The Significance of Lead in the Glazed Surface of Ceramic Ware from the Standpoint of The Public Health

Introduction:

Origin of the present investigation - Two cases of lead poisoning derived from the use of a specific set of ceramic ware.

The hygienic issue - (a) the contribution made by ceramic ware to the ingestion of lead by the entire population of a modern nation.

(b) the opportunities afforded by unusual practices and new technological developments in the production of ceramic ware, for the creation of hazards locally or generally

(c) the complexity of this problem, and its relative significance in a situation characterized by many other contributions.

The technological issue - the production of ceramic ware for use in the household in such manner as to meet the shifting utilitarian and aesthetic requirements of the population, in a free market which is competitive in local, national and international commerce

Historical account

The (abbreviated) history of ceramic ware
- Origin out of necessity and convenience
- Early developments
- The ceramic arts and crafts - decorative aspects - glazes
- The development of technology in the production of ceramic ware with particular reference to glazes

Hygienic problems in the production of ceramic ware.

Lead poisoning - in production - warning of existence of the problem
- epidemic (so to speak) lead poisoning from usage in household
- reported incidents, unreported incidents, alleged incidents, factors (in incidence of incidents.

Other metallic poisoning
Silicosis

The technologic and economic aspects of glazes

Justification for the use of lead in glazes
The alternatives - other metals

Their application to other materials used in the household
Glazed metal surfaces - cooking utensils
Enamels and glazes on other household utensils

The Limitation of the Contribution made by Ceramic Ware to the Lead in Food and Beverages Consumed by the Population

I. The Role of a Standard

(a) The establishment of a standard

(b) The general application of the standard to the entire production, so as to avoid failures and incidents of lead intoxication

II. The Basis for the Establishment of a Standard

(a) The lead content of the widely distributed food and beverages in the United States of America

(b) The daily intake of lead by representative persons in the American population

(c) The sources - individual contribution - total intake fate, limits of national safety

(d) The role in this situation of ceramic ware and public policy in that relationship

(e) The criteria on which a specification should be set.

Investigation of the Facts

Objectives

Plan of attack including method (all pertinent methods)

Results

Discussion including interpretations

Conclusions - including the formulation of an adequate standard.

Proposed Procedure for Implementation of Standard by the Ceramic Industry

I. Investigation of new formulations and processes within the industrial organization - from the aspect of the stability of glazes

II. Investigation of current production within the industrial organization

III. Reference of new and old materials to an approved testing laboratory for tests and certification, including the establishment of the validity and general acceptance of the certification of quality

IV. Extension of procedure to include all producers (large and small) of ceramic ware, not through the coercion of law or of ceramic table ware contract, but through the education of distributors to require certification for their own security from liability, and for the safety of the public