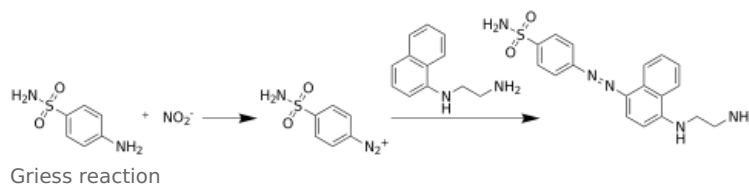


Determination of nitrite in urine

Nitrites are determined in urine as an **indirect sign of bacteriuria**. Normal urine does not contain them at measurable concentrations. Some primarily Gram-negative bacteria, such as *Escherichia coli*, *Proteus*, *Klebsiella*, staphylococci and others, have the ability to reduce the nitrates present in the urine to nitrites. Diagnostic strips for indirect detection of bacteriuria use nitrites in the so-called Griess reaction. Its essence is the diazotization of sulfanilamide with nitrites in the sample to form the diazonium salt. This is followed by azocoupling of the resulting salt with a coupling agent, developing a pink to purple colour.

The nitrite urine test (urinalysis for nitrites) should be performed in the first morning urine, as in this case a sufficiently long time necessary for bacterial reduction of nitrates to nitrite in the bladder is guaranteed. Another recommendation is to consume enough vegetables (containing nitrates) the day before the examination. A positive urinary nitrite test confirms bacteriuria, while a negative one does not rule it out.



Indirect evidence of bacteriuria is indicative and not a substitute for microbiological examination.

Links

Related articles

- Urinalysis/chemical