

HASKELL LABORATORY

Common Name: Inorganic Lead

Chemical Name: ----

CAS Registry No.: ----

Chemical Structure: ----

Physical and Chemical Properties:

Form:	Solids
Molecular Weight:	----
Boiling Point:	----
Melting Point:	----
Density:	----
Vapor Pressure:	----
Conversion Factors:	----

Recommended AEL

50 ug/100 grams of blood

Blood lead concentrations represent the most effective way to monitor an individual for exposure to inorganic lead. The diagnosis of excessive lead exposure should be based on history of exposure, clinical symptoms and signs, evidence of increased lead absorption, and significant biochemical changes. Individuals may present increased blood leads without clinical effects. In the range of normal background (20-40 ug/100 grams) biochemical changes such as decreased delta aminolevulinic acid dehydrase (ALAD) can be measured, but this change is apparently without physiologic consequence. At blood levels from 40-60 ug/100 grams, other biochemical markers indicative of lead exposure, aminolevulinic acid in urine (ALA), and increased free erythrocyte protoporphyrin (FEP) are elevated, again without serious consequence. Blood levels exceeding 60 to 80 ug/100 grams indicate overexposure to lead, although frank signs of lead intoxication including anemia, kidney function changes, and other clinical signs are not apparent until the level reaches around 100 ug/100 grams. While no impairment of health is evident with blood lead levels as high as 60 ug/100 grams blood, lower blood lead levels are desirable and will provide an additional margin of safety. When the blood lead concentration exceeds the recommended limit of 50 ug/100 grams blood, action needs to be

taken to determine the source of exposure and to initiate appropriate preventative actions. Medical Division has prepared instructions for blood lead determinations. In these instructions an airborne lead concentration of 30 ug/m^3 (8-hour TWA) is considered an action level for initiation of blood lead determinations. Also to be considered is the 30 ug/100 grams blood lead ceiling concentration for women of childbearing potential (memo, B. W. Karrh, C. F. Reinhardt 3/23/81).

Richard C. Graham:mjh
August 25, 1983
1.18
INMJH3