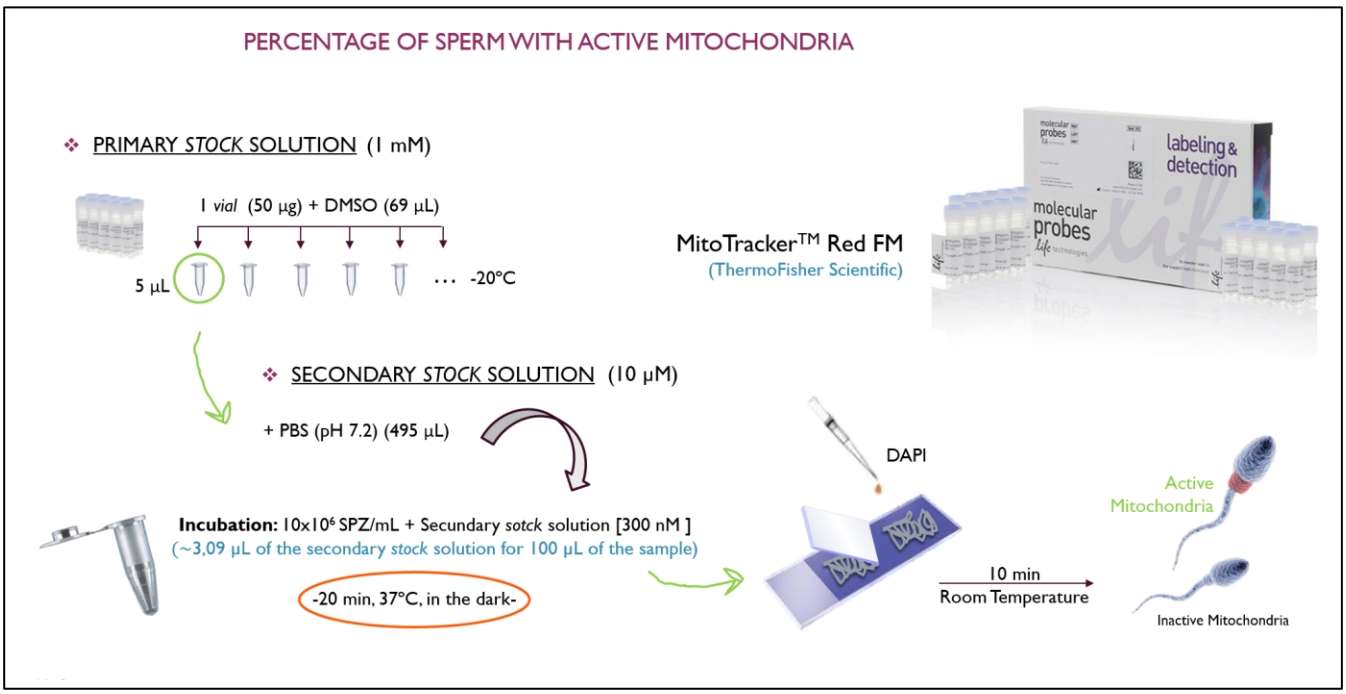

Figure S1: representative scheme of the protocol applied to assess the percentage of spermatozoa with active mitochondria, using the MitoTracker™ Red FM (MTRFM) dye.

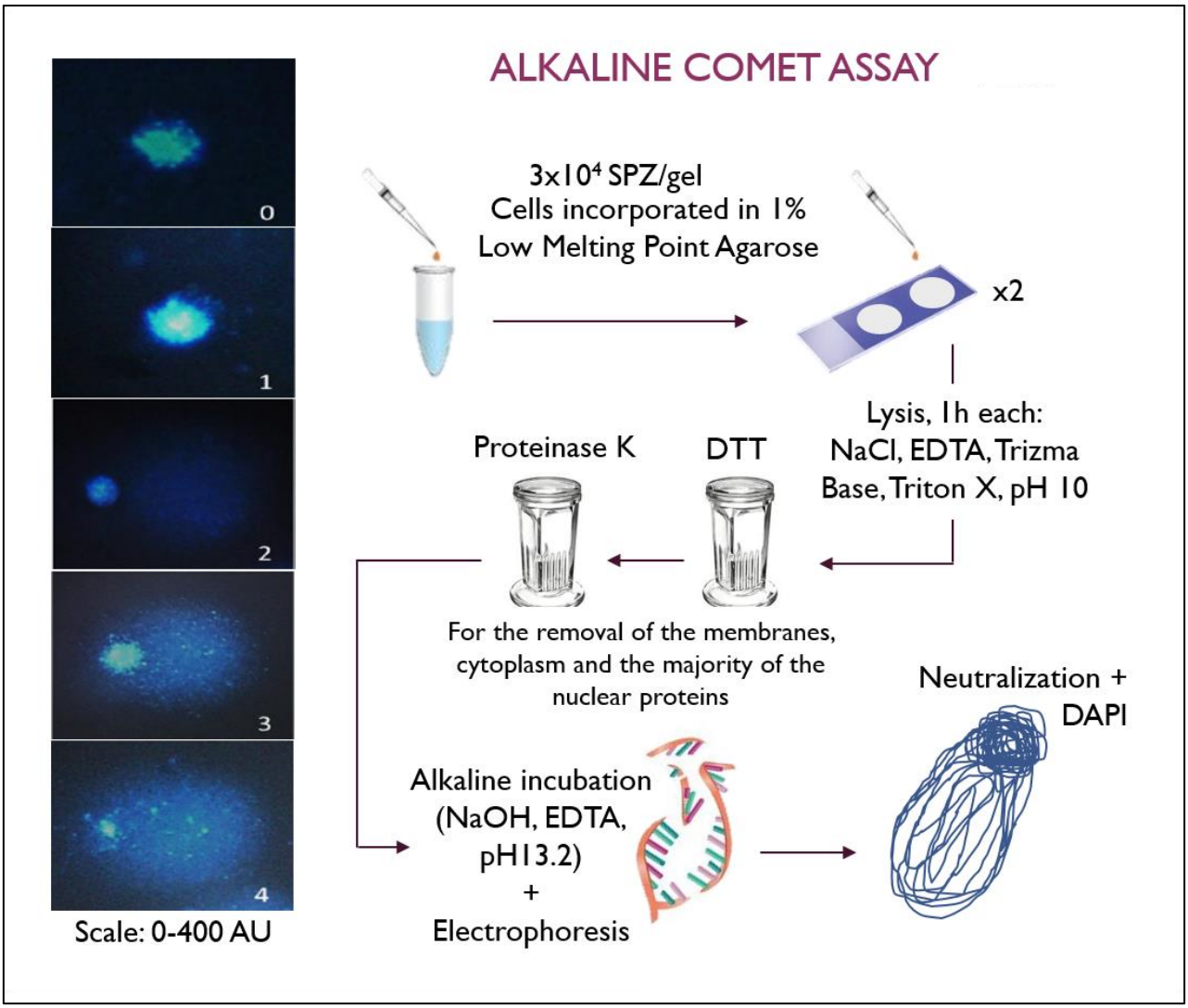

Figure S2: representative scheme of the protocol applied to assess the sperm DNA damage by alkaline comet assay and of the visual score, on a scale of 0-400 arbitrary units (AU).

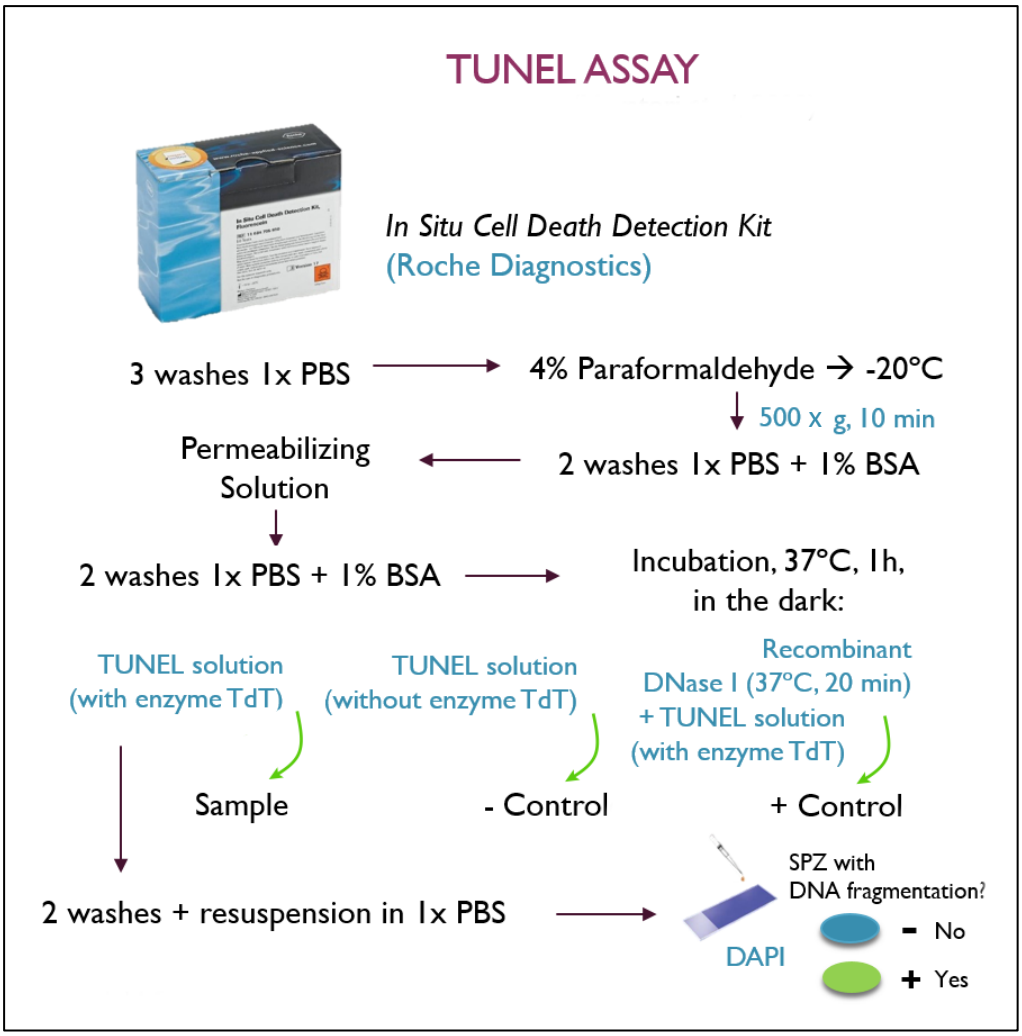

Figure S3: representative scheme of the protocol applied to assess the percentage of spermatozoa with fragmented DNA with the terminal deoxynucleotidyl transferase dUTP nick-end labeling (TUNEL) assay.

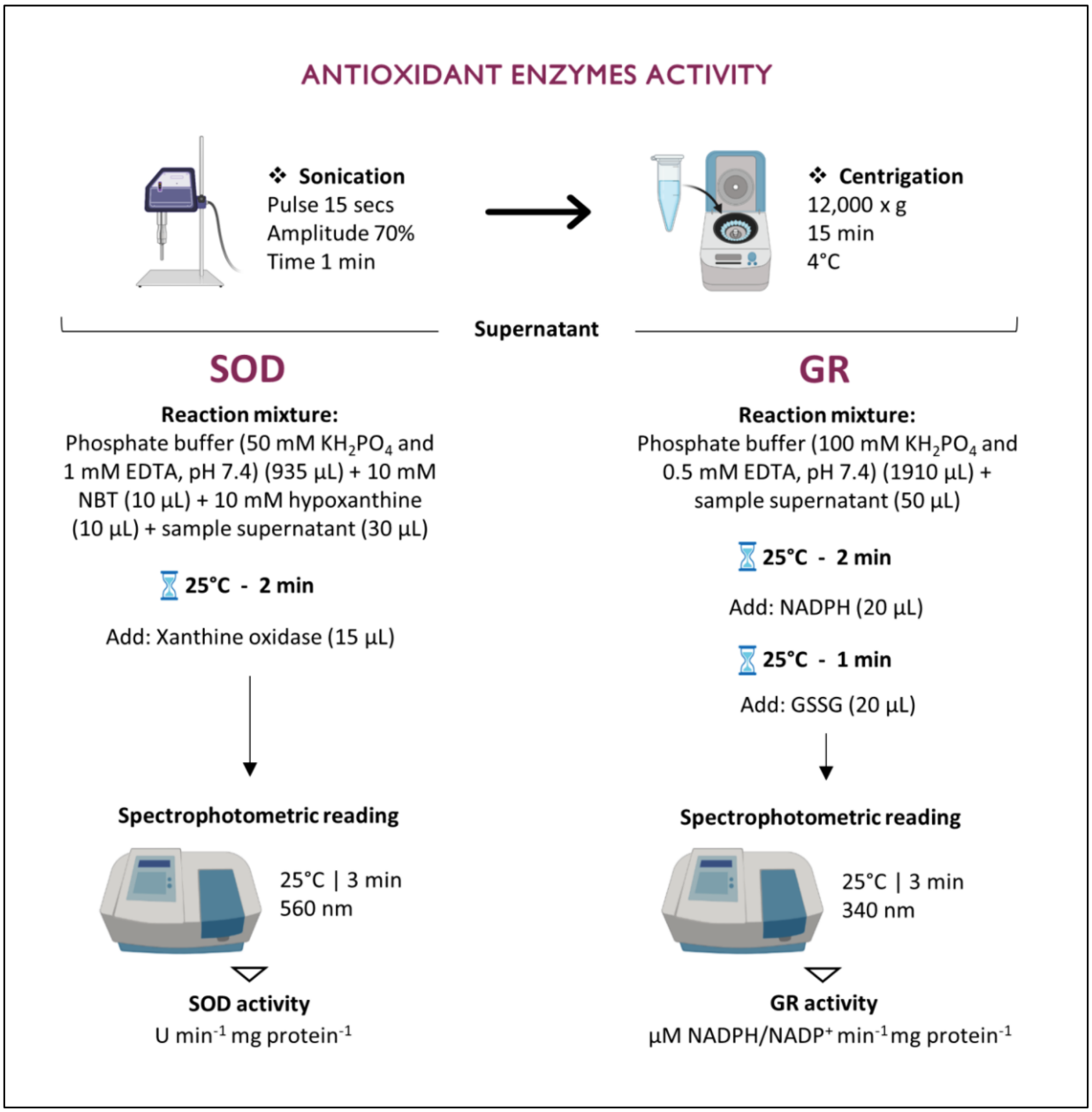

Figure S4: representative scheme of the protocol applied to assess the activity of the antioxidant enzymes superoxide dismutase (SOD) and glutathione reductase (GR)

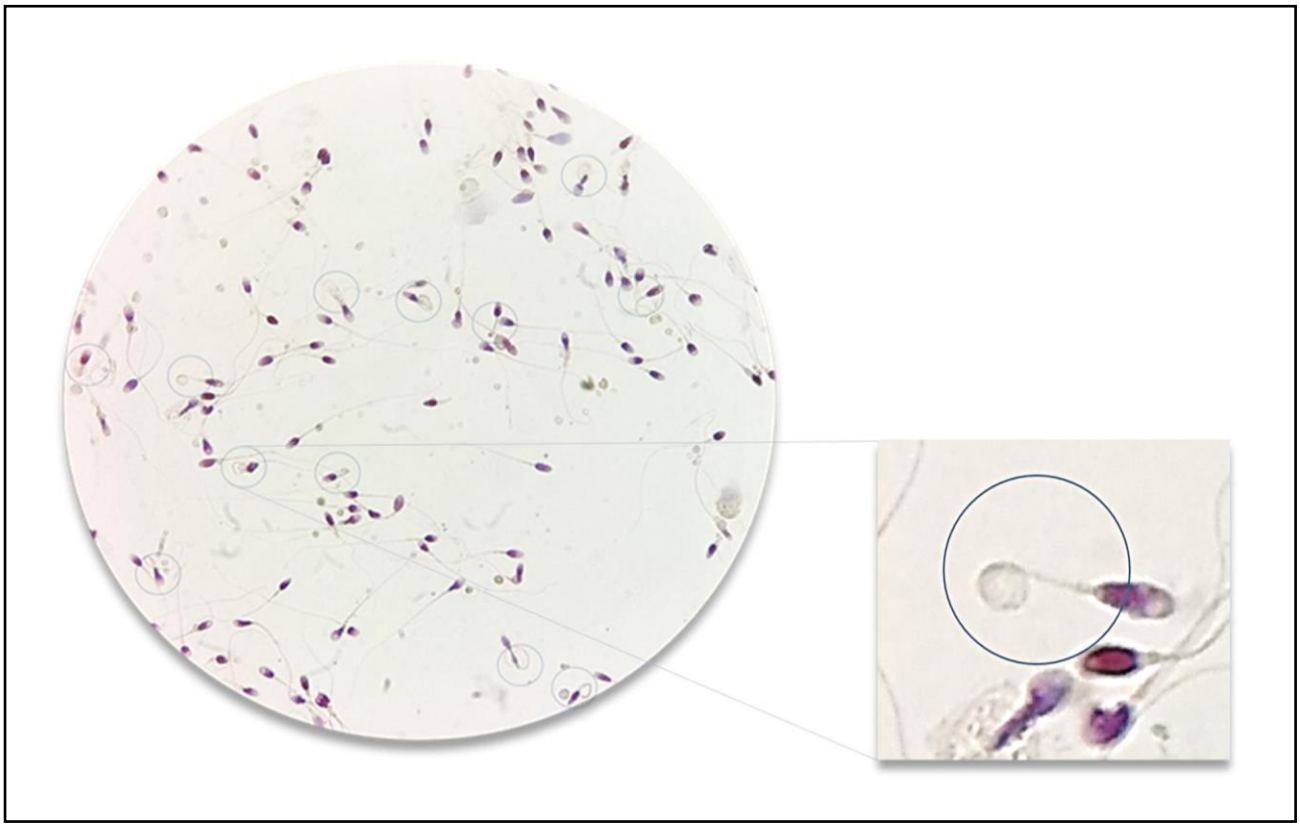

Figure S5: sperm morphology assessment after Papanicolaou–Shörr staining of a sperm sample cryo-preserved by method A (MA) (1000× magnification). A large number of spermatozoa with coiled tails (circled in blue) are evident when MA is applied.