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 <p><b>UCSF</b> Medical Center <b>Clinical Laboratories</b></p>	<p><b>Point of Care Testing</b></p>
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## FERN TEST EXAMINATION OF AMNIOTIC FLUID BY MICROSCOPY

### PURPOSE

The Fern Test, used with the Nitrazine test, detects the leakage of the amniotic fluid from the membranes surrounding the fetus during pregnancy. Premature rupture of the membranes may lead to fetal infection and subsequent mortality. The risk may be eliminated by induction of labor.

### SCOPE

The procedure is performed in the Hospital and Ambulatory settings by Medical Doctors and Nurse Practitioners who have been trained and maintain annual competency in this procedure.

### PERSONNEL

- Licensed Medical Doctors
- Licensed Nurse Practitioners

### REAGENTS, EQUIPMENT AND MATERIALS

- Microscope
- Sterile glass slide
- Sterile swab

### SPECIMEN REQUIREMENTS

- Vaginal secretion from the posterior vaginal pool collected with a sterile swab.
- Do not touch the mucus plug in the cervix.
- After collection, immediately rub the swab against the glass slide, creating a very thin smear.
- Allow the slide to dry.

- Specimens not tested immediately (by the person collecting the specimen) are labeled with two forms of patient identification.

### **QUALITY CONTROL**

N/A

### **PROCEDURE**

1. Using a microscope, examine the dried smear under low power without a cover slip.
2. If present, the amniotic fluid crystallizes to form a fern-like pattern due to the relative concentrations of sodium chloride, proteins, and carbohydrates in the fluid.
3. If ferning is difficult to locate, examine all fields on the slide thoroughly.

### **RESULTS AND REPORTING**

- Record the presence of “ferning” or “no ferning” on the patient’s medical record chart.
- Include the date/time, and name of person performing the test.

### **INTERFERENCES**

- False positive results may occur from the specimens contaminated with blood, urine, or cervical mucus.
- False negative results may occur from prolonged rupture of the membranes (longer than 24 hours).
- False negative results may occur if only a small volume of fluid has leaked.

### **PROCEDURE NOTES**

- The Fern Test should be performed in conjunction with the Amnio Swab.
- If the Amnio Swab and the Fern Test are positive, probable rupture has occurred.
- If the Amnio Swab is negative, but the Fern Test is positive, there is probable rupture of the membranes due to the Fern Test’s greater specificity.
- If the Amnio Swab is positive, but the Fern Test is negative, a second specimen should be collected and tested.

### **RECORDS MAINTENANCE**

- Patient records are stored in their medical record charts indefinitely.

### **REFERENCES**

- Addison, Lois Anne. Laboratory Medicine, July 1999. P.451