

Product Safety at Clorox

The human and environmental safety of Clorox products is a top priority. We have a product safety team made up of experts in chemistry, microbiology, toxicology, as well as public and environmental health and safety overseeing the review process of ingredients and formulas for new and existing products.

STEP 1

Clorox Research & Development conducts ongoing discovery and review of new and existing ingredients and formulas. Sources include:

A CLOROX RESEARCH + DEVELOPMENT REVIEWS

- Scientific literature
- National and international regulatory legislation developments and actions
- Trade associations
- Reports from NGOs, community interest groups
- Clorox R&D (New product formulas)

B INITIAL INFORMATION COLLECTED ON INGREDIENTS / FORMULAS:

Ingredient names
pH, color, odor, physical state, viscosity, flash point, other chemical characteristics

FOR FORMULAS, CONSIDERATIONS ARE:

Purpose in formulation of every ingredient, % active in final formula, % weight in final formula, product form (spray, powder, wipe, etc.) and usage intent / sites

STEP 2

Assessments initiated, data collection begins for two paths: Environmental and Human Safety.

A ENVIRONMENTAL ASSESSMENT INITIATED

- World-wide literature search
- Review of any existing data (internal, EPA, other governmental or NGO, manufacturer)

GLOBAL REVIEW

Observe regulatory requirements of different countries

HUMAN HEALTH ASSESSMENT INITIATED

- World-wide literature search
- Review of any existing data (internal, EPA, other governmental or NGO, manufacturer)

B ENVIRONMENTAL SCIENTISTS REVIEW OF EACH INGREDIENT + PRODUCT CATEGORY TO DETERMINE ECO IMPACT

Potential hazards identification + assessment

If concerns are identified, recommendation is to not formulate with this ingredient

C ASSESSMENT

PROCEED upon clearance of ingredient/formula

TOXICOLOGISTS / PUBLIC HEALTH EXPERTS REVIEW AVAILABLE DATA FOR ACUTE AND CHRONIC HEALTH CONCERNS

Potential hazards identification + assessment

If concerns are identified, recommendation is to not formulate with this ingredient

ASSESSMENT

PROCEED upon clearance of ingredient/formula

STEP 3

If data indicates it is OK to proceed with considering an ingredient or formula, the next steps are comprehensive exposure and risk assessments.

A ENVIRONMENTAL EXPOSURE ASSESSMENT

- Potential pathways of exposure are identified, e.g. runoff, down the drain, indoor / outdoor use and concentration of ingredient(s) determined for each pathway
- Eco impact is estimated, including consideration of amount per use, duration of use, frequency of use, amount of each ingredient in finished product, indoor use vs. outdoor use

B DATA GENERATION + RISK ASSESSMENT

Ingredient/formula is determined to be acceptable and appropriate for use as a consumer product given environmental considerations

Risks for the environment are too high, and risks cannot be sufficiently mitigated

C ASSESSMENT

OK FOR FORMULATION

DO NOT FORMULATE

HUMAN HEALTH EXPOSURE ASSESSMENT

- Potential pathways of exposure are identified, e.g. dermal, inhalation, etc.
 - Exposure is estimated using exposure models, including consideration of amount per use, duration of use, frequency of use, amount of each chemical in finished product, etc.
 - Intended use of the finished product is considered including compatibility or interaction with other products
 - Review restrictions and scientific background of ingredient / formula in U.S., European Union, other countries, etc.
- Restrictions may result in a recommendation not to formulate.

B DATA GENERATION + RISK ASSESSMENT

Ingredient/formula is determined to be acceptable and appropriate for use as a consumer product

Risks for the human health are too high, and risks cannot be sufficiently mitigated

ASSESSMENT

OK FOR FORMULATION

DO NOT FORMULATE