009: EQC for sperm morphology (EQConline)

EQConline is an online quality control system (www.eqconline.org) which allow users to compare their morphological evaluation of various biological objects with those of other professionals.
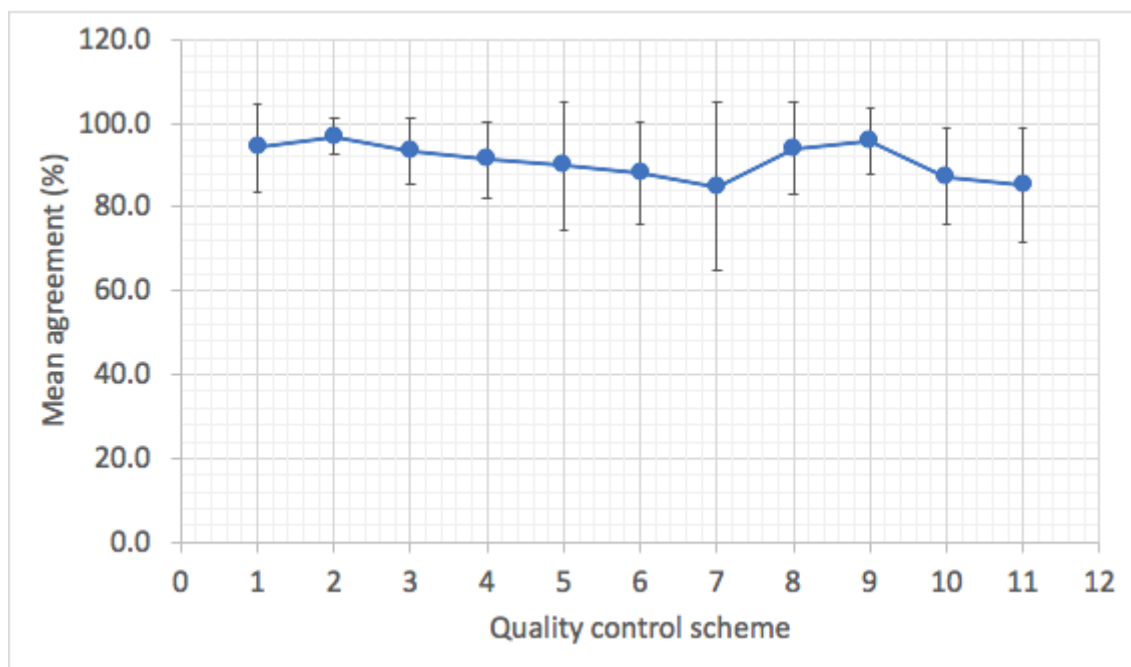
This protocol explains how this works and shows the results obtained for one of the evaluations.

In each QC scheme, 10 pictures (Pic_1 … Pic_10) of a spermatozoon are presented for morphology evaluation. Several parameters are evaluated (head, acrosome, middle piece, flagellum). Participating users enter their evaluation online. At the end of the test, results of each individual user are compared to those of all users.

In the table below, the results of the technician (referred to as user A) that performed the morphological evaluation for the majority of the samples in the Swiss fertility study are shown. For each picture the percentage of users who gave the same response as a given user (in this case user A) is calculated. The value of 100 indicates that 100% of the users gave the same response as User A. A value of 70 indicates that 70% of the users gave the same response as user A. For each scheme, the mean and standard error of these agreements is calculated. A value above 66%, indicates that user A gave answers that are equal to those of the majority of the participants.

No	QC	Pic_1	Pic_2	Pic_3	Pic_4	Pic_5	Pic_6	Pic_7	Pic_8	Pic_9	Pic_10
7	1	100.0	100.0	71.4	100.0	100.0	100.0	92.8	100.0	78.6	100.0
24	2	100.0	100.0	100.0	89.5	94.7	100.0	89.5	100.0	94.7	100.0
45	3	100.0	95.6	91.3	100.0	95.6	95.6	73.9	95.6	86.9	100.0
71	4	83.3	70.0	90.0	90.0	96.5	100.0	96.7	90.0	100.0	96.7
102	5	96.9	63.3	100.0	96.9	93.8	96.9	59.4	90.6	100.0	100.0
137	6	85.7	82.8	91.4	100.0	97.0	97.1	100.0	60.0	88.6	80.0
171	7	93.3	80.0	33.3	93.1	93.3	100.0	93.3	100.0	73.3	90.0
203	8	100.0	100.0	100.0	100.0	86.7	66.7	100.0	100.0	86.7	100.0
218	9	100.0	100.0	95.8	100.0	100.0	75.0	100.0	95.8	100.0	91.7
249	10	95.6	86.9	73.9	65.2	91.3	91.3	100.0	91.3	100.0	78.3
542	11	90.0	61.9	95.0	65.0	95.2	80.0	85.0	80.0	100.0	100.0

The mean values ± standard errors are presented in the following graph.

User A is considered to provide morphological evaluations that are in agreement with the majority of professionals who participated in the QC scheme.

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