MetroSperm
Preparation of insemination doses

You'll need		✔ MetroSperm with charged batteries. ✔ The ejaculates to be processed. ✔ Semen extender to prepare insemination doses. ✔ A recipient with semen extender. (If this is not completely clear and colourless, use distilled water!)
Power up and blank	**1**	Keep the middle button pressed until the display lights up.
	2	Check that the protective rubber cap at the probe's tip has been removed.
	3	Immerse the probe into the recipient with semen extender (or water), keeping the device tilted in order to avoid air to get trapped inside the sensor cavity.
	4	Stir gently to flush any trapped air bubbles out of the sensor cavity.
	5	Shortly press the middle button and keep the sensor inside the recipient until the reading of the blank has finished (~10 seconds).
	6	You can now take the probe out of the semen extender.
Parameter adjustment	**7**	Check that MetroSperm is in the right display mode: the upper display line should read: +0ml=0D. If this is not the case, wait until either Concentration or Absorbance is displayed on the lower display line and press the right or left buttons until it reads Dilute&Doses.
	8	Determine the ejaculate volume (including any prior extender,if present) by using a scale or graduated cylinder.
	9	Wait until the lower line displays VolEj= and adjust this value to the volume you have just determined by decrementing or incrementing it with the left or right button respectively.
	10	In the same way you should check and adjust, if necessary, the percentage of abnormal forms (Abnor.F=), the volume of a single dose (VolD=) and the number of spermatozoa per dose (S/D=) to your needs.
Ejaculate analysis	**11**	Verify that the probe is clean and dry before immersing the sensor into the ejaculate.
	12	Stir gently to flush any trapped air bubbles out of the sensor cavity, homogenise the ejaculate and to adapt the probe to the sample's temperature (5 - 30 seconds).
	13	Shortly press the middle button and keep stirring until the measurement is finished.
	14	The displayed result will look similar to +2343ml=28.7D. This means in this example, that you'll have to add 2343 millilitres of semen extender to prepare the 28 doses obtainable plus a rest.
	15	It is at your discretion to modify the values of Abnor.F ; VolD and S/D in order to explore *what-happens-if*. MetroSperm will update the result immediately, without having to repeat the analysis.
Cleaning	**16**	Rinse probe and sensor in a recipient containing distilled water.
	17	If you wish to analyse further ejaculates, keep MetroSperm parked in semen extender kept at the same temperature as the ejaculates and repeat steps 8 to 16.
	18	Keep the middle button pressed, until display and sensor stop working.
	19	Leave the probe to dry at the air or use a clean tissue.
	20	Store MetroSperm in its suitcase, with the protective rubber cap placed on the sensor.

MetroSperm
Verify the number of spermatozoa per dose

You'll need

- ✔ MetroSperm with charged batteries.
- ✔ The insemination doses that shall be analysed.
- ✔ A recipient with semen extender. (If this is not completely clear and colourless, use distilled water!)

Power up and blank	**1**	Keep the middle button pressed until the display lights up.
	2	Check that the protective rubber cap at the probe's tip has been removed.
	3	Immerse the probe into the recipient with semen extender (or water), keeping the device tilted in order to avoid air to get trapped inside the sensor cavity.
	4	Stir gently to flush any trapped air bubbles out of the sensor cavity.
	5	Shortly press the middle button and keep the sensor inside the recipient until the reading of the blank has finished (~10 seconds).
	6	You can now take the probe out of the semen extender.
Parameter adjustment	**7**	Check that MetroSperm is in the right display mode: the upper display line should read c=0M/D. If this is not the case, wait until either Dilute&Doses or Absorbance is displayed on the lower display line and press the right or left buttons until it reads Concentration.
	8	Wait until the lower line displays Vol D= and adjust this value to the volume of a single insemination dose by decrementing or incrementing it with the left or right button respectively.
	9	Proceed as above, if you wish to consider a certain percentage of abnormal forms of spermatozoa (Abnor.F=).
Sample analysis	**10**	Verify that the probe is clean and dry before immersing the sensor into the sample.
	11	Stir gently to flush any trapped air bubbles out of the sensor cavity, homogenise the sample and to adapt the probe to the sample's temperature (5 - 30 seconds).
	12	Shortly press the middle button and keep stirring until the measurement is finished.
	13	The displayed result will look similar to c=3122M/D. This means in this example, that there are 3122 million spermatozoa per dose. If the percentage of abnormal forms is set to be greater than zero, then results will be in terms of normal spermatozoa, otherwise they will refer to all spermatozoa.
	14	It is at your discretion to modify the values of Abnor.F and Vol D in order to explore *what-happens-if*. MetroSperm will update the result immediately, without having to repeat the analysis.
Cleaning	**15**	Rinse probe and sensor in a recipient containing distilled water.
	16	If you wish to analyse further ejaculates, keep MetroSperm parked in semen extender kept at the same temperature as the samples and repeat steps 8 to 15.
	17	Keep the middle button pressed, until display and sensor stop working.
	18	Leave the probe to dry at the air or use a clean tissue.
	19	Store MetroSperm in its suitcase, with the protective rubber cap placed on the sensor.