

## Comprehensive Semen Analysis 2.5

|  |                                       |
|--|---------------------------------------|
| Patient: Example, Patient                    | Physician: Clinician Example          |
| Gender: M Age: 46Y Date of Birth: 06/14/1973 | Phone: 413-555-5555 Fax: 413-555-5556 |
| Specimen: T0001545                           | Address: Example Clinic               |
| Reported: 11/13/2019                         | 123 Example St                        |
| Received: 11/12/2019 Time: 09:00             | Example City, EX 55555                |
| Collected: 11/11/2019 Time: 09:00 Approx     |                                       |

Collection Device: Cup  
 Collection Difficulty: None

Abstinence Period 3 Days

Transport Method



### Selected Results Overview

| Question                                       | Testing Category | Result Type |            |              | Result Highlights  |
|--|------------------|-------------|------------|--------------|--|
|  |                  | In Range    | Borderline | Out of Range |  |
| How many sperm do I have?                      | COUNT            | ✓           |            |              | 11.00 million sperm per ml<br>12.00 million total motile sperm |
| Do my sperm move well?                         | MOTILITY         | ✓           |            |              | 72% total motility<br>(62% progressive)                        |
| Are my sperm shaped normally?                  | MORPHOLOGY       | ✓           |            |              | 5% normal forms  |
| Is there evidence of inflammation in my semen? | INFLAMMATION     |             |            | ✓            | 8.7 million/ml white blood cells                               |

#### ADDITIONAL COMMENTS:

none

#### Sperm Terms

|                          |  |                                      |  |
|--------------------------|--|--------------------------------------|--|
| <b>normozoospermia</b>   | semen with sperm of normal concentration, motility, and shape (morphology) | <b>teratozoospermia</b>              | low percentage of sperm with normal shape (morphology)   |
| <b>oligozoospermia</b>   | low sperm concentration or total number of sperm                           | <b>oligoastheno-teratozoospermia</b> | abnormal concentration, motility, and shape (morphology) |
| <b>azoospermia</b>       | no sperm in semen  | <b>leukospermia (pyospermia)</b>     | semen with high levels of inflammatory cells             |
| <b>asthenozoospermia</b> | low percentage of sperm which move in a forward direction                  | <b>haemospermia (haematospermia)</b> | presence of red blood cells (erythrocytes) in semen      |

#### References

- World Health Organization. *WHO Laboratory Manual for the Examination and Processing of Human Semen*, 5th ed. Geneva: World Health Organization, **2010**.
- World Health Organization. *WHO Laboratory Manual for the Examination of Human Semen and Sperm-Cervical Mucus Interaction*, 4th ed. Cambridge: Cambridge University Press, **1999**.
- Jeyendran RS. *Interpretation of Semen Analysis Results: A practical guide*. Cambridge, UK: Cambridge University Press; **2000**.
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- Lipshultz LI, Howards SS, Niederberger CS, eds. *Infertility in the Male*. 4th Ed. Cambridge, UK: Cambridge University Press; **2009**.

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## Results

**ReproSource**  
 ILLUMINATING PATHWAYS TO REPRODUCTIVE HEALTH™

### Results

| Testing Category  | Test                        | Units       | Range      | In Range   | Border-line | Out of Range | Note |
|---|-----------------------------|-------------|------------|------------|-------------|--------------|------|
| <b>Semen Characteristics</b>  |                             |             |            |            |             |              |      |
| Liquefaction and viscosity are measures of how fluid the semen is, and are affected by correct specimen transportation, time and temperature. The appearance and/or color of semen can be affected by abnormal processes (eg blood can produce a red/brown color). Semen pH generally reflects the balance of secretions from accessory glands. *Semen analysis performed after 1 hour does not detect delayed liquefaction, and pH may be more alkaline. | <b>Transport:</b> Integrity | qualitative | accept     | accept     |             |              |      |
|   | <b>Semen:</b> Volume        | ml          | ≥ 1.5      | 1.50       |             |              |      |
|   | Liquefaction                | qualitative | complete   | complete*  |             |              |      |
|   | Viscosity                   | qualitative | normal     | normal     |             |              |      |
|   | pH                          | units       | ≥ 7.2      | 7.5 *      |             |              |      |
|   | Appearance                  | color       | white/gray | White/Grey |             |              |      |
|   | Other                       | qualitative | none       | none       |             |              |      |

| <b>Sperm Analysis</b>  |                                  |             |       |      |  |      |              |                |
|--|----------------------------------|-------------|-------|------|--|------|--------------|----------------|
| <b>COUNT, MOTILITY, MORPHOLOGY, AGGLUTINATION:</b><br>Guidance on normal ranges for these measurements have evolved over time. This report generally follows the 5th and most recent edition of the World Health Organization (WHO) manual (2010). Due to the complex and subjective nature of this testing, consensus among laboratories remains challenging. Sperm attaching to other sperm (agglutination) can reduce the accuracy of results which may be due to anti-sperm antibodies.<br><br><b>SPERM HEALTH:</b> Sperm may appear normal and yet be unhealthy which can be assessed in different ways. Viability (vitality) testing assesses the percentage of sperm with intact membranes. | <b>Count:</b> Concentration      | million/ml  | ≥ 20  |      |  | 11.0 | oligospermia |                |
|  | Total/ejaculate                  | million     | ≥ 40  |      |  | 16.5 | low          |                |
|  | Total Motile/ejaculate           | million     | N/A   | 12.0 |  |      |              |                |
|  | <b>Motility:</b> Total (PR+NP)   | %           | ≥ 40  | 72   |  |      |              |                |
|  | Rate of Progression              | units       | 3 - 4 | 3    |  |      |              | good           |
|  | Progressive (PR)                 | %           | ≥ 32  | 62   |  |      |              |                |
|  | Non-progressive (NP)             | %           | N/A   | 10   |  |      |              |                |
|  | Immotile (IM)                    | %           | ≤ 60  | 28   |  |      |              |                |
|  | <b>Morphology:</b> Kruger Strict | % normal    | ≥ 4   | 5    |  |      |              |                |
|  | <b>Agglutination:</b> Grade      | units       | 1 - 2 | 1    |  |      |              |                |
|  | Attachment Type                  | qualitative | N/A   | A    |  |      |              | A=head to head |
|  | <b>Sperm Health:</b> Viability   | %           | ≥ 58  | 70   |  |      |              |                |

| <b>Cells &amp; Inflammation</b>   |                           |            |       |     |  |      |      |
|---|---------------------------|------------|-------|-----|--|------|------|
| Other cells are found in semen such as epithelial cells from the genitourinary tract and "round" cells. Round cells which express the protein CD45 are white blood cells (WBCs) involved in inflammation. | <b>Other Cells:</b> Round | million/ml | < 5.0 |     |  | 9.50 | high |
|   | Epithelial                | million/ml | N/A   | 1.2 |  |      |      |
|   | Clumping                  | %          | N/A   | 15  |  |      |      |
|   | <b>Inflammation:</b> WBCs | million/ml | < 1.0 |     |  |      | 8.70 |

**Comments:**  
 none

The performance characteristics of the above testing were verified and are monitored by ReproSource. Some of testing contains the use of certain materials labeled "RUO. For Research Use Only." This testing has not been cleared or approved by the US Food and Drug Administration. The FDA does not require this testing to go through premarket FDA review. This testing is used for clinical purposes. It should not be regarded as investigational or for research. ReproSource is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) as qualified to perform high complexity laboratory testing.

**References (continued)**

- Köhn FM et al. *Human Reproduction* 1997; Apr (12:4) 714-21.
- Perticarari S et al. *Human Reproduction* 2007; (22:2): 485-494
- Chen Z et al. *Journal of Andrology* 2006; Jan/Feb (27:10).
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