

H7100

Advanced Hematology Analyzer



H7100 – Advanced Hematology Analyzer

Designed to redefine hematology analysis

Designed to redefine hematology analysis, this state-of-the-art diagnostic instrument promises a paradigm shift in blood analysis capabilities, catering to the intricate needs of clinical laboratories and research facilities.

An extensive parameter range, featuring the Reticulocyte Panel, Immature Platelet Fraction (IPF), and Immature Granulocytes (IG), empowers healthcare professionals to conduct meticulous assessments of various hematological conditions. The array of data points not only aids diagnosis but also supports research endeavors, offering a wealth of information for analysis and interpretation.



Fluorescence
Flow Cytometry



70+ Parameters



Throughput up to
100 samples/hour



Key features of H7100



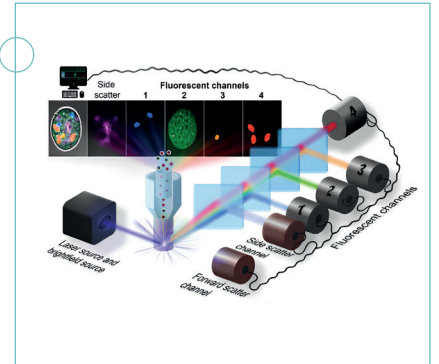
EFFORTLESS INTERACTION

The touch screen display on H7100 provides intuitive navigation and user-friendly interaction, simplifying operation, data input, and result interpretation, enhancing overall usability and efficiency in the laboratory setting.



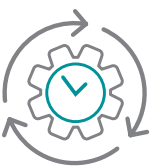
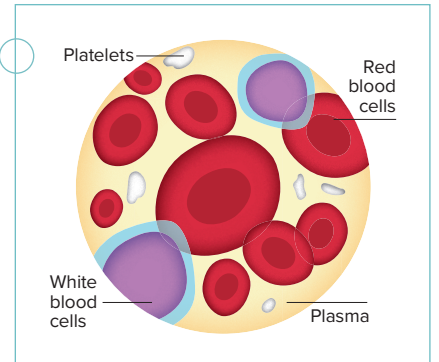
CUTTING-EDGE TECHNOLOGY

ERBA H7100 provides cutting edge technology combining the laser scattering, fluorescent method, and flow cytometry in WBC differentials and reticulocyte measurement enabling advanced analysis of cell size, complexity, and fluorescence offering detailed differentiation of WBC subtypes and accurate quantification of reticulocytes, providing valuable insights into various hematological conditions and improving diagnostic precision.



DEPENDABLE ASSAYS

A comprehensive panel of more than 70 parameters offers precise diagnosis of various diseases including anemia, leukemia, infection and inflammation. It provides in-depth analysis of red and white blood cell morphology, hemoglobin levels, platelet counts and more, enabling accurate detection and monitoring of a wide range of hematological conditions.



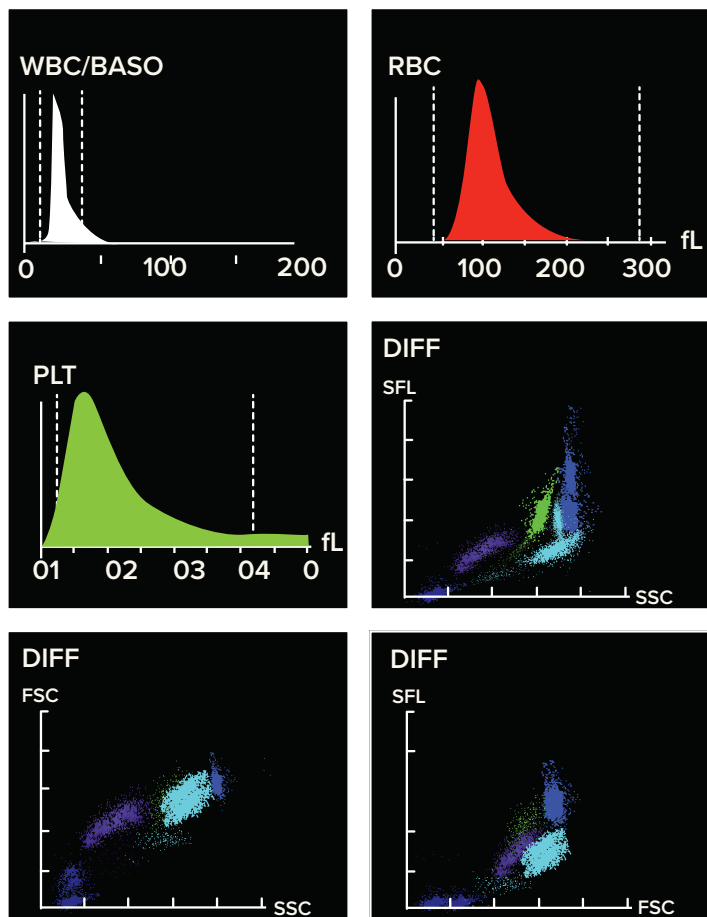
EFFICIENT HANDLING

An autoloader with 60 samples loading capacity streamlines workflow, saving time and reducing manual handling errors, enabling continuous sample loading, allowing for efficient processing of a large volume of samples with minimal user intervention.



INTERPRETING SCATTERPLOTS

ERBA H7100 provides scattergrams and histograms giving essential visual representations of cellular characteristics and abnormalities and cell populations based on size and complexity, aiding in the identification of anomalies such as blasts or atypical lymphocytes.



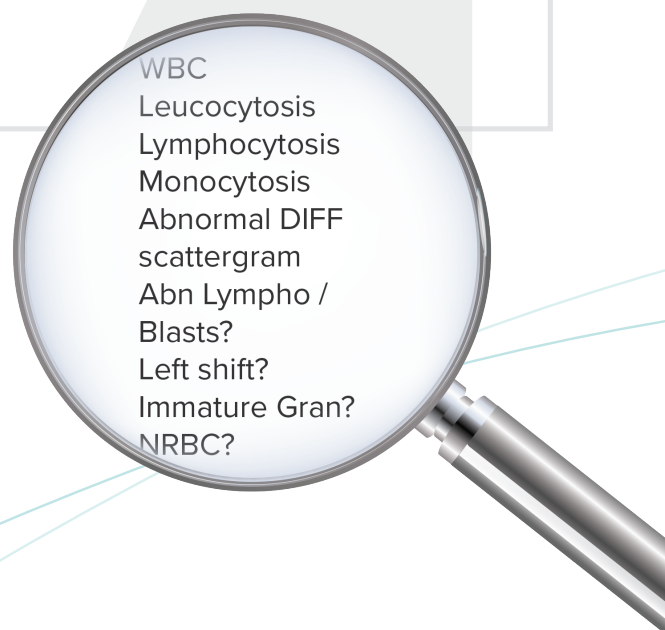
SCREENING INDICES FOR IRON DEFICIENCY ANEMIA AND BETA THALASSEMIA

Red Cell Distribution Width index (RDWi) and Mentzer Index are reliable screening indices with high sensitivity and specificity in microcytic hypochromic anemia cases.

Name:		Gender:	Age:	Sample No.:		
Smample Type:		Bed No.:	Department:	Medical Record No.:		
Time time:		Patient Type:		Diagnosis:		
S.No	Parameters		Result	Unit	Ref. range	Flag Info
1.	WBC	&H	22.56	10 ³ /μL	3.50–9.50	WBC Leucocytosis Lymphocytosis Monocytosis Abnormal DIFF scattergram Abn Lympho / Blasts? Left shift? Immature Gran? NRBC?
2.	Neu%	R	43.9	%	40.0–75.0	
3.	Lym%	R	27.6	%	20.0–50.0	
4.	Mon%	RH	27.0	%	3.0–10.0	
5.	Eos%	R	1.2	%	0.4–8.0	
6.	Bas	R	0.3	%	0.0–1.0	
7.	Neu%	&H	9.91	10 ³ /μL	1.80–6.30	
8.	Lym%	&H	6.23	10 ³ /μL	1.10–3.20	
9.	Mon%	&H	6.10	10 ³ /μL	0.10–0.60	
10.	Eos#	&	0.27	10 ³ /μL	0.02–0.52	
11.	Bas#	&	0.06	10 ³ /μL	0.00–0.06	
12.	IG%	R	41.6	%		RBC Anemia
13.	IG#	&	9.39	10 ³ /μL		
14.	RBC	L	2.26	10 ⁶ /μL	3.80–5.80	
15.	HGB	L	6.6	g/dL	11.5–17.5	
16.	HCT	L	20.9	%	35.0–50.0	
17.	MCV		92.3	fL	82.0–100.0	
18.	MCH		29.4	pg	27.0–34.0	
19.	MCHC		31.8	g/dL	31.6–56.0	
20.	RDW-CV	H	20.0	%	11.0–16.0	
21.	RDW-SD	H	63.8	fL	35.0–56.0	
22.	PLT	RL	8	10 ³ /μL	125–350	
23.	MPV		***	fL	6.5–12.0	
24.	PDW		***	fL	9.0–17.0	
25.	P-LCR		***	%	11.0–45.0	
26.	P-LCC		***	10 ⁹ /μL	30–90	
27.	PCT		***	&	0.108–0.282	
28.	*WBC-D	R	22.56	10 ⁹ /L		
29.	*TNC-D		23.28	10 ⁹ /L		
30.	*IME%	R	0.0	%		
31.	*IME#	&	0.00	10 ⁹ /L		
32.	*NLR	R	1.59			
33.	*PLR		****			
34.	*HFC#	&	0.07	10 ⁹ /L		
35.	*HFC%#	R	0.3	%		
36.	*NRBC#	&	3.2	10 ¹² /L		
37.	*NRBC%	R	0.71	%		
38.	*Micro%		3.2	%		
39.	*Micro#		11.2	%		
40.	*Macro%		17.7	%		
41.	Marco#		0.40	10 ¹² /L		

UNLOCKING INSIGHTS

Flagging in ERBA H7100 involves the automatic identification of abnormal or questionable results, allowing for further review by laboratory professionals. This crucial function helps ensure accurate and reliable analysis of blood samples, enabling timely diagnosis and treatment of various medical conditions.



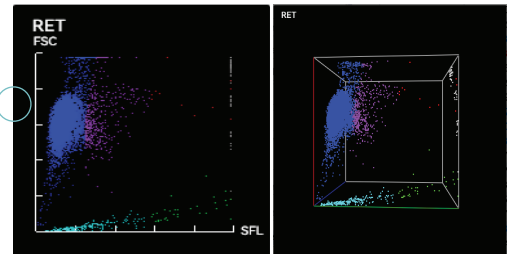
EXPLORING THE RETICULOCYTE PANEL TESTING

Reticulocyte Panel: ERBA H7100 with the Reticulocyte Panel offers a real-time snapshot of bone marrow iron status, providing valuable information about the balance between iron and erythropoiesis.

It serves as a crucial measure for accelerated iron utilization compared to traditional markers.

The reticulocyte count is utilized to monitor the response to therapy in conditions related to chronic kidney disease, bone marrow failure syndromes, and diagnosis of hemolytic anemia and sickle cell anemia.

Reticulocyte Hemoglobin (RET-He) is proven and recommended parameter in nephrology guidelines (NKF KDOQI). It is sensitive and an early indicator of current iron availability for erythropoiesis. It is used for monitoring erythropoietin and / or IV iron therapy.

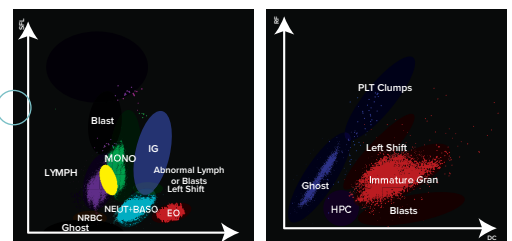


UNLEASH THE ROLE OF IMMATURE GRANULOCYTE COUNT

Immature Granulocyte (IG) count is important in the risk stratification and prognosis of patients with sepsis or other critical illnesses, as elevated levels are associated with increased disease severity and higher mortality rates.

Monitoring IG count over time provides valuable information on the patient's response to treatment and the resolution of the underlying inflammatory process.

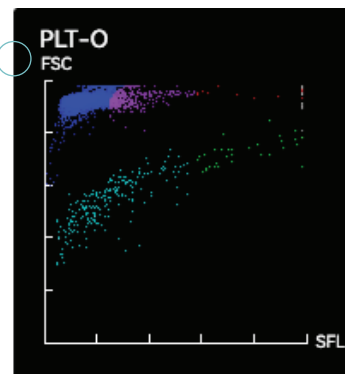
An increase in IG count, serves as an early indicator of inflammatory response and aids in distinguishing between infectious and non-infectious causes of leukocytosis.



OPTICAL PLATELET COUNT (PLT-O)

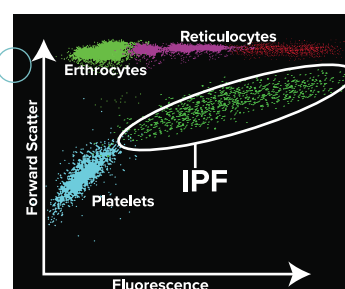
Optical Platelet Count (PLT-O): addresses challenges like pseudo-thrombocytopenia in hematological analysis. Pseudo thrombocytopenia (PTCP) remains a pre-analytical challenge in hematological analysis with multiple etiologies, including improper venipuncture, inadequate mixing blood sample, sample clotting, PLT satellitism, giant or large platelets, and anticoagulant-related platelet aggregation. The Optical platelet count reduces the spurious count and is usually useful to correct spurious low platelet counts in EDTA-PTCP patients.

With all this, Erba H7100 is poised to revolutionize hematology analysis, delivering excellence in diagnostics and advancing healthcare through innovation. The H7100 stands out as a cost-effective and comprehensive solution, leveraging sophisticated algorithms and next-generation technology to elevate diagnostic and research efforts in hematology.



IMMATURE PLATELET FRACTION (IPF)

Immature Platelet Fraction (IPF): Monitoring IPF enables early detection of bone marrow recovery and prediction of platelet engraftment timing, particularly valuable for patients undergoing chemotherapy or stem cell transplantation. It is a novel diagnostic tool to differentiate patients with thrombocytopenia due to increased destruction of platelets from those due to bone marrow/ suppression.



Technical Specifications

Test Modes

CBC, CBC+DIFF, CBC+RET, CBC+DIFF+RET, RET

35 Reportable Parameters

WBC, Lym%, Mon%, Neu%, Bas%, Eos%, IG%,
Lym#, Mon#, Neu#, Eos#, Bas#, IG#, RBC, HGB,
HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD,
PLT, MPV, PDW-SD, PDW-CV, PCT, P-LCR, P-LCC,
RET%, RET#, RHE, IRF, LFR, MFR, HFR, IPF%, IPF#

36 Research Parameters

WBC-D, TNC-D, IME%, IME#, NLR, LMR, PLR,
d-NLR, HFC#, HFC%, NRBC#, NRBC%, Micro%,
Micro#, Macro%, Macro#, H-NR%, L-NR%, PLT-I,
RBC-O, PLT-O, WBC-O, MRV, RPI, H-IPF, FRC#,
FRC%, cWBC, Hypo He#, Hypo He%, Hyper He#,
Hyper He%, Mentzer, RDWI.

Technology

WBC Differential / RET: Fluorescence Flow
Cytometry

RBC: Impedance Method

PLT: Impedance and Optical Method

HGB: Cyanide-free Colorimetric Method

Throughput

CBC + DIFF: 90 Samples/Hour

CBC + DIFF + RET: 65 Samples/Hour

Reagents

Erba H7100 Dil, Erba H7100 Dil Ret, Erba H7100
Lyse1, Erba H7100 Lyse2, Erba H7100 Fluro Ret,
Erba H7100 Fluro Diff, Erba H7100 Clean

Histograms & Scattergrams

Three Histograms

Two 3D Scattergrams

Eight 2D Scattergrams

Linearity

WBC: $(0.0-500.0) \times 10^9/L$

RBC: $(0.0-8.6) \times 10^{12}/L$

HGB: $(0.0-26) \text{ g/dL}$

HCT: $(0.0-75.0) \%$

PLT: $(0.0-5000) \times 10^9/L$

LIS

Bi-directional

LIS Protocol

HL7

External Interface

4 USB + 1 LAN port

Touch Screen

12.1 TFT touch screen

Autoloader Capacity

60

Data Storage

Analyzer – 150 000, PC: 500 000

Net Weight

$\leq 100 \text{ kg}$

Dimension (mm) (W × H × D)

665 × 870 × 820



Reagents Ordering Information

Product Code	Description	Pack size	Product Code	Description	Pack size
HEM00044	Erba H7100 Dil	20 L	HEM00049	Erba H7100 Lyse2	2 L
HEM00045	Erba H7100 Dil Ret	1 L	HEM00050	Erba H7100 Lyse2	4 L
HEM00053	Erba H7100 Fluro Diff	22 mL	HEM00063	Erba H7100 Clean	10x4 mL
HEM00054	Erba H7100 Fluro Diff	42 mL	HEM00055	Erba H7 CON	3x3 mL
HEM00051	Erba H7100 Fluro Ret	12 mL	HEM00057	Erba H7 CON N	1x3 mL
HEM00052	Erba H7100 Fluro Ret	24 mL	HEM00059	Erba H7 Ret CON	3x3 mL
HEM00047	Erba H7100 Lyse1	1 L	HEM00061	Erba H7 Ret CON N	1x3 mL
HEM00046	Erba H7100 Lyse1	500 mL	HEM00027	ELite H CAL	1x3 mL
HEM00048	Erba H7100 Lyse2	1 L			

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