



KAISER PERMANENTE®
COLORADO LABORATORY

MOL HEMATOLOGY STANDARDS REFERENCE SHEET

MCV = $\frac{\text{HCT}}{\text{RBC}} \times 100$

100-110 = 1+ Macro
111-120 = 2+ Macro
121-130 = 3+ Macro
>130 = 4+ Macro

>100 = OVALOCYTES if morphology present
<100 = ELLIPTOCYTES if morphology present
70-80 = 1+ Micro
65-70 = 2+ Micro
60-65 = 3+ Micro
<60 = 4+ Micro

MCH = $\frac{\text{HGB}}{\text{RBC}} \times 10$

<26.0 = HYPOCHROMIA

MCHC = $\frac{\text{HGB}}{\text{HCT}} \times 10$

>37.0 = CHECK FOR COLD AGGLUTININ / LIPEMIA or SPHEROCYTES

RDW = RED CELL DISTRIBUTION WIDTH (ANISOCYTOSIS)

16.0-18.9 = 1+ Aniso (**Do Not Report 1+**)
19.0-24.9 = 2+ Aniso
25.0-30.0 = 3+ Aniso
>30.0 = 4+ Aniso

Exceptions may occur when dimorphic RBC populations are noted

ROULEAUX: 4 or more RBC's aligned linearly (stack of coins) in thin layer of smear
Where RBC's barely touch each other.

RBC MORPHOLOGY:

Report as follows for: *Target cells / Elliptocytes / Ovalocytes / Burr cells / Stomatocytes*

3-5 per high power field = 1+ (**Do Not Report 1+**)
6-10 per high power field = 2+
11-20 per high power field = 3+
> 20 per high power field = 4+

Report as follows for: *Tear drops / Polychromasia / Basophilic Stippling*

3-5 per high power field = 1+
6-10 per high power field = 2+
11-20 per high power field = 3+
> 20 per high power field = 4+

Report as follows for: *Sickle cells / Acanthocytes / Schistocytes / Spherocytes*

0-2 per high power field = 1+
2-4 per high power field = 2+
4-6 per high power field = 3+
> 6 per high power field = 4+

Report the following as "PRESENT": *Howell Jolly Bodies*

WBC MORPHOLOGY:

Hypersegmented Neutrophils report as present if: *five segs with five lobes or one seg with six lobes*

WBC ESTIMATE: (Under 40X High Dry – where RBC's overlap slightly)

2-3	WBC's per field	approximates	4,000 – 7,000	total WBC count
4-6	WBC's per field	approximates	7,000 – 10,000	total WBC count
6-10	WBC's per field	approximates	10,000-13,000	total WBC count
10-20	WBC's per field	approximates	13,000-18,000	total WBC count

PLATELETS:

<30,000	-	Alert Value, repeat and do slide estimate, check for clots
>1,000,000	-	Alert Value, send to RRL for review
<70,000	-	Report a <i>platelet estimate</i> and send to RRL for review (Average of 10 fields multiplied by 20,000)

Note: Giant platelets should be as big as an RBC, and >5 in a 100 cell differential – to report

ALERTS: Refer to posted laboratory alert values

PATHOLOGY REVIEW CRITERIA: (unless previously reviewed for same parameter)

WBC	<2,000 or >30,000
HGB	<7 gm
HCT	< 21 %
Platelets	<70,000 or >1,000,000
Lymphocytes	> 50% transformed
Neutrophils	ANE <1.0 (for non ONC patients)
Monocytes	AMONO .>2.0
Eosinophils	AEOS > 4.0 and ≥ 10%
Basophils	ABASO > 0.3 and >3%
NRBC's	any present
Pelger Huet or Pseudo Pelger Huet cells	
A Provider Request	

RBC Morphology: Severe RBC morphology (4+)

WBC Morphology: See below

- Immature Granulocytes: > 3 metamyelocytes, any myelocytes or promyelocytes
- **Questionable or unidentified cells:** If there is any doubt about cell identification, the slide must be reviewed by a pathologist before the differential is released. If absolutely necessary, the suspect cells can be resulted as “unidentified cells” pending pathology review.
- **Blasts:** Any suspected blasts in a pediatric patient (<21 years of age) must be reviewed by a pathologist before the differential is released. If absolutely necessary, the suspect cells can be resulted as “unidentified cells” pending pathology review.