

Fact bite #47



Ceramics

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Variations of ceramics have been used by humans for thousands of years.

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Ceramic ware used for food contact — such as plates, bowls, and mugs — is made from clay that is shaped, glazed, and then fired at high temperatures. Its dense, vitrified (i.e. non-crystalline) surface offers durability and heat resistance. This makes glazed ceramics a highly inert, chemically simple material that avoids many of the chemical migration concerns often present in non-inert, chemically complex materials such as paper and plastics.

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But ceramics made with metal-containing glazes can result in lead, cadmium, or other toxic heavy metal migrating into foods. Low pH, long contact times, vintage/antique dishware, and chipped/worn/damaged glazes increase the risk of heavy metal migration when they are present.

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Many world regions have regulations in place that require testing to avoid heavy metals from being present in food contact ceramics. At the European level, this is Directive 84/500/EC and regulates the permissible limits of lead and cadmium, as well as migration testing conditions.

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