

## Cell Soft System-3000과 Sperm Quality Analyzer-V를 이용한 정자 운동성 비교 분석

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### Comparative Analysis of Sperm Motility Using Cell Soft System-3000 and Sperm Quality Analyzer-V

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**Objective:** To evaluate the results of CASA systems and to compare its results.

**Methods:** Fifty semen samples were analysed. Concentration, motility and forward progression were evaluated simultaneously on the same semen samples using Cell Soft System-3000 (CS system) and Sperm Quality Analyzer-V (SQA system).

**Results:** Mean semen volume was  $2.8 \pm 1.2$  ml. Mean value of sperm concentration, motility, forward progression using CS system were  $83.4 \pm 45.7 \times 10^6/\text{ml}$ ,  $52.3 \pm 16.4\%$  and  $48.6 \pm 13.4\%$ , respectively. And mean value of sperm concentration, motility, forward progression using SQA system were  $78.2 \pm 42.9 \times 10^6/\text{ml}$ ,  $57.0 \pm 24.0\%$  and  $50.6 \pm 21.9\%$ , respectively. There were no statistical significance of sperm concentration, motility, forward progression between the two devices.

**Conclusion:** SQA system variables well correlated with the CS system. As a screening test for semen quality, CS system and SQA system is considered as useful in the management of male infertility.

**Key Words:** Semen analysis, Motility, Forward progression, CASA, SQA

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(CASA; Computer Assisted Sperm Analyser,  
CASA)

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가 . CS-3000 sys-  
 tem , CASA system  
 CASA system curvilinear velocity (VCL), straight-line velocity (VSL),  
 average path velocity (VAP)  
 .<sup>2</sup> CASA system , 0 4 4  
 (%)  
 가 CASA system 2) Sperm Quality Analyzer - V (SQA) system  
 .<sup>1</sup> CASA system SQA system  
 (parameter) , SQA system 1 capillary  
 가 , 가  
 2 ,  
 CASA system , CASA system  
 , CASA system CASA system  
 curvilinear velocity (VCL), straight-line velocity  
 (VSL), average path velocity (VAP)  
 1. Student T-test  
 , p<0.05  
 50 2  
 CASA system WHO  
 2. 50 Cell  
 30 Soft System-3000 (CS-3000) system Sperm Quality  
 (liquefaction) Cell Soft System-3000 Analyzer-V (SQA) system  
 (Cryo Resources Inc., NY, USA, CS-3000) system 2.8±1.2 ml , CS-  
 Sperm Quality Analyzer-V (Medical Electronic Sys- 3000 system  
 tems, Ltd., Caesarea, Israel, SQA) system 83.4±45.7×10<sup>6</sup>/ml,  
 (concentration), (motility), 52.3±16.4% 1.9 48.6±  
 13.4% . SQA system 78.2±42.9  
 (forward progression) ,  
 (parameter) ×10<sup>6</sup>/ml, 57.0±24.0% 50.6±21.9%  
 가 .  
 1) Cell Soft System - 3000 (CS - 3000) system CS-3000  
 system SQA system 83.4±45.7×10<sup>6</sup>/ml  
 5 μl Makler Chamber 78.2±42.9×10<sup>6</sup>/ml CS-3000 system  
 CS-3000 system , 가

**Table 1.** Comparison between CS-3000 system and SQA system

	CS-3000	SQA	P-value
Total count (10 <sup>6</sup> /ml)	83.4±45.7	78.2±42.9	NS
Motility (%)	52.3±16.4	57.0±24.0	NS
Forward progression (%)	48.6±13.4	50.6±21.9	NS

NS: not significant

(p>0.05).

가 . , a)

, b) , c) ,

, CS-3000 system SQA system d)

52.3±16.4% 57.0±24.0% SQA system

system

WHO (>50%) ,

가 (CASA; Computer Assisted Sperm Analyser, CASA)

, CS-3000 system 0 4

4 가

1.9

(%) 48.6±13.4% CASA system ,

, SQA system 50.6±21.9% ,

WHO 25% 가 IVF , CASA

가 가 가

가 ,<sup>3</sup> CASA

IVF 가 가

<sup>4-7</sup>

CASA system , 가

가 , ,<sup>2</sup> CASA system

가 가

CASA system . CASA system

10 (%) 0 4 , ,

CASA system 가 , 가  
37 가 .<sup>1</sup> 가  
가  
CASA system  
가 , CASA system  
가  
CASA system  
(parameter) 가  
CASA system , CASA  
system  
SQA system  
(total sperm concentration (TSC)), (% of motility), (% of progressive motility), (% of normal morphology), (motile sperm concentration (MSC)) (progressively motile sperm concentration (PMSC))  
가  
가  
CS-3000 system SQA system WHO (>50%)  
가 CASA system curvilinear velocity (VCL), straight-line velocity (VSL), average path velocity (VAP) CS-3000 system SQA system  
<sup>8,9</sup>  
가  
CASA  
system , ,

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