

**Table 4.2: Common diagnostic tests (as of June 2012) for detection of *N. gonorrhoeae***

	Microscopy <sup>a</sup>	Culture	NAAT
<b>Specimen types</b>			
Endocervical swab	Yes <sup>a</sup>	Yes	Yes
Vaginal swab	No	Yes <sup>b</sup>	Yes (some assays)
Urine			
Female	No	No	Yes <sup>c</sup>
Male	No	No	Yes
Urethral swab	Yes <sup>a</sup>	Yes	Yes
Rectal swab	No	Yes	No <sup>d</sup>
Oropharyngeal swab	No	Yes	No <sup>d</sup>
Conjunctival swab	Yes	Yes	No <sup>d</sup>
<b>Performance</b>			
Sensitivity <sup>e</sup>	Low–high <sup>a</sup>	Moderate–high	Very high
Specificity <sup>e</sup>	Moderate–high <sup>a</sup>	Very high	Moderate–very high
<b>Other considerations</b>			
Cost	Low	Moderate	High–very high
Instrumentation	Microscope	Routine microbiology	Large footprint
Throughput/automation	Moderate/no	Moderate/no	High/possible
Technical complexity	Low	Moderate	High
Level of laboratory infrastructure	Peripheral	Peripheral–intermediate	Intermediate–central
Multiple pathogens from one sample	No	No	<i>C. trachomatis</i> , <i>T. vaginalis</i> , and HPV on some platforms
Other comments		<ul style="list-style-type: none"> <li>• Strict sample collection, transportation, and storage are crucial to maintaining viability</li> <li>• This is the only method that allows antimicrobial susceptibility testing.</li> </ul>	<ul style="list-style-type: none"> <li>• NAATs generally have a superior sensitivity compared to culture, especially for pharyngeal and rectal samples. However, the specificity can be suboptimal, and confirmation using supplementary NAAT may be required.</li> </ul>

HPV, human papillomavirus; NAAT, nucleic acid amplification test.

<sup>a</sup> Microscopy has high sensitivity and specificity in symptomatic men (with urethritis), low sensitivity in asymptomatic men, and endocervical infections, and is not recommended for vaginal, urine, rectal, or pharyngeal specimens.

<sup>b</sup> Not an ideal specimen, mainly applied for prepubertal girls or women who have had a hysterectomy.

<sup>c</sup> Urine is not the ideal sample, due to suboptimal sensitivity, for detection of *N. gonorrhoeae* in women.

<sup>d</sup> There are no internationally licensed NAAT for use with extra-genital samples, but there is increasing evidence that NAATs are more sensitive than culture at these sites. It is recommended that a positive NAAT test for rectal and pharyngeal specimens be confirmed with a supplementary test (NAAT with another target sequence) to avoid false-positive results.

<sup>e</sup> Sensitivity and specificity estimates vary widely depending on the different sensitivity and specificity of assays of the same methodology as well as assays used for comparison (the “gold standard”).