

# Boule 3PD Hematology Control

CONTROL

IVD

LOT



CONT

4.5 mL



Tri-Level	32109-8K	2022/01/29
Low	32109-51	2022/01/29
Normal	32109-54	2022/03/01
High	32109-53	2022/02/04

Open Vial Stability: 14 days

LOW CONTROL		Sysmex KX Series	Mindray 3000 Series	ABX Micros 45/60	Orphee Mythic 18	ERMA PCE-210	Diatron Abacus Jr.	Nihon Kohden MEK 6400/6410/6420	
Lot 32109-51									
Parameters		Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	3.0	3.1	3.2	3.2	3.3	3.0	3.1	0.3
Lymph #	x10 <sup>9</sup> /L	1.3	1.3	1.5	1.5	1.4	1.3	1.5	0.5
Mid # (Mxd*)	x10 <sup>9</sup> /L	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Gran # (Neut*)	x10 <sup>9</sup> /L	1.5	1.6	1.5	1.6	1.8	1.6	1.4	0.8
Lymph %	%	43.9	41.6	47.8	45.4	41.1	43.8	49.2	5.0
Mid (Mxd*) %	%	6.2	6.7	5.6	4.0	4.0	4.0	4.3	4.0
Gran (Neut*) %	%	49.9	51.7	46.6	50.6	54.9	52.2	46.5	5.0
RBC	x10 <sup>12</sup> /L	2.20	2.28	2.20	2.21	2.33	2.28	2.26	0.12
Hgb	g/dL	4.9	5.4	5.4	5.3	5.6	5.6	5.4	0.3
Hct	%	14.7	16.6	15.4	16.4	17.5	16.7	16.2	3.0
MCV	fL	67.0	72.6	69.8	74.1	75.3	73.1	71.7	7.0
MCH	pg	22.3	23.7	24.5	24.0	24.0	24.6	23.9	2.0
MCHC	g/dL	33.3	32.5	35.1	32.3	32.0	33.5	33.3	4.0
RDW-CV	%	14.1	15.1	16.7	16.7	16.8	17.7	19.1	4.5
RDW-SD	fL	37.2	na	na	na	na	na	na	5.7
PLT	x10 <sup>9</sup> /L	77	95	96	89	97	74	99	15
MPV	fL	8.7	9.8	10.1	10.5	10.0	9.1	10.4	1.5
NORMAL CONTROL		Sysmex KX Series	Mindray 3000 Series	ABX Micros 45/60	Orphee Mythic 18	ERMA PCE-210	Diatron Abacus Jr.	Nihon Kohden MEK 6400/6410/6420	
Lot 32109-54									
Parameters		Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	8.0	8.1	8.1	8.2	8.8	7.9	8.2	0.6
Lymph #	x10 <sup>9</sup> /L	3.8	3.5	4.0	3.8	3.5	3.6	4.0	0.6
Mid # (Mxd*)	x10 <sup>9</sup> /L	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Gran # (Neut*)	x10 <sup>9</sup> /L	3.6	3.9	3.7	4.1	4.8	3.8	3.9	1.0
Lymph %	%	46.9	43.0	48.9	45.9	40.1	45.3	48.2	5.0
Mid (Mxd*) %	%	8.6	8.5	5.8	4.6	5.1	6.3	4.0	4.0
Gran (Neut*) %	%	44.5	48.5	45.3	49.5	54.8	48.4	47.8	5.0
RBC	x10 <sup>12</sup> /L	4.18	4.34	4.16	4.17	4.25	4.17	4.20	0.18
Hgb	g/dL	11.4	11.4	11.4	11.4	11.8	11.2	11.7	0.4
Hct	%	31.7	36.6	34.0	35.7	37.5	36.2	34.7	3.5
MCV	fL	75.8	84.3	81.7	85.7	88.3	86.7	82.7	7.0
MCH	pg	27.3	26.3	27.4	27.3	27.8	26.9	27.9	2.0
MCHC	g/dL	36.0	31.1	33.5	31.9	31.5	30.9	33.7	4.0
RDW-CV	%	12.7	14.4	15.2	15.1	15.7	17.6	18.6	4.5
RDW-SD	fL	40.1	na	na	na	na	na	na	5.2
PLT	x10 <sup>9</sup> /L	225	244	241	219	233	230	269	30
MPV	fL	8.5	9.1	9.5	10.2	9.2	8.7	10.1	1.5
HIGH CONTROL		Sysmex KX Series	Mindray 3000 Series	ABX Micros 45/60	Orphee Mythic 18	ERMA PCE-210	Diatron Abacus Jr.	Nihon Kohden MEK 6400/6410/6420	
Lot 32109-53									
Parameters		Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	19.6	19.2	19.6	19.8	20.2	19.4	20.7	1.8
Lymph #	x10 <sup>9</sup> /L	11.8	10.5	11.9	11.5	10.3	11.6	13.7	1.5
Mid # (Mxd*)	x10 <sup>9</sup> /L	1.5	1.8	1.2	1.0	1.2	1.2	1.2	1.0
Gran # (Neut*)	x10 <sup>9</sup> /L	6.3	6.8	6.5	7.3	8.6	6.6	5.8	2.5
Lymph %	%	60.5	55.0	60.7	58.0	51.2	59.8	66.3	5.0
Mid (Mxd*) %	%	7.6	9.4	6.1	4.9	6.1	6.3	5.6	4.0
Gran (Neut*) %	%	31.9	35.6	33.2	37.1	42.7	33.9	28.1	5.0
RBC	x10 <sup>12</sup> /L	4.95	5.22	4.94	4.95	4.98	4.81	4.98	0.22
Hgb	g/dL	16.4	16.2	16.1	16.0	16.5	15.6	16.6	0.5
Hct	%	44.3	51.7	47.9	49.8	51.4	48.6	48.0	4.0
MCV	fL	89.4	99.1	97.0	100.6	103.3	101.1	96.3	7.0
MCH	pg	33.1	31.0	32.6	32.3	33.1	32.4	33.3	2.0
MCHC	g/dL	37.0	31.3	33.6	32.1	32.1	32.1	34.6	4.0
RDW-CV	%	11.9	12.1	12.2	12.3	13.4	13.8	15.0	4.5
RDW-SD	fL	38.7	na	na	na	na	na	na	4.8
PLT	x10 <sup>9</sup> /L	512	548	545	494	463	537	618	60
MPV	fL	9.6	10.2	10.6	11.2	10.9	9.5	11.3	1.5



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Normal	32109-54	2022/03/01
High	32109-53	2022/02/04

Open Vial Stability: 14 days

LOW CONTROL		Beckman Coulter Series								± Range
		S-Plus Series	JT Series	STKR STKS™	MAXM™	MD Series	OnyX	AcT Diff	AcT 10 T Series	
Lot 32109-51		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	
Parameters		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	0.3
Lymph #	x10 <sup>9</sup> /L	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.3	0.5
Mono #	x10 <sup>9</sup> /L	0.3	0.3	0.3	0.3	0.3	0.3	0.3	na	0.3
Gran #	x10 <sup>9</sup> /L	1.6	1.6	1.6	1.6	1.6	1.6	1.6	na	0.8
Lymph	%	45.5	45.5	45.5	45.5	45.5	45.5	45.5	38.7	5.0
Mono	%	4.0	4.0	4.0	4.0	4.0	4.0	4.0	na	4.0
Gran	%	50.5	50.5	50.5	50.5	50.5	50.5	50.5	na	5.0
RBC	x10 <sup>12</sup> /L	2.21	2.21	2.21	2.21	2.20	2.20	2.20	2.20	0.12
Hgb	g/dL	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	0.3
Hct	%	15.5	15.5	15.5	15.5	15.7	15.7	15.7	15.7	3.0
MCV	fL	70.3	70.3	70.3	70.3	71.4	71.4	71.4	71.4	7.0
MCH	pg	24.0	24.0	24.0	24.0	24.1	24.1	24.1	24.1	2.0
MCHC	g/dL	34.2	34.2	34.2	34.2	33.8	33.8	33.8	33.8	4.0
RDW	%	19.7	19.7	19.7	19.7	18.0	18.0	18.0	na	4.5
PLT	x10 <sup>9</sup> /L	78	78	78	78	76	76	76	76	15
MPV	fL	10.5	10.5	10.5	10.5	10.4	10.4	10.4	10.4	1.5
NORMAL CONTROL		S-Plus Series	JT Series	STKR STKS™	MAXM™	MD Series	OnyX	AcT Diff	AcT 10 T Series	
Lot 32109-54		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
Parameters		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.2	0.6
Lymph #	x10 <sup>9</sup> /L	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.2	0.6
Mono #	x10 <sup>9</sup> /L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	na	0.5
Gran #	x10 <sup>9</sup> /L	3.9	3.9	3.9	3.9	3.9	3.9	3.9	na	1.0
Lymph	%	46.9	46.9	46.9	46.9	46.9	46.9	46.9	39.9	5.0
Mono	%	6.0	6.0	6.0	6.0	6.0	6.0	6.0	na	4.0
Gran	%	47.1	47.1	47.1	47.1	47.1	47.1	47.1	na	5.0
RBC	x10 <sup>12</sup> /L	4.20	4.20	4.20	4.20	4.16	4.16	4.16	4.16	0.18
Hgb	g/dL	11.4	11.4	11.4	11.4	11.3	11.3	11.3	11.3	0.4
Hct	%	34.1	34.1	34.1	34.1	34.2	34.2	34.2	34.2	3.5
MCV	fL	81.2	81.2	81.2	81.2	82.3	82.3	82.3	82.3	7.0
MCH	pg	27.1	27.1	27.1	27.1	27.2	27.2	27.2	27.2	2.0
MCHC	g/dL	33.4	33.4	33.4	33.4	33.0	33.0	33.0	33.0	4.0
RDW	%	17.6	17.6	17.6	17.6	16.3	16.3	16.3	na	4.5
PLT	x10 <sup>9</sup> /L	213	213	213	213	212	212	212	212	30
MPV	fL	10.2	10.2	10.2	10.2	10.1	10.1	10.1	10.1	1.5
HIGH CONTROL		S-Plus Series	JT Series	STKR STKS™	MAXM™	MD Series	OnyX	AcT Diff	AcT 10 T Series	
Lot 32109-53		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
Parameters		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	20.1	20.1	20.1	20.1	19.9	19.9	19.9	19.9	1.8
Lymph #	x10 <sup>9</sup> /L	12.0	12.0	12.0	12.0	11.9	11.9	11.9	10.1	1.5
Mono #	x10 <sup>9</sup> /L	1.2	1.2	1.2	1.2	1.2	1.2	1.2	na	1.0
Gran #	x10 <sup>9</sup> /L	6.9	6.9	6.9	6.9	6.8	6.8	6.8	na	2.5
Lymph	%	59.9	59.9	59.9	59.9	59.9	59.9	59.9	50.9	5.0
Mono	%	5.9	5.9	5.9	5.9	5.9	5.9	5.9	na	4.0
Gran	%	34.2	34.2	34.2	34.2	34.2	34.2	34.2	na	5.0
RBC	x10 <sup>12</sup> /L	4.98	4.98	4.98	4.98	4.94	4.94	4.94	4.94	0.22
Hgb	g/dL	16.0	16.0	16.0	16.0	15.9	15.9	15.9	15.9	0.5
Hct	%	47.6	47.6	47.6	47.6	47.5	47.5	47.5	47.5	4.0
MCV	fL	95.5	95.5	95.5	95.5	96.2	96.2	96.2	96.2	7.0
MCH	pg	32.1	32.1	32.1	32.1	32.2	32.2	32.2	32.2	2.0
MCHC	g/dL	33.6	33.6	33.6	33.6	33.5	33.5	33.5	33.5	4.0
RDW	%	14.1	14.1	14.1	14.1	13.1	13.1	13.1	na	4.5
PLT	x10 <sup>9</sup> /L	481	481	481	481	480	480	480	480	60
MPV	fL	11.4	11.4	11.4	11.4	11.3	11.3	11.3	11.3	1.5

STKS\*, MAXM\* (CBC parameters only)



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4.5 mL

Tri-Level	32109-8K	2022/01/29
Low	32109-51	2022/01/29
Normal	32109-54	2022/03/01
High	32109-53	2022/02/04



Open Vial Stability: 14 days

LOW CONTROL		Abbott CELL-DYN Series				± Range
		1400	1600	1700	1800	
Lot 32109-51						
Parameters		Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	3.4	3.4	3.4	3.2	0.3
Lymph #	x10 <sup>9</sup> /L	1.3	1.3	1.4	1.3	0.5
Mid #	x10 <sup>9</sup> /L	na	0.3	0.3	0.3	0.3
Gran #	x10 <sup>9</sup> /L	2.1	1.9	1.8	1.7	0.8
Lymph %	%	39.2	39.2	41.7	39.4	5.0
Mid %	%	na	4.5	6.1	9.0	4.0
Gran %	%	60.8	56.3	52.2	51.6	5.0
RBC	x10 <sup>12</sup> /L	2.29	2.29	2.29	2.36	0.12
Hgb	g/dL	5.6	5.6	5.6	5.6	0.3
Hct	%	15.8	15.8	15.9	16.5	3.0
MCV	fL	69	69	69	70	7
MCH	pg	24.5	24.5	24.5	23.7	2.0
MCHC	g/dL	35.4	35.4	35.2	33.9	4.0
RDW	%	na	21.5	21.5	19.5	4.5
PLT	x10 <sup>9</sup> /L	81	81	81	77	15
NORMAL CONTROL		1400	1600	1700	1800	
Lot 32109-54						
Parameters		Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	8.5	8.5	8.5	8.1	0.6
Lymph #	x10 <sup>9</sup> /L	3.3	3.3	3.6	3.3	0.6
Mid #	x10 <sup>9</sup> /L	na	0.7	0.7	0.9	0.5
Gran #	x10 <sup>9</sup> /L	5.2	4.5	4.2	3.9	1.0
Lymph %	%	39.4	39.4	42.7	40.4	5.0
Mid %	%	na	8.1	8.2	10.9	4.0
Gran %	%	60.6	52.5	49.1	48.7	5.0
RBC	x10 <sup>12</sup> /L	4.25	4.25	4.25	4.25	0.18
Hgb	g/dL	11.6	11.6	11.6	11.7	0.4
Hct	%	34.4	34.4	34.4	34.9	3.5
MCV	fL	81	81	81	82	7
MCH	pg	27.3	27.3	27.3	27.5	2.0
MCHC	g/dL	33.7	33.7	33.7	33.5	4.0
RDW	%	na	19.8	19.8	17.6	4.5
PLT	x10 <sup>9</sup> /L	240	240	240	223	30
HIGH CONTROL		1400	1600	1700	1800	
Lot 32109-53						
Parameters		Mean	Mean	Mean	Mean	± Range
WBC	x10 <sup>9</sup> /L	20.6	20.6	20.6	19.9	1.8
Lymph #	x10 <sup>9</sup> /L	10.5	10.5	11.2	10.2	1.5
Mid #	x10 <sup>9</sup> /L	na	2.0	1.8	2.4	1.0
Gran #	x10 <sup>9</sup> /L	10.1	8.1	7.6	7.3	2.5
Lymph %	%	51.2	51.2	54.4	51.1	5.0
Mid %	%	na	9.6	8.7	12.3	4.0
Gran %	%	48.8	39.2	36.9	36.6	5.0
RBC	x10 <sup>12</sup> /L	5.04	5.04	5.04	5.02	0.22
Hgb	g/dL	16.4	16.4	16.4	16.4	0.5
Hct	%	48.4	48.4	48.3	48.7	4.0
MCV	fL	96	96	96	97	7
MCH	pg	32.5	32.5	32.5	32.7	2.0
MCHC	g/dL	33.9	33.9	34.0	33.7	4.0
RDW	%	na	15.9	15.9	16.5	4.5
PLT	x10 <sup>9</sup> /L	545	545	545	503	60

Note: Platelet/RBC - causing alarms, and WBC differential "R" flags should be disregarded for Abbott Series.

