

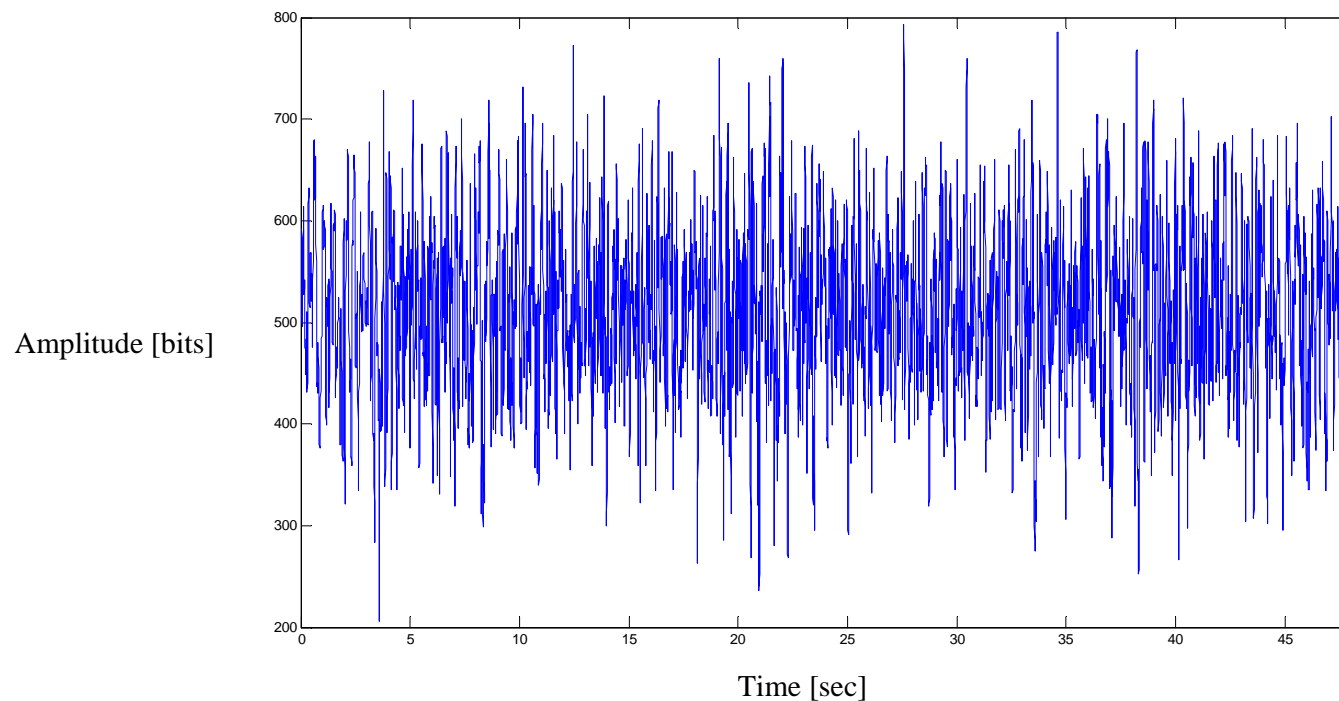


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Motility grading (a, b, c and d – or combinations of these parameters) is performed by the SQA through signal processing and characterization. The following diagram demonstrates the differences in the various signals for interpretation of the motility grading.

Motility “a” is defined in WHO 3rd/4th as sperm with rapid progressive motility. These are the “strongest” sperm cells that also swim fast and in a straight line. Rapidly progressively motile cells move at >25 mic/sec at 37 °C and >20 mic/sec at 20 °C; (25 mic. is approximately equal to five head lengths or half a tail length). These cells will spend about ~2 - 4 sec in the SQA field of view. The signal produced by these cells is displayed below.

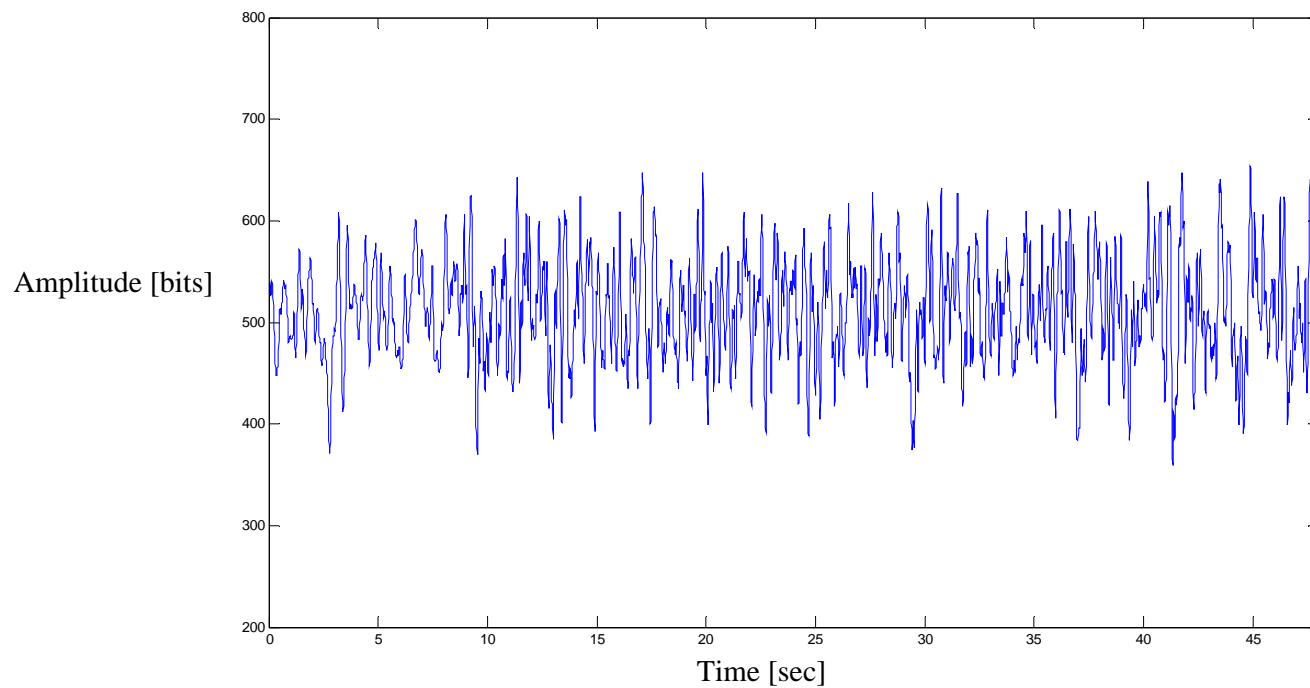




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Motility “b” is defined by WHO 3rd/4th as non-linear motility. These sperm cells also move fast and forward but tend to travel in a curved or crooked motion. WHO 5th combines “a + b” motility into one parameter called PROGRESSIVE MOTILITY. These cells will spend about ~ 4 - 16 sec in the SQA field of view. The signal produced by these cells is displayed below.

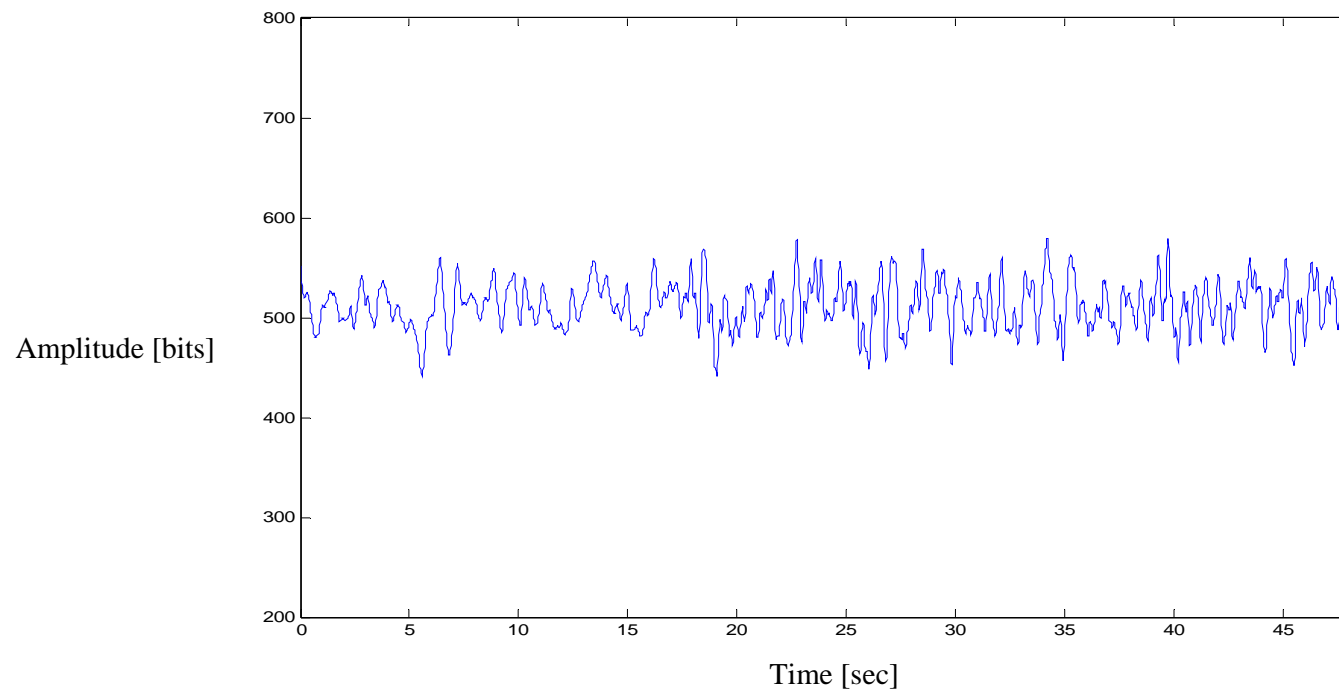




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Motility “c” is defined as non-progressive motility. These sperm cells do not move forward despite the fact that they move their tails. Non-progressively motile cells move <5 mic/second. These cells spend more than ~16 sec in the SQA field of view. The signal produced by these cells is displayed below.





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Motility “d” cells are immotile – they fail to move at all. The signal produced by these cells is displayed below.

