

## عنوان مقاله:

Sperm motility parameters of *Barbus barbus callensis* throughout the reproduction season: Computer aided semen analysis and gametes motility duration

## محل انتشار:

مجله علوم شیلات ایران، دوره 15، شماره 4 (سال: 1395)

تعداد صفحات اصل مقاله: 12

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## خلاصه مقاله:

The present study investigated the existing relationship between computer assisted semen motility parameters and gametes motility duration, known to express semen quality and fertilizing capacity in fish. The objective was particularly to identify computer aided semen analysis (CASA) parameters that could be used as potential fertility predictors. Semen samples were collected from the beginning to the end of the spawning season of *Barbus barbus callensis*, a freshwater fish abundantly distributed throughout North Africa. Semen was simultaneously analyzed using optical microscopy including semen motility duration (SMD) measurement, by the aid of a computer-assisted semen analyzer. The measured CASA parameters were: straight line velocity (VSL), average path velocity (VAP), curvilinear velocity (VCL), beat cross frequency (BCF), amplitude of lateral head displacement (ALH), linearity and straightness. The results showed that motility duration evolved in a similar manner as several CASA parameters. Significant correlation coefficients expressed these relationships with  $r = 0.74$ ,  $0.32$ ,  $0.16$  and  $0.45$  for VSL, VAP, VCL and BCF, respectively. No correlations were observed when studying relationships between motility duration, STR, LIN and ALH, with  $r = 0.08$ ,  $0.06$  and  $0.006$ , respectively. The present results showed that CASA motility parameters are strongly related to motility duration. VSL was revealed as the main parameter being highly correlated to motility duration ( $r = 0.74$ ). This quantitatively and objectively measured parameter is revealed to be a useful indicator of semen quality and could serve as a potential indicator of fertility outputs in fish.

## کلمات کلیدی:

*Barbus barbus callensis*, Reproduction season, Semen motility, CASA

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1401746>

