

# Modern Approaches, Safer Chemicals



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## Principles for a Modernized Chemicals Policy: Strong Regulations Start with Modern Science

Chemicals are regulated based on their potential for causing harmful effects; therefore, whether, how, and when toxicity testing is conducted is an essential cornerstone to any chemical safety legislation, and we need to ensure it is laid down correctly.

*Revision of the Toxic Substances Control Act must incorporate scientific approaches to information collection based on human-relevant testing methods developed with modern biological understanding, as outlined in the National Academy of Sciences report *Toxicity Testing in the 21st Century: A Vision and Strategy*.*

The recommendations below encompass core principles that would ensure an efficient toxicity testing process now, and lay the foundation for a more efficient, protective, and humane toxicity-testing paradigm in the near future.

### A More Strategic, Flexible Approach to Testing

- The law should be flexible to allow incorporation of new approaches as they develop. References to animal test-based data requirements or lists of tests should be avoided.
- Prioritization and testing of chemicals should be based on exposure and/or biological effect; current high-throughput non-animal tests should be used to target testing to the most toxic chemicals.
- Testing of chemicals or categories of chemicals should be tailored to specific chemical properties by applying a flexible, stepwise testing strategy that uses a “weight-of-evidence” of the available information. A minimum data set for all chemicals should be avoided.

### Minimization of Animal-Based Testing

- Require the use of available non-animal methods in place of animal methods and new ones as they are developed.
- Request EPA update Congress on its progress in implementing alternative methods through regular review and reporting.
- Avoid further animal testing if adequate animal data are already available for an endpoint.
- Provide for publication of all available information on chemicals considered for regulation, and plans for testing, before any new testing takes place.
- Require coordination between EPA and the regulatory agencies of other regions, especially with regard to REACH and other comprehensive testing programs.

### Promoting Development and Incorporation of Evolving Science

Explicit language within the law should provide for funding for alternative methods development and translation as part of a larger mandate to implement the vision for “21st century toxicology” put forward by the NAS—a yearly \$15 million commitment would complement spending from other sources. Importantly, this is only about 5% of the money the US currently spends on investigating the health risks of chemicals each year.