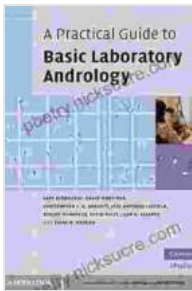


A Practical Guide to Basic Laboratory Andrology: Cambridge Medicine

Andrology is the medical specialty that deals with the male reproductive system and its disorders. Basic laboratory andrology is the foundation of andrology practice, and provides the basis for diagnosis and treatment of male infertility. This practical guide provides a comprehensive overview of the basic techniques used in andrology laboratories, including semen analysis, sperm preparation for assisted reproductive technologies, and assessment of sperm function. It is written by experienced andrologists and embryologists, and provides detailed protocols and troubleshooting tips to ensure successful implementation of these techniques. This guide is essential reading for andrologists, embryologists, and other healthcare professionals who work with male infertility.



A Practical Guide to Basic Laboratory Andrology (Cambridge Medicine) by Karen Bassie-Sweet

★★★★☆ 4.7 out of 5

Language : English
File size : 4717 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 478 pages
Lending : Enabled



Semen Analysis

Semen analysis is the cornerstone of andrology laboratory testing. It provides information about the quantity and quality of a man's sperm, and can help to identify potential causes of infertility. The World Health Organization (WHO) has published guidelines for the interpretation of semen analysis results, which are used by andrologists around the world.

The following parameters are typically assessed in a semen analysis:

*

- Semen volume

*

- Sperm concentration

*

- Sperm motility

*

- Sperm morphology

Semen analysis can be performed in a variety of ways, but the most common method is the "manual" method. This method involves the collection of a semen sample into a sterile container, and then the analysis of the sample under a microscope. Automated semen analyzers are also available, which can provide more objective and standardized results.

Sperm Preparation for Assisted Reproductive Technologies

Sperm preparation is an essential step in assisted reproductive technologies (ART) such as in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI). The goal of sperm preparation is to remove seminal plasma and other contaminants from the sperm sample, and to concentrate the sperm into a smaller volume. This process can be performed using a variety of methods, including:

*

- Swim-up

*

- Density gradient centrifugation

*

- Magnetic-activated cell sorting (MACS)

The choice of sperm preparation method depends on the specific ART procedure being performed.

Assessment of Sperm Function

In addition to semen analysis, a variety of other tests can be performed to assess sperm function. These tests can provide information about the ability of sperm to fertilize an egg, and can help to identify potential causes of infertility. The following are some of the most common sperm function tests:

*

- Sperm penetration assay (SPA)

*

- Hypoosmotic swelling test (HOST)

*

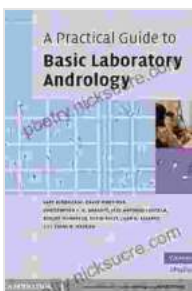
- Acrosome reaction assay

*

- Mitochondrial function assay

Sperm function tests can be performed in a variety of ways, and the choice of test depends on the specific information that is being sought.

Basic laboratory andrology is a complex and challenging field, but it is also essential for the diagnosis and treatment of male infertility. This practical guide provides a comprehensive overview of the basic techniques used in andrology laboratories, and is an essential resource for andrologists, embryologists, and other healthcare professionals who work with male infertility.



A Practical Guide to Basic Laboratory Andrology

(Cambridge Medicine) by Karen Bassie-Sweet

★★★★☆ 4.7 out of 5

Language : English

File size : 4717 KB

Text-to-Speech : Enabled

Screen Reader : Supported

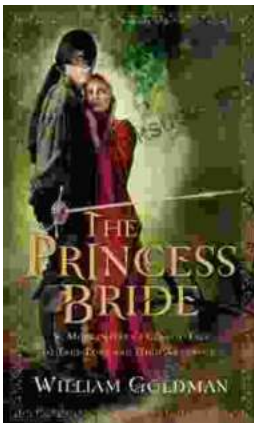
Enhanced typesetting : Enabled

Print length : 478 pages
Lending : Enabled



79 ESL Activities, Games, and Teaching Tips for Big Classes (20+ Students)

Teaching large ESL classes can be a challenge, but it's definitely possible with the right strategies. Here are 79 ESL activities, games, and...



Morgenstern: A Classic Tale of True Love and High Adventure

Morgenstern is a classic tale of true love and high adventure. Set in a medieval world, the story follows the journey of Morgenstern, a young...