

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

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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 rate, 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.

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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 the safety of the public

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