

oxiSperm® II

Detection of pro-oxidant activity



Every life is unique.
So are we

Infertile men exhibit significantly increased reactive oxygen species (ROS) levels. These individuals tend to show a reduction in antioxidant capacity compared with fertile controls. ROS assays tend to focus on ROS production by isolated spermatozoa or leukocytes, since they are a source of ROS.

Between 25 to 50% of patients attending infertility clinics have high concentration of ROS that may be associated with abnormal sperm motility, membrane integrity and poor DNA quality. Some of these patients are treated with antioxidant cocktails to correct this problem but without any previous assessment of the pro-oxidant activity present in the ejaculate.

oxiSperm® II has been designed to provide clinicians with easy to apply and reliable technology for assessment of NBT-reactivity in the ejaculate. Based on a colorimetric reaction, oxiSperm® II allows a qualitative determination NBT-reactivity associated to the neat ejaculate, in seminal plasma or at the level of the individual sperm cell. After the reaction, three levels of pro-oxidant activity can be established: NBT-LOW, NBT-MEDIUM and NBT-HIGH (Figure 1).

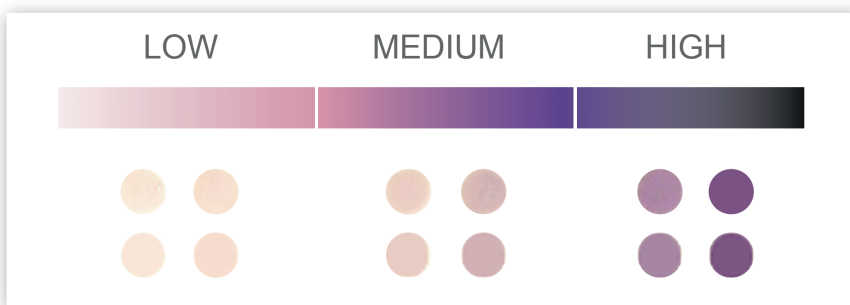
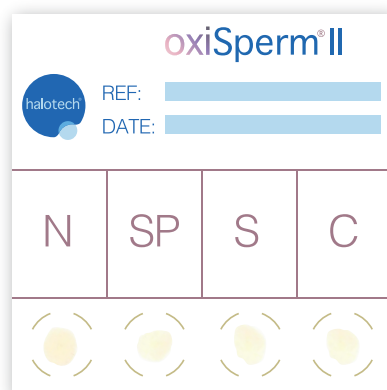


Figure 1. Colour pallet according to NBT- reactivity (according to oxiSperm® II)



In addition to help understanding the potential causes of male factor infertility, oxiSperm® II can also be used to repeatedly assess the pro-oxidant activity in the ejaculate. For example, if pro-oxidant activity of the ejaculate is determined to be NBT-HIGH, the patient can be administered with cocktails of dietary antioxidants and followed up for changes in NBT reactivity levels by means of the color reaction in subsequent ejaculates.

It is also possible to obtain a semi-quantitative assessment of the NBT-signal intensity after 5 min of reaction using a simple image analysis routine.

Take a look at our Tutorial Video

