



**COLLEGE of AMERICAN
PATHOLOGISTS**

325 Waukegan Road, Northfield, Illinois 60093-2750
800-323-4040 • cap.org

ORIGINAL EVALUATION

FH9-C 2023 Hematology Auto Differentials, FH9

INSTITUTION: LKF Laboratorium fur Klinische Forschung GmbH

Schwentinental GE 24223

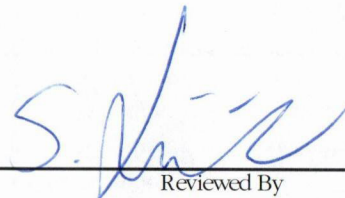
ATTENTION: Volker El-Samalouti PhD

CAP NUMBER: 7234136-01 **Kit#** 1

KIT INFORMATION:	Kit ID:	Kit Mailed:	Original Evaluation:	Next Mailing Date:
	36969406	9/18/2023	10/25/2023	1/22/2024

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LEGEND: **Exception Reason Codes appearing in this evaluation:**
[26] = Educational challenge.



Reviewed By



Date

The College of American Pathologists recommends that the result of this interlaboratory comparison not be used as a sole criterion for judging the performance of any individual clinical laboratory.



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Institution: LKF Laboratorium fur Klinische Forschung GmbH

Attention: Volker El-Samalouti PhD

City / State: Schwentimental GE 24223

Kit ID: 36969406

Kit Mailed: 9/18/2023

Original Evaluation: 10/25/2023

**EVALUATION
ORIGINAL**

FH9-C 2023 Hematology Auto Differentials, FH9

Test Unit of Measure Peer Group	Evaluation and Comparative Method Statistics									Plot of the Relative Distance of Your Results from Target as Percentages of allowed Deviation Survey -100-----Mean-----+100
	Specimen	Your Result	Mean	S.D.	No. of Labs	S.D.I	Limits of Acceptability Lower Upper		Your Grade	
White Blood Cell Count x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	17.8	16.42	0.26	3325	+5.3	13.9	18.9	Acceptable	
	FH9-12	2.9	2.89	0.08	3342	+0.1	2.4	3.4	Acceptable	
	FH9-13	3.0	2.68	0.08	3331	+4.1	2.2	3.1	Acceptable	
	FH9-14	7.2	7.04	0.15	3337	+1.1	5.9	8.1	Acceptable	
	FH9-15	6.6	6.13	0.13	3316	+3.7	5.2	7.1	Acceptable	
Red Blood Cell Count x 10E12/L or x 10E6/uL SYSMEX XN-SERIES	FH9-11	5.22	5.280	0.053	3331	-1.1	4.96	5.60	Acceptable	
	FH9-12	5.20	5.244	0.052	3333	-0.9	4.92	5.56	Acceptable	
	FH9-13	5.25	2.232	0.029	3333	+103.2	2.09	2.37	Unacceptable	
	FH9-14	2.43	2.391	0.030	3333	+1.3	2.24	2.54	Acceptable	
	FH9-15	4.33	4.323	0.042	3329	+0.2	4.06	4.59	Acceptable	
Hemoglobin g/dL SYSMEX XN-SERIES	FH9-11	16.2	16.11	0.15	3325	+0.6	14.9	17.3	Acceptable	
	FH9-12	16.0	16.09	0.15	3330	-0.6	14.9	17.3	Acceptable	
	FH9-13	5.3	5.22	0.07	3331	+1.1	4.8	5.6	Acceptable	
	FH9-14	6.8	6.69	0.09	3335	+1.3	6.2	7.2	Acceptable	
	FH9-15	12.3	12.24	0.12	3345	+0.5	11.3	13.1	Acceptable	
Hematocrit % SYSMEX XN-SERIES	FH9-11	44.70	45.939	0.716	3353	-1.7	43.18	48.70	Acceptable	
	FH9-12	45.30	46.254	0.724	3353	-1.3	43.47	49.03	Acceptable	
	FH9-13	15.70	15.880	0.347	3353	-0.5	14.92	16.84	Acceptable	
	FH9-14	19.10	19.070	0.339	3350	+0.1	17.92	20.22	Acceptable	
	FH9-15	35.30	35.679	0.589	3346	-0.6	33.53	37.82	Acceptable	

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Test Unit of Measure Peer Group	Evaluation and Comparative Method Statistics									Plot of the Relative Distance of Your Results from Target as Percentages of allowed Deviation Survey -100-----Mean-----+ 100
	Specimen	Your Result	Mean	S.D.	N.o. of Labs	S.D.I	Limits of Acceptability Lower Upper		Your Grade	
MCV fL SYSMEX XN-SERIES	FH9-11	85.6	86.91	0.90	3314	-1.5	84.2	89.6	Acceptable	
	FH9-12	87.1	88.09	0.91	3313	-1.1	85.3	90.9	Acceptable	
	FH9-13	69.8	70.56	0.80	3314	-1.0	68.1	73.0	Acceptable	
	FH9-14	78.6	79.62	0.86	3316	-1.2	77.0	82.2	Acceptable	
	FH9-15	81.5	82.41	0.89	3316	-1.0	79.7	85.1	Acceptable	
MCH pg SYSMEX XN-SERIES	FH9-11	31.0	30.51	0.36	3296	+1.3	29.4	31.7	Acceptable	
	FH9-12	30.8	30.68	0.36	3293	+0.3	29.6	31.8	Acceptable	
	FH9-13	23.6	23.38	0.33	3303	+0.7	22.3	24.4	Acceptable	
	FH9-14	28.0	27.98	0.38	3304	+0.1	26.8	29.2	Acceptable	
	FH9-15	28.4	28.31	0.33	3301	+0.3	27.3	29.4	Acceptable	
MCHC g/dL SYSMEX XN-SERIES	FH9-11	36.2	35.11	0.52	3311	+2.1	33.5	36.7	Acceptable	
	FH9-12	35.3	34.83	0.52	3308	+0.9	33.2	36.4	Acceptable	
	FH9-13	33.8	33.13	0.56	3305	+1.2	31.4	34.9	Acceptable	
	FH9-14	35.6	35.14	0.57	3304	+0.8	33.4	36.9	Acceptable	
	FH9-15	34.8	34.37	0.51	3306	+0.8	32.8	35.9	Acceptable	
Platelet Count x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	536	545.5	12.4	3322	-0.8	409	682	Acceptable	
	FH9-12	139	136.0	5.8	3313	+0.5	101	170	Acceptable	
	FH9-13	56	55.8	3.1	3322	+0.1	41	70	Acceptable	
	FH9-14	345	340.5	8.1	3326	+0.6	255	426	Acceptable	
	FH9-15	226	231.0	6.5	3324	-0.8	173	289	Acceptable	

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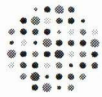
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	Specimen	Your Result	Mean	S.D.	No. of Labs	S.D.I	Limits of Acceptability Lower Upper	Your Grade		
MPV fL SYSMEX XN-SERIES	FH9-11	10.1	10.04	0.15	3148	+0.4	9.5 10.5	Acceptable		
	FH9-12	10.7	10.35	0.28	3147	+1.2	9.4 11.2	Acceptable		
	FH9-13	11.0	10.69	0.31	3165	+1.0	9.7 11.7	Acceptable		
	FH9-14	10.4	10.36	0.15	3149	+0.3	9.9 10.9	Acceptable		
	FH9-15	10.3	10.28	0.20	3135	+0.1	9.6 10.9	Acceptable		
RDW fL SYSMEX XN-SERIES	FH9-11	43.7	44.27	0.68	445	-0.8	42.2 46.4	Acceptable		
	FH9-12	44.0	45.18	0.76	446	-1.6	42.9 47.5	Acceptable		
	FH9-13	48.4	48.72	0.47	441	-0.7	47.3 50.2	Acceptable		
	FH9-14	42.8	43.20	0.44	443	-0.9	41.8 44.6	Acceptable		
	FH9-15	45.2	45.32	0.60	445	-0.2	43.5 47.2	Acceptable		
Neut/ Gran % SYSMEX XN-SERIES	FH9-11	48.0	47.70	0.91	3240	+0.3	44.9 50.5	Acceptable		
	FH9-12	45.2	43.57	1.16	3239	+1.4	40.0 47.1	Acceptable		
	FH9-13	35.7	37.27	1.08	3237	-1.4	34.0 40.6	Acceptable		
	FH9-14	44.4	43.58	0.97	3245	+0.9	40.6 46.5	Acceptable		
	FH9-15	43.3	43.52	0.99	3247	-0.2	40.5 46.5	Acceptable		
Neut/ Gran Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	8.08	7.832	0.195	3249	+1.3	6.83 8.84	Acceptable		
	FH9-12	1.31	1.258	0.048	3254	+1.1	0.25 2.26	Acceptable		
	FH9-13	1.01	0.999	0.042	3254	+0.3	0.00 2.00	Acceptable		
	FH9-14	3.20	3.067	0.097	3253	+1.4	2.06 4.07	Acceptable		
	FH9-15	2.67	2.666	0.081	3236	0.0	1.66 3.67	Acceptable		

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	Specimen	Your Result	Mean	S.D.	No. of Labs	S.D.I	Limits of Acceptability Lower Upper		Your Grade	
Lymphs % SYSMEX XN-SERIES	FH9-11	25.1	24.18	0.96	3289	+1.0	21.2	27.1	Acceptable	
	FH9-12	27.2	28.61	1.28	3282	-1.1	24.7	32.5	Acceptable	
	FH9-13	36.9	35.09	1.60	3277	+1.1	30.2	39.9	Acceptable	
	FH9-14	29.9	28.76	1.21	3279	+0.9	25.1	32.5	Acceptable	
	FH9-15	31.7	28.94	1.29	3287	+2.1	25.0	32.9	Acceptable	
Lymphs Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	4.21	3.970	0.167	3283	+1.4	2.96	4.97	Acceptable	
	FH9-12	0.79	0.826	0.041	3278	-0.9	0.00	1.83	Acceptable	
	FH9-13	1.04	0.940	0.049	3280	+2.0	0.00	1.95	Acceptable	
	FH9-14	2.16	2.023	0.094	3276	+1.5	1.02	3.03	Acceptable	
	FH9-15	1.95	1.772	0.085	3277	+2.1	0.77	2.78	Acceptable	
Monocytes % SYSMEX XN-SERIES	FH9-11	10.4	11.95	0.96	3247	-1.6	9.0	14.9	Acceptable	
	FH9-12	13.8	12.73	1.12	3228	+1.0	9.3	16.1	Acceptable	
	FH9-13	12.8	13.60	1.42	3275	-0.6	9.3	17.9	Acceptable	
	FH9-14	10.7	12.50	1.16	3257	-1.6	9.0	16.0	Acceptable	
	FH9-15	10.2	12.39	1.20	3254	-1.8	8.7	16.0	Acceptable	
Monocytes Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	1.74	1.961	0.161	3243	-1.4	0.96	2.97	Acceptable	
	FH9-12	0.40	0.368	0.035	3235	+0.9	0.00	1.37	Acceptable	
	FH9-13	0.36	0.365	0.040	3267	-0.1	0.00	1.37	Acceptable	
	FH9-14	0.77	0.880	0.084	3255	-1.3	0.00	1.88	Acceptable	
	FH9-15	0.63	0.759	0.076	3254	-1.7	0.00	1.76	Acceptable	

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	Specimen	Your Result	Mean	S.D.	No. of Labs	S.D.I	Limits of Acceptability Lower Upper	Your Grade		
Eosinophils % SYSMEX XN-SERIES	FH9-11	11.6	11.32	0.83	3243	+0.3	8.8 13.9	Acceptable		
	FH9-12	9.0	10.32	0.83	3246	-1.6	7.8 12.9	Acceptable		
	FH9-13	9.6	9.20	0.64	3251	+0.6	7.2 11.2	Acceptable		
	FH9-14	10.2	10.35	0.80	3250	-0.2	7.9 12.8	Acceptable		
	FH9-15	9.9	10.32	0.80	3250	-0.5	7.9 12.8	Acceptable		
Eosinophils Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	1.94	1.858	0.139	3246	+0.6	0.85 2.86	Acceptable		
	FH9-12	0.26	0.298	0.025	3248	-1.5	0.00 1.30	Acceptable		
	FH9-13	0.27	0.247	0.020	3251	+1.2	0.00 1.25	Acceptable		
	FH9-14	0.74	0.728	0.058	3252	+0.2	0.00 1.73	Acceptable		
	FH9-15	0.61	0.631	0.051	3246	-0.4	0.00 1.64	Acceptable		
Basophils % SYSMEX XN-SERIES	FH9-11	4.9	4.82	0.11	3235	+0.7	3.8 5.9	Acceptable		
	FH9-12	4.8	4.79	0.18	3245	+0.1	3.7 5.8	Acceptable		
	FH9-13	5.0	4.80	0.17	3242	+1.2	3.7 5.8	Acceptable		
	FH9-14	4.8	4.80	0.13	3237	0.0	3.8 5.9	Acceptable		
	FH9-15	4.9	4.80	0.13	3237	+0.8	3.7 5.8	Acceptable		
Basophils Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	0.82	0.792	0.022	3233	+1.3	0.00 1.80	Acceptable		
	FH9-12	0.14	0.138	0.006	3174	+0.3	0.00 1.14	Acceptable		
	FH9-13	0.14	0.128	0.006	3180	+2.0	0.00 1.13	Acceptable		
	FH9-14	0.35	0.337	0.012	3215	+1.0	0.00 1.34	Acceptable		
	FH9-15	0.30	0.294	0.010	3227	+0.6	0.00 1.30	Acceptable		

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	Specimen	Your Result	Mean	S.D.	No. of Labs	S.D.I	Limits of Acceptability Lower Upper		Your Grade	Survey -100-----Mean-----+ 100
IG % SYSMEX XN-SERIES	FH9-11	11.8	12.01	0.34	3056	-0.6			See Note [26]	
	FH9-12	11.7	11.10	0.41	3060	+1.5			See Note [26]	
	FH9-13	9.2	9.62	0.36	3058	-1.2			See Note [26]	
	FH9-14	11.6	11.07	0.34	3064	+1.6			See Note [26]	
	FH9-15	11.2	11.08	0.36	3059	+0.3			See Note [26]	
IG Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES	FH9-11	1.98	1.972	0.063	3039	+0.1			See Note [26]	
	FH9-12	0.34	0.320	0.015	3049	+1.3			See Note [26]	
	FH9-13	0.26	0.258	0.012	3010	+0.2			See Note [26]	
	FH9-14	0.84	0.779	0.029	3044	+2.1			See Note [26]	
	FH9-15	0.69	0.679	0.026	3044	+0.4			See Note [26]	
nRBC/ 100 WBC nRBC/ 100 WBC SYSMEX XN-SERIES XN CHECK CONTROL	FH9-11	5.9	6.56	0.23	3003	-2.9			See Note [26]	
	FH9-12	0.0	0.08	0.14	3008	-0.6			See Note [26]	
	FH9-13	6.0	5.12	0.52	3023	+1.7			See Note [26]	
	FH9-14	0.3	0.05	0.05	2934	+5.0			See Note [26]	
	FH9-15	6.5	6.55	0.37	2994	-0.1			See Note [26]	
nRBC Absolute x 10E9/L or x 10E3/uL SYSMEX XN-SERIES XN CHECK CONTROL	FH9-11	0.99	1.077	0.038	2892	-2.3			See Note [26]	
	FH9-12	0.00	0.002	0.004	2892	-0.5			See Note [26]	
	FH9-13	0.17	0.137	0.014	2926	+2.4			See Note [26]	
	FH9-14	0.02	0.006	0.006	2927	+2.3			See Note [26]	
	FH9-15	0.40	0.401	0.023	2897	0.0			See Note [26]	
Test Method	Specimen	Your Result		Good Response		Acceptable Response		Your Grade		
Blood Cell ID	BCP-21	EOSINOPHIL, ANY STAGE		EOSINOPHIL, ANY STAGE				Good		
	BCP-22	STOMATOCYTE		STOMATOCYTE				Good		
	BCP-23	LEUKOCYTE w/BACTERIA		LEUKOCYTE w/BACTERIA		IMMATURE/ABN CELL, REF		Good		

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Test Method	Specimen	Your Result	Good Response	Acceptable Response	Your Grade
	<u>BCP-24</u>	TEARDROP CELL	TEARDROP CELL		Good
	<u>BCP-25</u>	SPHEROCYTE	SPHEROCYTE		Good
Blood Cell ID Ungraded	<u>BCP-26</u>	ERYTHROCYTE, NORMAL			See Note [26]
	<u>BCP-27</u>	MONOCYTE			See Note [26]
	<u>BCP-28</u>	LYMPHOCYTE			See Note [26]
	<u>BCP-29</u>	HOWELL-JOLLY BODY			See Note [26]
	<u>BCP-30</u>	PLATELET, NORMAL			See Note [26]

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Subspecialty: Hematology

Regulated Analyte	Proficiency Event 2023 1			Proficiency Event 2023 2			Proficiency Event 2023 3			Current Event Performance Interpretation	Cumulative CLIA '88 Performance Interpretation
	Test Event	Score	%	Test Event	Score	%	Test Event	Score	%		
Cell ID/ Flow Differential	FH9-A	5/5	100	FH9-B	5/5	100	FH9-C	5/5	100	Satisfactory	Successful
Erythrocyte Count (RBC)	FH9-A	5/5	100	FH9-B	5/5	100	FH9-C	4/5	80	Satisfactory	Successful
Hematocrit	FH9-A	5/5	100	FH9-B	5/5	100	FH9-C	5/5	100	Satisfactory	Successful
Hemoglobin	FH9-A	5/5	100	FH9-B	5/5	100	FH9-C	5/5	100	Satisfactory	Successful
Leukocyte Count (WBC)	FH9-A	5/5	100	FH9-B	5/5	100	FH9-C	5/5	100	Satisfactory	Successful
Platelet Count	FH9-A	5/5	100	FH9-B	5/5	100	FH9-C	5/5	100	Satisfactory	Successful
Fibrinogen	CGL-A	5/5	100	CGL-B	5/5	100				Pending	Successful <4>
PTT	CGL-A	5/5	100	CGL-B	5/5	100				Pending	Successful <4>
Prothrombin Time	CGL-A	5/5	100	CGL-B	5/5	100				Pending	Successful <4>
Hematology		45/45	100		45/45	100		29/30	97	Satisfactory	Successful

<4> Scorecard performance pending future evaluation or may not be applicable due to discontinued testing or use of a waived method.

The College of American Pathologists recommends that the result of this interlaboratory comparison not be used as a sole criterion for judging the performance of any individual clinical laboratory.