

# NHANES 1999–2000 Public Release Dataset

Revised July 2004

## Lab 25 – Complete Blood Count with Five-Part Differential

### Description

#### Instrument

The Beckman Coulter MAXM instrument in the Mobile Examination Center (MEC) produces a complete blood count on blood specimens and provides a distribution of blood cells for all participants.

#### Eligible Sample

Participants were 1+ years of age.

#### Examination Protocol

Detailed specimen collection and processing instructions are discussed in NHANES Laboratory/Medical Technologists Procedures Manual (LPM). The analytical method used by MEC medical technologists is in the Analytic Methodology section.

### Analytic Methodology

#### CBC Parameters

The methods used to derive complete blood count (CBC) parameters are based on the Beckman Coulter method of counting and sizing, in combination with an automatic diluting and mixing device for sample processing, and a single-beam photometer for hemoglobinometry. The white blood count (WBC) differential uses VCS technology. See Chapter 7 of the NHANES Laboratory/Medical Technologists Procedures Manual for details.

#### Analytic Notes

Derived variables were created using the following calculation:

LBDLYMNO	=	LBXWBCSI * LBXLYPCT/100
LBDMONO	=	LBXWBCSI * LBXMOPCT/100
LBDNENO	=	LBXWBCSI * LBXNEPCT/100
LBDEONO	=	LBXWBCSI * LBXEOPCT/100
LBDBANO	=	LBXWBCSI * LBXBAPCT/100

The five counts (variable names) were:

Segmented neutrophils number	(LBDNENO)
Lymphocyte number	(LBDLYMNO)
Monocyte number	(LBDMONO)
Eosinophil number	(LBDEONO)
Basophil number	(LBDBANO)