EPA
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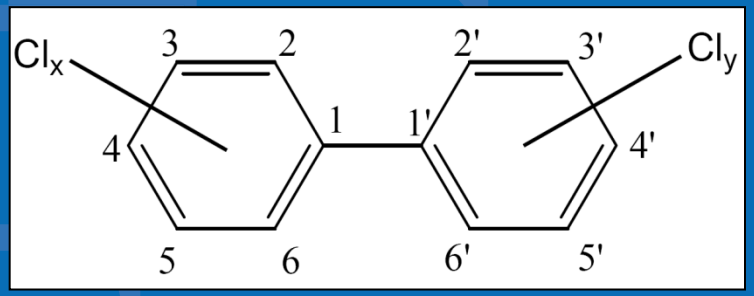
Agency

Scoping and Problem Formulation for the IRIS Toxicological Review of Polychlorinated Biphenyls (PCBs): Effects Other Than Cancer

Geniece M. Lehmann, PhD
Assessment Manager



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Key Science Topics

1. Impact of congener profile on the toxicity of PCB mixtures
2. Evaluation of epidemiological studies for PCB dose-response assessment
3. Potential for hazard identification and dose-response assessment for PCB exposure via inhalation
4. Suitability of available toxicokinetic models for reliable route-to-route, interspecies, and/or intraspecies extrapolation
5. Potential toxicokinetic models or methods to estimate the relationship between continuous daily maternal PCB intake and milk PCB concentrations in humans
6. Putative mechanisms of PCB toxicity
7. Factors influencing human susceptibility

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Science Topic 2: Human Studies

- Human data indicate that health effects may occur in response to PCB exposure.
- Human studies of PCBs commonly use current measures of body burden to characterize exposure, often relying on a limited number of measured congeners.

Science Topic 2: Human Studies

Limitations of commonly-used approaches to exposure characterization in epidemiological studies of PCBs:

1. Measures of current PCB body burden may not provide accurate information on exposure to less persistent congeners or during critical windows of development
2. Congener selection is often determined by factors unrelated to biological activity

Science Topic 2: Human Studies

- Human data indicate that health effects may occur in response to PCB exposure.
- Human studies of PCBs commonly use current measures of body burden to characterize exposure, often relying on a limited number of measured congeners.
- *Determine how human and/or animal studies may best be used to support hazard identification and/or dose-response assessment for PCBs, considering important study design and methodologic aspects, especially exposure assessment methods*