



# Andrology Staff Guidelines

ProteX™ is designed to protect sperm from thermal fluctuations and biochemical stressors that lower motility, lower counts, and negatively affect sperm quality. Stress in sperm is indicated by hypermotility at analysis as well as premature capacitation and other biochemical processes.

The ProteX collection method includes adding 1 mL of room temperature, pH-buffered media to ProteX prior to patient collection. It is expected that samples collected in ProteX may initially have a slower forward progression than traditional methods. This is because sperm in ProteX are not shocked and better maintain their pre-ejaculatory quiescence. Forward progression naturally increases with time and processing as biochemical pathways activate, without activating shock proteins that lead to faster apoptosis.

## How to Calculate Volume and Concentration When Media is Added Prior to Collection

It is important to account for the media added prior to collection when calculating the volume of ejaculate and concentration of sperm. Review the example and formulas below.

### Example

1. The patient's sample with media equals 4 mL and there was 1 mL of media added to ProteX prior to collection.

**Volume Calculation:**  
 $4 \text{ mL} - 1 \text{ mL} = 3 \text{ mL}$

**FORMULA**

$$\frac{\text{Volume of sample with media in ProteX} - \text{Volume of media added prior to collection}}{\text{Volume of semen sample without media}}$$

2. Identify the concentration / mL of the semen sample with media as determined during your semen analysis by manual count or computer assisted semen analysis (CASA).

In this example, the concentration / mL of the semen sample with media = **15,000,000 / mL**

3. Calculate the concentration of the semen sample without media using the preceding values.

**Concentration Calculation:**  
 $(4 \div 3) = 1.33 \times 15,000,000 = 19,950,000 / \text{mL}$

**FORMULA**

$$\frac{(\text{Volume of sample with media} \div \text{Volume of sample without media}) \times \text{Concentration / mL of semen sample with media}}{\text{Concentration / mL of semen sample without media}}$$

ProteX