



A selection of references describing the use of the Nitrazine Test for the diagnosis of Premature Rupture of Membranes during Pregnancy.

Quotation	Source
<p>To avoid a digital exam, a visual estimate at the time of sterile speculum examination can sometimes identify women with advanced dilation. The sterile speculum examination may also reveal a collection or "pool" of fluid that can be tested for pH with nitrazine paper. Since amniotic fluid is slightly alkaline (the pH is about 7.15), vaginal secretions containing amniotic fluid will usually result in pH changes in the blue-green range, 6.5 to 7.5. Nitrazine testing is accurate in 90 to 98 percent of cases.</p>	<p>From: Preterm Premature Rupture of Membranes, Diagnosis <i>in</i> Gabbe, S.G., J.R Niebyl, & J.L. Simpson, in <i>Obstetrics: Normal and Problem Pregnancies</i>, 4th Edition, Churchill Livingstone, Philadelphia, 2002:805</p>
<p>A technic for the detection of rupture of the membranes: A review and preliminary report.</p>	<p>Smith, R., <i>Obstet. Gynecol.</i> 48:172,1976</p>
<p>Clinical diagnosis of pPROM is made by visualisation of a pool of amniotic fluid in the vagina, with or without a positive nitrazine or ferning test, and continually wet sanitary pads.</p>	<p>From: Abnormal Antenatal Care, Preterm Prelabour Rupture of Membranes <i>in</i> Chamberlain, G., & P.J. Steer, in <i>Turnbull's Obstetrics</i>, 3rd Edition, Churchill Livingstone, London, 2001:358</p>
<p>Evaluation of the patient who has suspected PROM begins with a sterile speculum examination. Visualization of a vaginal pool or obvious leakage of fluid from the cervix into the posterior fornix is strong evidence supporting the diagnosis of ruptured membranes. A sterile swab of fluid should be obtained from the posterior fornix and placed on a clean glass slide and on nitrazine paper.... Nitrazine paper changes color (yellow to blue) when exposed to any alkaline fluid (i.e. pH of 7.0 or more). The normal pH of the vagina is 4.5 to 5.5, whereas that of the amniotic fluid is 7.0 to 7.5. The Nitrazine test has an overall accuracy of 93.3% in the diagnosis of PROM. False-positive results range from 1 to 17% and can result from alkaline urine, blood, semen, vaginal discharge in cases of bacterial vaginosis, or <i>Trichomonas</i> infection.</p>	<p>From: Premature Rupture of Fetal Membranes (PROM), Diagnosis, <i>by</i> Athayde, N., E. Maymon, P. Pacora, & R. Romero, <i>in</i> Ransom, S.B., <i>Practical Strategies in Obstetrics and Gynecology</i>, W. B. Saunders Company, Philadelphia, 2000, 254</p>

<p>Visualization of the cervix and posterior fornix allows for assessment for amniotic fluid flow from the cervix or pooling in the posterior fornix. ... Nitrazine paper can be evaluated using a sterile cotton swab of the posterior fornix to document a change in the pH of the vagina from its normal level (pH 4.5 to 5.5, strip remains yellow) in contrast to rupture of membranes (the alkaline amniotic fluid, pH 7.0 to 7.5, turns the pH strip dark blue). False positive evaluations can be found in the presence of semen, blood, alkaline urine and bacterial vaginosis.</p> <p>Also, in Table 12-2 Tests to evaluate Rupture of Amniotic Membranes The Nitrazine paper test is described as having "good" specificity.</p>	<p>From: Emergency Vaginal Delivery, Rupture of Membranes <i>in</i> Pearlman, M.D., J.E. Tintinalli, <i>Emergency Care of the Woman</i>, McGraw-Hill, New York, 1998, 122</p>
<p>The diagnosis of rupture is based on history of passage of watery fluid and confirmed by sterile speculum examination. The cervical os may be inspected for dilatation during speculum examination, but unless immediate induction is planned, a digital examination should not be performed as part of the initial evaluation. Visualization of fluid in the posterior vagina is the strongest supporting evidence. The fluid may be tested with nitrazine paper for the typical blue alkaline reaction and examined under the microscope for a ferning pattern.</p>	<p>From: Management of Labor Abnormalities, Section B. Prelabor Rupture of Membranes at Term <i>by</i> Byrd, J.E., <i>in</i> Ratcliffe, S.D., E.G Baxley, J.E. Byrd, & E.L. Sakornbut, <i>Family Practice Obstetrics</i>, 2nd Edition, Hanley & Belfus, Inc., Philadelphia, 2001:423</p>
<p>A pelvic exam using a sterile medical instrument (speculum) may reveal a trickle of amniotic fluid leaving the cervix, or a pool of amniotic fluid collected behind the cervix. One of two easy tests can be performed to confirm that the liquid is amniotic fluid. A drop of the liquid can be placed on nitrazine paper. Nitrazine paper is made so that it turns from yellowish green to dark blue when it comes in contact with amniotic fluid. [The other test, "ferning", requires a microscope]</p>	<p>From: Premature Rupture of Membranes <i>by</i> Rosalyn S. Carson-DeWitt <i>in</i> <i>The Gale Encyclopedia of Medicine</i> (from Internet, accessed 27/07/02)</p>

The above references describe the use of nitrazine paper which is the traditional means of performing the nitrazine test. They are offered as evidence for the efficacy of the test. **Amnicators[®] provide a direct means of performing the test without the need for separate swabs, pieces of paper, slides and microscopes** (required for ferning test). Because the reagent is incorporated in the swab bud, the test is effected as soon as, and only when contact is made with the pool of fluid in the posterior fornix, so the risk of false positives from interfering substances is significantly reduced. **Amnicators[®] are sterile, self-contained and give an immediate, visible result.**

Bold type, where used above, is not in the original, but added for emphasis.

The above references are all taken from reputable sources, but Medical Wire makes no comment or endorsement for any of the clinical procedures described.