



DELAYED LEUKOCYTE COUNT.

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ABSTRACT

A simple method for preservation of white blood cells for delayed counting at leisure up to 100 or more days is described.

It's simplicity, reproducibility with certain degree of accuracy make it useful for field survey.

INTRODUCTION.

Shaper and Lewis noted that with only slight modification of the standard method leukocytes can be preserved for a long period of time so that the total leukocyte count could be performed at convenient away from the area of blood collection. We have been using this technic in the field work in which the total leukocyte counts were done weeks afterward.

METHOD.

The procedure for total white cell counts were done according to the standard method. (2) The diluting fluid is made of 4 % acetic and is colored pale violet with gentian violet. A 1 in 20 dilution of tested blood samples (obtained from 22

individuals) is made by adding 1 ml. of venous blood into 19 ml. of diluting fluid in a plastic container, mix well and tightly stoppered. Ten specimens were kept at room temperature of 25 - 28° C. and the rest were kept in refrigerator at 4° C. Total white blood cell count of these specimens were determined at regular intervals.

RESULTS.

The results obtained (see table) is summarized as follow :

1. While being kept at 4° C. the total white cell counts of the specimens decreased significantly up to 40 - 50 % of the initial counts within 30 days then remained constant up to 260 days.

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2. At room temperature the total white cell counts were fluctuating but closed to the initial counts up to the initial counts up to 100 days or longer. Significantly lowered count encountered only after 150 days of storage. This is in agreement with previous experience. (1)

COMMENTS.

The method used is obviously not for routine use in clinical laboratory but useful for workers engaged in the field study rather.

CONCLUSION.

The simple method for preservation of white blood cells for delayed counting at the convenient time is described. It is recommended for field study.

REFERENCES.

1. Shaper, A.G., and Lewis, P.: Preservation of leucocytes for delayed counts. *Lancet* 1: 105, 1969.
2. Cartwright, G.E.: *Diagnostic Laboratory Hematology*. Fourth Edition, Grune & Stratton, New York, 1968.

TOTAL LEUKOCYTE COUNTS AT VARYING PERIOD

Specimen No.	Day															
	1	10	20	30	50	100	150	200	230	260	290	320	340	360	380	400
1	12500	11500	10550	11600	11000	10500	11300	9250	10300	7350	10150	8900	9400	9250	8700	8600
2	7200	6750	7050	8800	7800	6500	7100	6450	6600	6700	5650	5850	5150	5600	5500	5350
3	6800	7500	7200	7900	7650	7050	5450	5200	5250	5250	6650	6000	4600	5000	4800	4900
4	10200	8600	9650	8950	8750	9600	9500	6900	6850	5350	6050	6000	5100	5300	4600	4850
5	9350	9550	9400	9900	9300	8900	9500	9300	9000	7500	7000	7250	7350	7100	6850	7000
6	8050	9250	8800	8450	8250	9200	8550	8450	7700	8100	8400	8000	8250	7700	7850	7400
7	4100	4300	4350	4200	4450	4600	3700	3350	3650	3550	3050	4250	3300	3450	3100	3300
8	13650	14500	13700	16100	15000	12500	12700	12550	14850	11250	12300	11500	13000	12000	12650	12200
9	11300	12900	12500	12950	11600	10950	11850	6350	7850	5000		2050	2200	1750	1600	1250
10	3050	3650	3450	3250	3100	3050	3350	3200	3250	2550	2800	2400	2900	2850	2500	2650
11	6250	5440	4150	5600	5500	3500	2850	3100	2700	2900						
12	13850	8600	7750	8500	8100	8850	8450	8500	8650	8400						
13	7200	6400	6200	5700	6000	6200	5850	5500	5650	5350						
14	3750	3400	3050	3200	3800	3150	3100	3350	3100	3400						
15	4500	3400	3900	3200	3400	3400	3350	3300	3150	2900						
16	10350	7700	6850	5750	6100	5300	5450	5150	5250	4850						
17	4450	3250	4850	3850	4600	4650	4250	4000	4150	4200						
18	9900	8400	5250	5850	3700	3850	3900	3550	3650	3400						
19	10150	9750	8400	8800	8050	7400	7900	7250	7300	6450						
20	2250	2300	3250	2700	2550	2600	2800	2450	2400	1900						
21	9750	7150	8750	7850	8100	7500	6500	6800	6400	5750						
22	10100	9800	9100	8250	9950	8100	6900	7850	7950	7250						

NOTE. - Specimens number 1 to 10 were kept in room temperature (25-28° C).
- Specimens number 11 to 22 were kept in a refrigerator (4° C).