

**Reporting Title:** Semen Analysis with Strict Morphology  
**Performing Location:** Rochester

**Ordering Guidance:**

This test should not be used to check patient's sterility following a vasectomy. For such cases, order POSV / Post Vasectomy Check, Semen.

Semen analysis specimens submitted to Mayo Clinic Laboratories are not acceptable for fructose testing due to the use of dilution media. For specimen requirements for fructose testing in azoospermia patients, see FROS2 / Fructose, [Qualitative](#), Semen.

Submit separate specimen to rule-out ejaculatory duct blockage. Positive result indicates no blockage.

**Shipping Instructions:**

**Specimen must arrive within 24 hours of collection. Send specimen Monday through Thursday only and not the day before a holiday.** If holiday falls on a Saturday, holiday will be observed on the preceding Friday. Sunday holidays are observed on the following Monday. Specimen should be collected and packaged as close to shipping time as possible. Laboratory does not perform testing on weekends.

**Necessary Information:**

Include the following information:

- Semen volume (required)
- Viscosity
- pH
- Appearance (color)
- Number of days of sexual abstinence

**Specimen Requirements:**

**Patient Preparation:** Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results.

**Supplies:** Semen Analysis Kit - Dilution Media (T178)

**Specimen Volume:** Total ejaculate

**Collection Instructions:**

See Semen Collection Specimen Preparation and Packaging Instructions included with the kit

1. Prior to use, allow dilution medium to warm to room temperature for 45 to 60 minutes.
2. Allow semen to liquefy at room temperature for up to 30 minutes.
3. Use sterile volumetric pipet or tube for volume measurement.
4. Pour liquefied semen into 50-mL dilution medium container within 60 minutes of semen collection time, cap tightly, but do not overtighten, and gently mix.

Note: Proper temperature maintenance of specimen throughout processing and shipping is critical. All materials the specimen is exposed to should be at room temperature (20–28 degrees C).

Specimen Type	Temperature	Time	Special Container
Semen	Ambient	36 hours	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
ABSTN	Abstinence	Numeric	d	10587-4
CLST1	Collection Site	Alphanumeric		56816-2
TY	Study Type	Alphanumeric		54453-6
CNTN	Container Type	Alphanumeric		74384-9
APP3	Appearance	Alphanumeric		13359-5
VL53	Semen Volume	Numeric	mL	3160-9
PH1	pH	Numeric		2752-4
MOTML	Motile/mL	Numeric	x10(6)	42531-4
SPML	Sperm/mL	Numeric	x10(6)	9780-8
MOTY	Motility	Numeric	%	6800-7
GR2	Grade	Numeric		13942-8
MOTEJ	Motile/Ejaculate	Numeric	x10(6)	6800-7
VISC	Viscosity	Numeric		32789-0
AGGLU	Agglutination	Numeric		33217-1
STAIN	Supravital Stain	Numeric	% live	101570-0
FRCT	Fructose	Alphanumeric		13943-6
CMT45	Comment	Alphanumeric		48767-8
OVAL2	Strict Morph NL	Numeric	%	10622-9
ACRSM	Acrosom Defect	Numeric	%	66494-6
HDSAB	Head Shape Abnormal	Numeric	%	66495-3
HDZAB	Head Size Abnormal	Numeric	%	66496-1
MD	Midpiece Defect	Numeric	%	10603-9
TAILD	Tail Defect	Numeric	%	10604-7
DBLF	Double Forms	Numeric	%	66497-9
MULTI	Multiple Defects	Numeric	%	66498-7
GERM3	Germ Cells/mL	Numeric	x10(6)	10576-7
WBC6	WBC/mL	Numeric	x10(6)	10579-1
CMT56	Comment	Alphanumeric		48767-8

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

Components:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
FER	Semen Analysis	1	89310	Yes	Yes
MSTC	Strict Criteria Sperm Morphology	1	89398	Yes	Yes

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**CPT Code Information:**

89310-Semen Analysis

89398-Strict Criteria Sperm Morphology

If both components performed,

89322-Semen Analysis with Strict Morphology

**Reference Values:**

## SEMEN ANALYSIS

Appearance: normal

Volume:  $\geq 1.5$  mLpH:  $\geq 7.2$ Motile/mL:  $\geq 6.0 \times 10^6$ Sperm/mL:  $\geq 15.0 \times 10^6$ Motility:  $\geq 40\%$ Grade:  $\geq 2.5$ 

**Note:** Multiple laboratory studies have indicated that semen parameters for motility and grade on average retain 80% of original parameters when our shipping method is used for transport. Using these averages, samples with 32% to 39% motility and grade of 2 may be in the normal range if testing was performed shortly after collection. Therefore, these borderline patients may need to collect another sample at a local fertility center to verify fertility status.

Motile/ejaculate:  $\geq 9.0 \times 10^6$ Viscosity:  $\geq 3.0$ Agglutination:  $\geq 3.0$ Supravital:  $\geq 58\%$  live

Fructose: positive

**Note:** Fructose testing cannot be performed on semen analysis specimens shipped through Mayo Clinic Laboratories. If patient is azoospermic, refer to FROS2 / Fructose, Qualitative, Semen. Submit separate specimen to rule-out ejaculatory duct blockage. Positive result indicates no blockage.

## STRICT MORPHOLOGY

Normal forms:  $\geq 4.0\%$  normal oval sperm headsGerm cells:  $< 4 \times 10^6$  (normal) $\geq 4 \times 10^6$ /mL (elevated germinal cells in semen are of unknown clinical significance)

White blood cell count:

 $< 1 \times 10^6$  (normal) $\geq 1 \times 10^6$ /mL (elevated white blood cells in semen are of questionable clinical significance)