DEVELOPMENT OF AN AIR QUALITY VALUE FOR LEAD FROM COMMUNITY STUDIES

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APPROACH

- DATA BASE
  - AZAR - PERSONAL MONITOR STUDY
  - SEVEN CITIES SURVEY OF 2,015 SUBJECTS
- BIOLOGICAL GUIDELINE FOR LEAD
  - ZIELHUIS
- AIR QUALITY VALUE FOR LEAD

  CALCULATE AIR LEAD CONSISTENT WITH BIOLOGICAL GUIDELINE

AIR QUALITY VALUE (AQV) FOR LEAD
AZAR PERSONAL MONITOR STUDY

AVERAGE	6.0 μg Pb/ m^3
RANGE	4.5 - 6.8 μg Pb/ m^3

AIR QUALITY VALUE (AQV) FOR LEAD
SEVEN CITIES SURVEY

SITE	AIR Pb	AVERAGE AQV ($\mu g\ Pb/m^3$)
OKEANA	0.3	6.8
ARDMORE	1.2	5.1
RITTENHOUSE	1.7	1.7
PASADENA	3.4	8.9
LOS ALAMOS MALE	0.2	5.9
LOS ALAMOS FEMALE	0.2	11.1
WASHINGTON, D.C.	1.2	5.3
PORT WASHINGTON	1.1	11.0
GREENWICH VILLAGE	2.1	10.1
LOMBARD	1.2	16.4
BRIDGEPORT	1.8	7.1
HOUSTON	0.8	19.9

AIR QUALITY VALUE (AQV) FOR LEAD

AZAR AND SEVEN CITIES STUDIES COMBINED

AVERAGE	7.7 µg Pb/ m^3
RANGE	6.0 - 8.9 µg Pb/ m^3

CONCLUSION

THE AZAR AND SEVEN CITY STUDIES INDICATE THAT AN AIR QUALITY VALUE OF 5 μg Pb/m^3 PROVIDES A COMFORTABLE MARGIN OF SAFETY FOR THE PROTECTION OF PUBLIC HEALTH.