

**RISK ASSAY OF PATHOLOGIES FROM METHYL-MERCURY AND
HEXACHLOROBENZENE IN ONE ZONE OF HIGH INDUSTRIAL DENSITY IN THE
SICILY**

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The industrial area of the triangle Augusta, Priolo, Melilli, in the South-East Sicily, at present hosts five refineries. A so high concentration of industry in a quite small area gives serious environmental pollution problems and can compromise the health of the local population. Releasing of polluters, due to a not rational disposal of the waste water and to the not blasting of the polluting emissions in the environmental matrices, which air, water and ground, expose the population to hazardous substances among that mercury and hexachlorobenzene; especially according to some studies, concentration of mercury and hexachlorobenzene several times higher than low limit was found on the Augusta bay. The compromising of the food chain comes from the proved accumulating of methyl-mercury in fish, widely consumed by local inhabitants. Epidemiological surveying demonstrate that the rate mortality standardized for congenital malformations in the male sex exceeds a lot the national value with one high statistic significance ($p < 0.01$). Beginning a study in order to characterize the single relationships between the each specific polluting and the found pathologies was necessary. So the total mercury and methyl-mercury in hair of the mothers of the born malformed children was determined comparing values coming from controls. For the exachlorobenzene effect maternal milk champions coming from the mothers of the last malformed born were analysed and confronting with the related controls. The outcomes will be an important start point to elaborate a fast and specifies methodical for the risk assay of poisoning.