Stephanie Brooks (ISO 15189:2012 4.12.7, 4.2).

This, in conjunction with the team above includes meeting the needs of our users (ISO 15189:2012 4.1.2.2, 4.4, 4.14.3), Service level agreements & third party agreements ((ISO 15189:2012 4.4), complaints (ISO 15189:2012 4.8), assessment of user feedback (ISO 15189:2012 4.14.3), review input (ISO 15189:2012 4.15), training of staff and competency assessment (ISO 15189:2012 5.1.5, 5.1.6), maintenance of facilities (ISO 15189:2012 5.2), equipment maintenance (ISO 15189:2012 5.3), reagents and consumables (ISO 15189:2012 5.3.2), pre-examination processes (ISO 15189:2012 5.4), examination processes (ISO 15189:2012 5.5), ensuring quality of examination of results (ISO 15189:2012 5.6), post examination processes, (ISO 15189:2012 5.7), reporting of results (ISO 15189:2012 5.8). This list is not exhaustive and may include additional items.

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3 LOCATION

(ISO 15189:2012 5.4.2 A)

The Andrology Laboratory is situated on the 2nd floor (Ward 25) of Leighton Hospital in the Pink Zone. From the Maternity and Women's services entrance, proceed down the corridor and take the stairs/lift on the left hand side to the 2nd floor.

4 OPENING TIMES

(ISO 15189:2012 5.4.2 C)

The Andrology Laboratory at Leighton hospital is open 09:00 – 14:00 on pre-agreed Thursdays, and 09:00 – 14:00 on Fridays.

5 PROTECTION OF PATIENT INFORMATION

The information that you give to us regarding your patients is protected by Liverpool Women's NHS Foundation Trust policies. The following link will direct you to more information if required: <https://www.liverpoolwomens.nhs.uk/about-us/our-aims-vision-values/>

6 HOW TO REQUEST A SEMEN ANALYSIS

(ISO 15189:2012 5.4.3)

6.1 Diagnostic semen analysis

Clinicians wishing to arrange an appointment for a diagnostic semen analysis should complete the relevant semen analysis request form. It is essential that this form is completed in full and is legible. This referral should be emailed to tmc-tr.semen.analysis@nhs.net

Appointments are made following referral from a GP to Ward 25 or following a request from the Fertility Clinic at Ward 25, where the patient books an appointment with the appointments team 01270 612212 .

6.2 Post-vasectomy


Referral form must be emailed to tmc-tr.semen.analysis@nhs.net using the appropriate post-vasectomy semen analysis request form for Leighton. These and other forms can be found on the Hewitt fertility centre website. [For GPs and other Clinicians | The Hewitt Fertility Centre](#)

6.3 Rescheduling

The department can be contacted on 01270 612212 or 01270 612293 to cancel or change existing appointments. There is no out-of-hours service.

7 INSTRUCTIONS FOR THE PRODUCTION OF SEMEN SAMPLES

(ISO 15189:2012 5.4.4.2)

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Instructions for the production of semen samples are detailed in the 'Record of Semen Production and Instructions (Leighton)' form, SCI-AND-FORM-59, contained in the pack sent to the patient via post.

Patients are advised to carefully follow the instructions on this form before attempting to produce a semen sample.

Instructions should be read at least 2 days prior to their appointment as a minimum abstinence period of 2 days is required.

Patients should be advised to only use the collection vessel provided as these will have been toxicity tested on a batch by batch basis meaning the sterility of the sample container can be assured, and a more accurate calculation of seminal volume can be made.

Patients should produce their sample by masturbation only. However, if this is not possible, non-spermicidal condoms can be provided by the laboratory on a case-by-case basis.

8 INSTRUCTIONS FOR THE TRANSPORTATION OF SEMEN SAMPLES

(ISO 15189:2012 5.4.2 H)

The patient has the option of producing their sample 'off-site' provided that the sample is delivered to the Andrology Laboratory within 50 MINUTES of production and not exposed to extremes of temperatures. This can be prevented by keeping the sample pot close to the body.

9 ROUTINE TESTS

(ISO 15189:2012 5.4.2 D)

The Andrology Laboratory provides a range of Andrology tests and follows recommendations made by the World Health Organisation (WHO Laboratory manual for The Examination and Processing of Human Semen, current edition), Laboratory Guidelines for Post Vasectomy Analysis 2016, The British Andrology Society and The Association of Reproductive and Clinical Scientists (ARCS).

Tests include;

- Diagnostic semen analyses
- Sperm cryopreservation
- Sperm DNA fragmentation - Self funded only.
- Microbial Culture and Sensitivity testing
- Extraction of sperm through operating procedures – e.g. testicular biopsies
- Counselling services
- Access to a consultant male fertility specialist

The Leighton Hospital Andrology Service only provide diagnostic semen analysis testing, whilst other male fertility services as stated above, should be referred to the Hewitt Fertility Centre at Liverpool Women's Hospital.

9.1 Diagnostic semen analysis

The following parameters are measured and included on the report:

PARAMETER	COMMENTS
Appearance	A qualitative assessment of the visual appearance of the ejaculate e.g normal, opaque etc.
Viscosity	A qualitative assessment of the consistency of the ejaculate e.g. viscous or non-viscous.
Presence of round cells	A quantitative assessment of the number of non-sperm cells in the ejaculate (NB. No differentiation is made between non-sperm round cells and leucocytes). Reported in millions of round cells per ml of ejaculate.
Sample volume	The volume of the ejaculate (ml).
pH	The pH of the ejaculate is measured to assess the function of the seminal vesicles. Measured at least 30 minutes post-ejaculation following liquefaction.
Sperm concentration	Number of sperm per ml of ejaculate (millions/ml).
Total sperm number	Total number of sperm in the whole ejaculate (millions).
Sperm motility	The assessment of the motility of at least 200 sperm (at 37°C) expressed as the percentage showing progressive motility, non-progressive motility or immotility.
Sperm vitality	Percentage of viable (live) sperm. Only measured if sperm motility <10%.
Presence of agglutination	A qualitative assessment of the numbers of sperm 'sticking' to each other. Reported as 1, 2, 3 or 4 (1 being little agglutination, 4 being a large proportion of the sperm agglutinated).
Sperm morphology	Percentage of sperm with 'normal' morphology.

9.2 Post-vasectomy semen analysis

A post-vasectomy semen analysis will report any observations made. If motile sperm are present in the ejaculate, analysis will continue as per 9.1 above. If a low number of immotile sperm are observed, this number will be included in the report. If greater than 200 non-motile sperm are seen in a 10µl wet preparation slide, a concentration assessment will be performed to assist clinicians in giving 'special clearance'. It is left to the clinical judgement of the referring clinician to decide whether this should be granted. Clinical advice can be provided on request (see 'Provision of Clinical Advice' below). If no sperm are identified, the centrifugation method will be used and the pellet will be examined to assess the presence of sperm.


10 ACCEPTANCE/REJECTION CRITERIA

The Senior Biomedical Andrologist will be consulted and professional judgement will be used at all times when deciding whether to accept or reject a sample. The type of sample (diagnostic semen analysis or post-vasectomy semen analysis) will also be considered.

Patients who attend the laboratory without prior referral will not be accepted under any circumstances.

All semen collection pots must be clearly labelled with the patient's full name and DOB. Any samples brought to andrology laboratory without full patient details on may be rejected.

If the patient has produced their semen sample into a non-laboratory issued container it may not be rejected but the patient should be informed that it may be necessary to repeat the analysis.

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If the patient's sample has spilt or leaked into the specimen bag, professional judgement will be used when deciding whether to accept or reject the sample. The patient should be informed that it may be necessary to repeat the analysis.

If the patient has the incorrect abstinence period the sample may not be rejected but the patient should be informed that it may be necessary to repeat the analysis.

If the patient delivers the sample to the andrology laboratory more than 50 minutes after production the sample may not be rejected but the patient should be informed that it may be necessary to repeat the analysis.

11 INTERPRETIVE COMMENTS & TERMINOLOGY

Term	Definition
Aspermia	No sample produced on ejaculation
Azoospermia	No sperm present in ejaculate
Cryptozoospermia	No sperm observed on initial examination but very low numbers observed following centrifugation concentration and examination of entire ejaculate
Oligozoospermia	<15 million sperm per ml of ejaculate
Asthenozoospermia	<32% grade A motility or <40% grade A + grade B motility
Teratozoospermia	<4% normal forms
Haemospermia	Presence of blood in the ejaculate
Incomplete sample collection	Patient has failed to collect entire ejaculate

In addition, other self-explanatory interpretative comments may be added.

For more detailed interpretation and significance of results reported in a semen analysis, the Andrology Laboratory recommends reference to the following organisations and guidelines to which the laboratory follows;

- The World Health Organisation (WHO Laboratory manual for the examination and processing of human semen, Fifth Edition, 2010).
- The Association of Reproductive Clinical Scientists

12 REPORTING OF RESULTS

(ISO 15189:2012 5.8)

A 'Semen Analysis Report Form' is generated by the Hewitt Fertility Centre 'IDEAS' database and returned by post or email to the referring clinician.

VERBAL RESULTS WILL NOT BE GIVEN OUT UNDER ANY CIRCUMSTANCES

13 TURNAROUND TIME

The Andrology Laboratory endeavours to return results within 10 working days of patient attendance.

14 PROVISION OF CLINICAL ADVICE

Clinical advice on any aspect of the diagnostic (or therapeutic) services provided by the Andrology Laboratory can be obtained from

Dr Rachel Gregoire, Scientific Director	0151 702 4173
Mr Richard Russell, Andrology Clinical Lead	0151 702 4215
The Andrology Laboratory	0151 702 4214

Or by e-mail enquiry to

rachel.gregoire@lwh.nhs.uk
stephanie.brooks@lwh.nhs.uk
Rebecca.lunt@lwh.nhs.uk
lwt@andrologylab@nhs.net

Scientific Director
Quality Manager
Lead Clinical Embryologist
General Enquiries

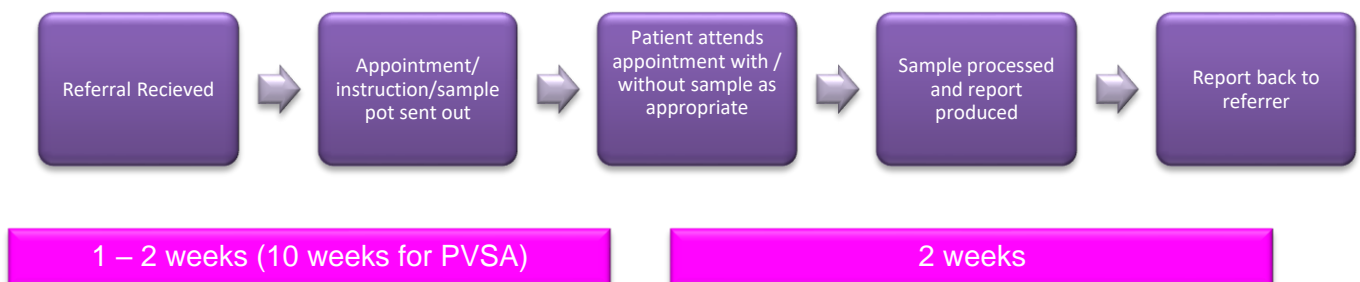
Complaints should be directed to the Quality Manager or Scientific Director at the Hewitt Fertility Centre, Liverpool Women's Hospital, Crown Street, Liverpool L8 7SS. (ISO 15189:2012 4.8),

15 MEASUREMENT OF UNCERTAINTY

(ISO 15189:2012 5.5.1.3, 5.5.1.4, 5.5.3)


Clinicians and scientists are generally comfortable with the concept of uncertainty in relation to a blood test to determine for example a hormone level, but a semen analysis comprises a combination of different test results. As such it is important to consider the measurement of uncertainty in relation to semen analysis testing and the mechanisms that are in place to attempt to minimise uncertainty of measurement when assessing semen samples. Therefore we have produced a document SCI-POL-1 'Uncertainty measurement in semen analysis – information for users' that we ask that you read. It includes a section at the back with bullet points that you are asked to consider when interpreting the results that we provide.

16 PROCEDURE FLOW DIAGRAM WITH APPROXIMATE TIMESCALES



17 APPENDIX

The following forms are available to download at:
[For GPs and other Clinicians | The Hewitt Fertility Centre](#)

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1. Semen Analysis Request Form
2. Patient information leaflet
3. User manuals all HFC Andrology laboratories
4. Sample report
5. Measurement of uncertainty Hewitt Fertility Centre document (SCI-POL-1)