ESR IN 20 SECONDS

ESR

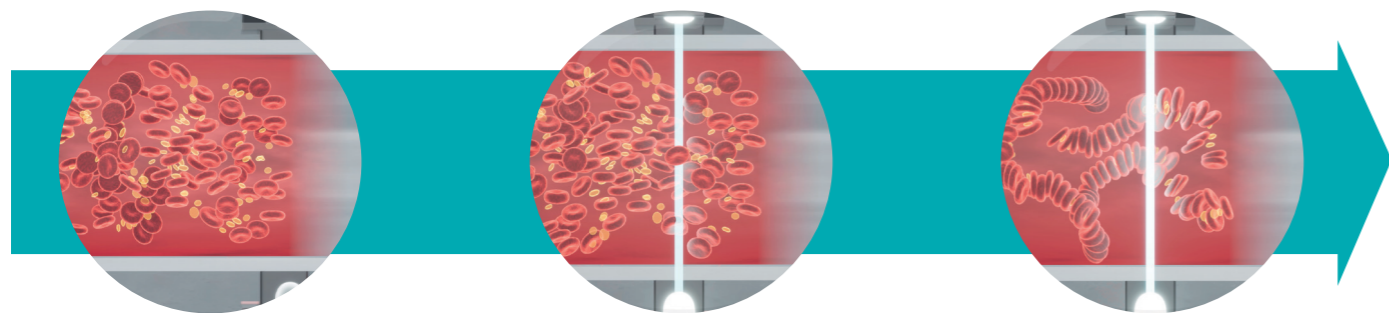**FULLY AUTOMATED ANALYZERS**
FOR THE DETERMINATION
OF THE ERYTHROCYTE
SEDIMENTATION RATE

20
SECONDS

ESR IN 20 SECONDS BY RED CELL AGGREGATION

EACH SAMPLE is read 1000 times in 20 seconds

20 sec

1 h

CAPILLARY PHOTOMETRY	SEDIMENTATION ESR
Temperature control 37°C	Temperature variability
Independent from Hematocrit value	Hematocrit influence
No dilution, use of EDTA tube	Dilution problems using Sodium Citrate
Use of the same capillary for all samples	Inadequate materials and pipettes variability
No influence of vibration or other external factors	Vibrations and pipette verticality influence
Automated mixing step	No standardized sample mixing
Latex Controls and Calibrators available	Controls and Calibrators lack
High reproducibility	Poor reproducibility

TEST1 CAPILLARY PHOTOMETRY TECHNOLOGY OVERCOMES THE MAJORITY OF THE VARIABLES AND LIMITATIONS OF THE SEDIMENTATION METHOD (ICSH RECOMMENDATIONS, 2017).

Alifax technology is classified by CLSI guidelines as an alternative method for ESR (H02-A5 Vol. 31, N.11)

"ESR measurements by TEST1 reflect inflammation better than do those by the Westergen method in patients with malignancy, autoimmune disease, or infection"

Clin Chem Lab Med 2010;48(7):1043–1048

YOUNG JOO CHA

MD, Department of Laboratory Medicine, Chung-Ang University Hospital, Seoul, Korea

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ALIFAX

Patented technology

TEST1

Direct loading from original cell blood counter rack

60 cm

54 cm

49 cm

TEST1 THL
SI 195.210/THL

- **NEW AUTOMATIC WASHING SYSTEM**
- 175 µl EDTA blood sample per test
- Only 800 µl sample requested in the tube
- Capacity up to 60 samples
- Direct loading of CBC racks
- Throughput up to 150 samples/hour
- Internal bar code reader
- Bidirectional connection to LIS

TEST1 BCL
SI 195.220/BCL
Up to 60 samples per session with ALIFAX green plastic racks.
Up to 48 samples per session with Beckman Coulter Series LH 700 CBC racks

TEST1 SDL
SI 195.230/SDL
Up to 40 samples per session with ALIFAX yellow plastic racks.
Sysmex series SF/SE/XE/XT/XS/XN, cell counter rack Mindray and Horiba Yumizen

TEST1 YDL
SI 195.240/YDL
Up to 40 samples per session with ALIFAX blue plastic racks.
Up to 40 samples per session with Siemens Series ADVIA 120 CBC racks

TEST1 MDL
SI 195.250/MDL
Up to 40 samples per session with Beckman Coulter
Series LH 500 CBC racks

TEST1 XDL
SI 195.260/XDL
Up to 40 samples per session with Beckman Coulter
Series DxH 800 CBC racks

ROLLER

Manual tube loading also
for uncapped and low volume samples

Patented technology

ROLLER 20-PN
SI R20-PN

Double circuit for automatic and manual sampling

- Internal rotor with 20 positions
- 175 µl EDTA blood sample automated withdrawal per test
- 100 µl sample requested in the tube for manual withdrawal
- LCD touch screen
- User-friendly software
- Automatic washing system
- External barcode reader

46 cm

24 cm 39 cm

ROLLER 20-MC
SI R20-MC

Manual sampling

- Only 30 µl EDTA blood sample
- LCD touch screen
- User-friendly software
- External barcode reader

ROLLER 20-LC
SI R20-LC

Automatic sampling

- 175 µl EDTA blood sample per test
- 800 µl sample requested in the tube
- 18 samples
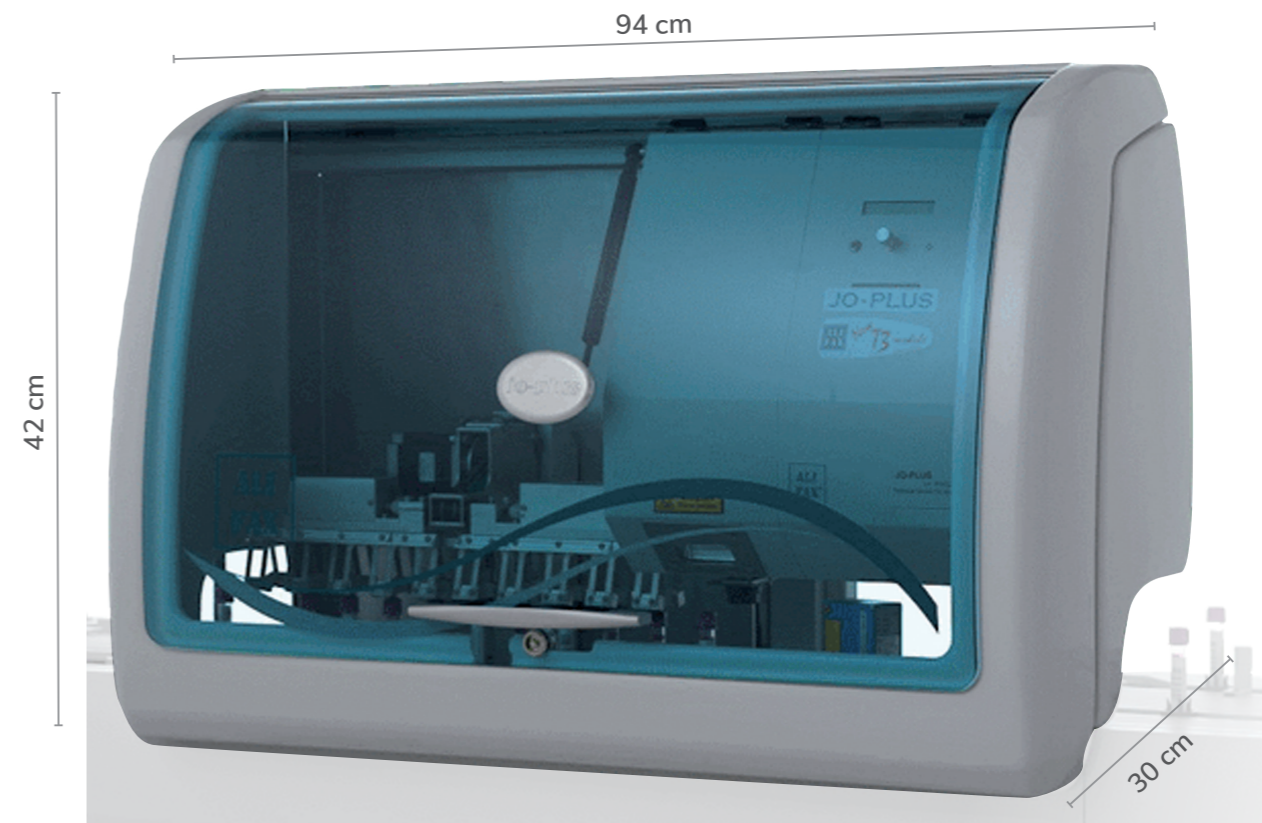- Simplified needle replacement
- Automated washing

58 cm

32 cm 56 cm

JO-PLUS

On line ESR SYSTEM
for total laboratory automation

Patented technology

JO-PLUS is conceived for mega laboratories with high routine volumes equipped with Laboratory Automation System (LAS).

JO-PLUS is based on the same TEST1 family technology.

94 cm

42 cm

30 cm

JO-PLUS
SI 804.100

- **120 samples processed in about 1 hour**
- 175 µl EDTA blood sample per test
- Results available in 30 seconds

Power supply: 115-230 VAC (SMPS), 50/60 Hz
Power consumption: 66W
Size: 94 x 30 x 42 cm (W,D,H)
Weight: 16 Kg

LATEX CONTROLS

Three levels to guarantee:
precision, accuracy, repeatability

6 TESTS

30 TESTS

SI 305.100-A (Greiner tubes)
SI 305.102-A (Sarstedt tubes)

SI 305.300-A (Greiner tubes)
SI 305.302-A (Sarstedt tubes)

SHELF LIFE: From production: 6 months. From the 1st piercing: 6 weeks
STORAGE CONDITIONS: From production: +4-25°C. From the 1st piercing: +4-8°C

EQE KIT

External Quality Evaluation kit specific for all Alifax ESR analyzers

Third parties international programs available:
- CAP
- LABQUALITY
- NEQAS
- ONEWORLD ACCURACY
- API

SMART CARD

Environmentally friendly cards save storage and transport costs.
Only pay for a test when needed.

1.000 tests

4.000 tests

10.000 tests

20.000 tests

TEST1 ROLLER	code SI 195.901	code SI 195.904	code SI 195.910	code SI 195.920
JO-PLUS	-	-	code SI 804.910	code SI 804.920

COMPARATIVE CHART

	TEST1	ROLLER 20 PN	ROLLER 20 LC	ROLLER 20 MC
Positions	Up to 60	Up to 20	Up to 18	•
Sampling	Automatic direct loading of 4 CBC racks	Automatic and Manual	Automatic	Manual
Time To Result	20"	30"	20"	18"
Min Volume	800 μl	800 μl (auto) 100 μl (manual)	800 μl	100 μl
Testing volume	175 μl	175 μl (auto) 100 μl (manual)	175 μl	30 μl
Internal mixing	✔	✔	✔	✗
Thermostatation 37°C	✔	✔	✔	✔
Internal washing	✔	✔	✔	✗
Barcode reader	✔	(ext. optional)	(ext. optional)	(ext optional)
Printer	✔	✔	✔	✔
LIS bidirectional connection	✔	✔	✔	✔
Dimensions (cm) W,D,H	49 x 54 x 60	24 x 39 x 46	32 x 56 x 58	24 x 39 x 46
Weight (Kg)	47	16	23,2	11
Daily maintenance	5'	5'	5'	5'
Maintenance	1 year or 30.000 tests	1 year or 30.000 tests	1 year or 30.000 tests	1 year or 30.000 tests
Operator time	1'	< 2'	< 2'	30' / sample

Class I - FDA registered - Device listing number D116930
FOR PROFESSIONAL USE ONLY
next introduction graphic layout

CE IVD MARKED

ALI FAX

INSIDE INNOVATION

NEW ESR SYSTEM GENERATION

ERYTHROCYTE SEDIMENTATION RATE

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1. Lapić I, Piva E, Spolaore F, Tosato F, Pelloso M, Plebani M; Automated measurement of the erythrocyte sedimentation rate: method validation and comparison. Clin Chem Lab Med. 2019 Apr 2
2. Kim M, Ju YS, Lee EJ, Lee E, Jeon K, Lee J, Kang HJ, Kim HS, Lee JS, Kim HJ, Lee YK; Erythrocyte sedimentation rate measured using microhemagglutination is not elevated in monoclonal gammopathy compared with other diseases. Int J Lab Hematol. 2018Oct;40(5):540-548
3. Sonmez C, Dogan OC, Kaymak AO, Akkaya N, Akin KO, Guntas G; Test-1 analyzer and conventional Westergren method for erythrocyte sedimentation rate: A comparative study between two laboratories. J Clin Lab Anal. 2018 Jun;32(5).
4. Kratz A, Plebani M, Peng M, Lee YK, McCafferty R, Machin SJ; ICSH recommendations for modified and alternate methods measuring the erythrocyte sedimentation rate. Int J Lab Hematol. 2017 Oct;39(5):448-457.
5. Cha CH, Cha YJ, Park CJ, Kim HK, Cha EJ, Kim DH, Honghoon, Jung JS, Kim MJ, Jang S, Chi HS, Lee DS; Evaluation of the TEST 1 erythrocyte sedimentation rate system and intra- and inter-laboratory quality control using new latex control materials. Clin Chem Lab Med 2010;48(7):1043–1048
6. Scott G, Nguyen T, Leunda Ostolaza S, Galiano C, Nalbandian G and Miller B; Roller 20PN and Westergren Correlation. White Paper 2012 Chatsworth, CA
7. Cha CH, Park CJ, Cha YJ, Kim HK, Kim DH, Honghoon, Bae JH, Jung JS, Jang S, Chi HS, Lee DS, Cho HI; Erythrocyte Sedimentation Rate Measurements by TEST 1 Better Reflect Inflammation Than Do Those by the Westergren Method in Patients With Malignancy, Autoimmune Disease, or Infection. Am J Clin Pathol. 2009 Feb;131(2):189-94
8. Frollano B, Cigliana G, Vitelli G, Fontinovo R, Giommi S, Cordone I; Capillary Erythrocyte Sedimentation Rate (ESR) in oncological patients: low haematocrit pitfalls and sample collection optimization in a certified quality system laboratory. SIBioC National Congress 28-31 October 2008, Rimini, Italy.
9. Pajola R, Piva E, Robecchi B, Tosato F, Plebani M; The Erythrocyte Sedimentation Rate (ESR): an old test with new contents. SIBioC National Congress 28-31 October 2008, Rimini, Italy.
10. Reis J, Diamantino J, Cunha N, Valido F; Erythrocyte sedimentation rate in blood a comparison of theTest 1 ESR system with the ICSH reference method. Clinical Chemistry and Laboratory Medicine 2007 June; 45, Special Supplement, p.S118, MO77.
11. Piva E, Pajola R, Temporin V, Plebani M; A new turbidimetric standard to improve the quality assurance of the erythrocyte sedimentation rate measurement. Clinical Biochemistry 2007 Apr; 40(7):491-5. Epub 2007 Jan 8.
12. Arikan S, Akalin N. (Biochemistry Department, Baskent University, Ankara, Turkey) "Comparison of the erythrocyte sedimentation rate measured by the Micro Test 1 sedimentation analyzer and the conventional Westergren method" Ann Saudi Med 2007; 27(5): 362-365.
13. Li LY, Chen WB, Feng G, Shen SF; Evaluation of the Microtest 1 ESR analyzer and investigation of the reference value. Chin J Lab Med, March 2007, Vol 30, N 3
14. Ozdem S, Akbas HS, Donmez L, Gultekin M; Comparison of TEST 1 with SRS 100 and ICSH reference method for the measurement of the length of sedimentation reaction in blood. Clin Chem Lab Med. 2006;44(4):407-12
15. Ajubi NE, Bakker AJ, van den Berg GA; Determination of the length of sedimentation reaction in blood using the Test 1 system: comparison with the Sedimatic 100 method, turbidimetric fibrinogen levels and the influence of M proteins. Clin Chem Lab Med 2006, 44 (7): 904-906
16. Kagawa Y, Ikeda N, Ito S, Makino S, Miyake N; Evaluation for ESR automated measuring instrument with EDTA. 36th Japan Society for Clinical Laboratory Automation, 30 September 2004, Japan.
17. Rosas B, Díaz P, Musa C, Aldunate J; Estudio Comparativo de 2 equipos que realizan VHS, Test1 y Vesmatic", XII Congreso Chileno de Tecnologia Medica. 20–22 October 2004, Santiago, Chile
18. Plebani M, D'Altoé P, Temporin V, Piva E, Buttarello M, Sanzari M; Variabilità Biologica Intra ed Interindividuale della Velocità di Eritrosedimentazione. 36th SIBioC, 8-11 June 2004, Padova, Italy

19. Melkič E, Piskar M, Lenart P; Nov način merjenja hitrosti sedimentacije eritrocitov z analizatorjem Test1 Alifax. 2 Kongres Hematologov in Transfuziologov Slovenije z Mednarodno Ubelelbo, 23–24 April 2004, Portoroz, Slovenia
20. Olivera Alonso B, Sirvent Monerris M, Rotella Belda MT, Ballenilla Antón V, Vidal G; Cambio De Método Para La Determinación De V.S.G.: Repercusiones Sobre La Fase Preanalítica. Generalitat Valenciana - Conselleria De Sanitat (for Valencia Government – MOH), Spain 2004
21. Galiano P; Quality and Automation in the Determination of the Erythrocyte Sedimentation Rate", Symposium 046, 22nd World Congress of Pathology & Laboratory Medicine, 30 August- 1 September 2003, Busan, Korea.
22. Nicoli M, Lanzoni E, Massocco A; Integrated Haematology and Coagulation Laboratory. Poster, Euromedlab Congress, 1-5 June 2003, Barcelona, Spain
23. Plebani M; Erythrocyte Sedimentation Rate: Innovative Techniques for an Obsolete Test? Clinical Chemistry and Laboratory Medicine, 2003, 41 (2): 115-116
24. Romero A, Muñoz M, Ramirez G; Determination of the Length of Sedimentation Reaction in Blood: a Comparison of the Test1 ESR System with the ICSH Reference Method and the Sedisystem", Clinical Chemistry and Laboratory Medicine 2003, 41 (2)
25. Giavarina D, Capuzzo S, Cauduro F, Carta M, Soffiati G; Internal Quality Control for Erythrocyte Sedimentation Rate Measured Test 1 Analyzer. Clinical Laboratory 2002, 48:459-462
26. Heverin E; Comparison of the Westergren method versus the TEST1 technique for determining the Erythrocyte Sedimentation Rate. May 2002, private communication
27. Lee BH, Choi J, Gee MS, Lee KK, Park H; Basic Evaluation and Reference Range Assessment of TEST1 for the Automated Erythrocyte Sedimentatioon Rate. Journal of Clinical Pathology and Quality Control, Vol. 24, No. 1, 2002
28. Piva E, Fassina P, Plebani M; Determination of the length of sedimentation reaction (erythrocyte sedimentation rate) in non-anticoagulated blood with the Microtest 1. Clin Chem Lab Med. 2002 Jul;40(7):713-7
29. Plebani M, Piva E; Erythrocyte Sedimentation Rate. Use of Fresh Blood for Quality Control. American Journal of Clinical Pathology, 2002, 117:621-626
30. Smith D, Spedding D; Evaluation of Agreement between the TEST1 and Starrsed Automated ESR Analysers. November 2001, private communication
31. Giavarina D, Capuzzo S, Carta M, Cauduro F, Soffiati G; Internal Quality Control for Erythrocyte Sedimentation Rate (ESR) measured by TEST-1 Analyzer. Clinical Chemistry, June 2001, 47: 162
32. Piva E, Sanzari MC, Servidio G, Plebani M; Length of Sedimentation Reaction in Undiluted Blood (Erythrocyte Sedimentation Rate): Variations with Sex and Age and Reference Limits. Clinical Chemistry and Laboratory Medicine, May 2001, 39: 451-454
33. de Jonge N, Sewkaransing I, Slinger J, Rijsdijk JJM; Erythrocyte Sedimentation Rate by Test-1 Analyzer Clinical Chemistry. June 2000, 46: 881-882
34. Plebani M, De Toni S, Sanzari MC, Bernardi D, Stockreiter E; The TEST 1 automated system: a new method for measuring the erythrocyte sedimentation rate. Am J Clin Pathol. 1998 Sep;110(3):334-40
35. Soffiati G; Nuovo Metodo per la Determinazione della Velocità di Eritrosedimentazione (VES), August 1998, private communication
36. Cirilli N, Abu Asy Z, Giacchè N, Bordicchia F, Paolucci S, Tocchini M; TEST1: Un Nuovo Metodo per la Determinazione della VES. Biochimica Clinica, Vol. 22, N. 5-6, 1998, p. 339

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Entered in Padova companies register at the n. 04337640280. Company stock € 10.000.000 entirely deposited Company with single partner and subjected to direction and coordination of Alifax Holding