

EPA Exposure and Fate Search Strategies

*Desktop Version (1.43)*

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# Search Strategies

EPA’s National Center for Environmental Assessment (NCEA) regularly creates chemical-centric evidence maps as part of its literature assessment process. To achieve this, relevant literature must be identified, evaluated, and binned into appropriate categories. Accordingly, EPA and Sciome have develop optimized search strategies that can be used within the SWIFT-Review software application to streamline this process by efficiently retrieving and categorizing relevant literature into pre-defined categories of interest to EPA. All search strings were first evaluated and optimized with respect to an EPA-provided, human-curated, gold-standard dataset. Optimizations were performed using keyword enrichment tools and quantitative analysis to improve the search strings, placing an emphasis on achieving high recall.

This document lists contains the detailed search strings used in SWIFT-Review to automatically tag documents in various categories of interest to environmental health researchers. **To quickly move to a specific search strategy**, click on the search topic below to move to the relevant section of the document. All search strategies were developed jointly by EPA and Sciome. For more information, please contact Amina Wilkins [Wilkins.Amina@epa.gov](mailto:Wilkins.Amina@epa.gov).

**EPA Exposure and Fate**

[Sources Production and Uses](#_Sources_Production_and)

[Environmental Media](#_Environmental_Media)

[Environmental Concentrations](#_Environmental_Concentrations)

[Human Exposure Measures](#_Human_Exposure_Measures)

[Environmental Fate and Transport](#_Environmental_Fate_and)

[Physical Chemical Properties](#_Physical_Chemical_Properties)

[Populations](#_Populations)

[Engineering](#_Engineering)

[Consumer](#_Consumer)

[Consumer (TSCA)](#_Consumer_(TSCA))

# EPA Exposure and Fate

## Sources Production and Uses

((tiab: ("facilities" OR "facility" OR "factories" OR "factory" OR "incinerator" OR "industrial" OR "industries" OR "industry" OR "manufacture" OR "manufactured" OR "manufacturing" OR "point source" OR "point sources" OR "treatment plant" OR "treatment plants" OR "houses" OR "foundries" OR "smelter")) OR ((tiab: ("consumer" OR "petrochemical" OR "industrial" OR "indoor" OR "urban" OR "agricultural" OR "public" OR "residential" OR "estuarine" OR "rural" OR "domestic" OR "industrialized" OR "suburban" OR "private" OR "chemicals" OR "commercially available" OR "commercially" OR "anthropogenic" OR "military" OR "pharmaceuticals")) AND ((tiab: ("plant" OR "plants" OR "product" OR "products" OR "production")) OR (tiab: ("pollutant" OR "pollution" OR "health risk" OR "contamination" OR "contaminants" OR "emission" OR "emissions" OR "pollutants" OR "risks" OR "impacts" OR "hazards" OR "micropollutants" OR "ecotoxicity" OR "toxicity" OR "residues" OR "contaminant" OR "exposures" OR "toxics" OR "exposure")))) OR ((tiab: ("release" OR "releases" OR "releasing" OR "production" OR "effluent" OR "effluents" OR "emissions" OR "emission" OR "leach" OR "leaching" OR "dissipation" OR "migrate" OR "migration" OR "transport" OR "sorption")) AND (tiab: ("kg" OR "tons" OR "pounds" OR "g" OR "ng" OR "ppm" OR "m3" OR "tonnes" OR "microg" OR "micrograms" OR "microgm" OR "µg"))) OR (tiab: ("dumping ground" OR "dumping grounds" OR "garbage dump" OR "garbage dumps" OR "landfill" OR "landfills" OR "compost" OR "waste")) OR (tiab: ("wastewater treatment" OR "water treatment" OR "sludge" OR "treatment plants" OR "sewage treatment" OR "activated sludge" OR "sewage sludge" OR "biosolid" OR "biosolids" OR "bio solid" OR "bio solids" OR "effluents" OR "effluent" OR "potw" OR "potws" OR "sewage" OR "sewages" OR "sewer" OR "sewers" OR "wastewater" OR "waste waters" OR "gray water" OR "gray waters" OR "graywater" OR "graywaters" OR "grey water" OR "grey waters" OR "greywater" OR "greywaters" OR "sullage" OR "sullages" OR "wrrf" OR "wrrf" OR "wwtp" OR "wwtps" OR "leachate" OR "leachates")) OR (tiab: ("incineration" OR "incinerate" OR "incinerates" OR "incinerated" OR "incinerator" OR "incinerators" OR "combust" OR "combusts" OR "combusted" OR "combustion")) OR ((tiab: ("pollutant" OR "pollutants" OR "pollution" OR "contaminants" OR "contamination" OR "plasticizers" OR "retardants" OR "VOCs" OR "mtbe" OR "pfoa" OR "chlordecone" OR "tetrachloroethylene" OR "pah" OR "dinp" OR "arsenic" OR "ethylbenzene" OR "benzene" OR "deha" OR "tnt" OR "cadmium" OR "vanadium" OR "nickel" OR "chromium" OR "bromine" OR "mercury" OR "tin" OR "arsenic")) OR (((tiab: ("chemical" OR "chemicals" OR "compound" OR "compounds" OR "substances")) OR (tiab: ("plasticizer" OR "plasticizers" OR "plasticiser" OR "plasticisers" OR "retardant" OR "retardants" OR "phthalate" OR "phthalates" OR "VOC" OR "VOCs")) OR (tiab: ("mtbe" OR "voc" OR "pfoa" OR "pcb" OR "mitc" OR "pcbs" OR "chlordecone" OR "hbcd" OR "tetrachloroethylene" OR "trichloroethylene" OR "pah" OR "pahs" OR "dinp" OR "thenylchlor" OR "bromacil" OR "arsenic" OR "trichlorophenol" OR "-trichlorophenol" OR "ethylbenzene" OR "benzene" OR "deha" OR "tnt" OR "toluene" OR "dioxane" OR "ddt" OR "hch" OR "chlorine" OR "se" OR "selenium")) OR (tiab: ("lead" OR "copper" OR "iron" OR "tungsten" OR "cadmium" OR "boron" OR "antimony" OR "vanadium" OR "nickel" OR "zinc" OR "chromium" OR "bromine" OR "methyltin" OR "mercury" OR "iodine" OR "tin" OR "sb" OR "cr" OR "zn" OR "ni" OR "cd" OR "mn" OR "fe" OR "arsenic" OR "br"))) AND ((tiab: ("pollutant" OR "pollution" OR "contamination" OR "contaminants" OR "emissions" OR "pollutants" OR "risks" OR "impacts" OR "hazards" OR "micropollutants" OR "ecotoxicity" OR "exposures" OR "toxics" OR "exposure")) OR (tiab: ("source" OR "sources" OR "occurrence" OR "occurrences" OR "bioconcentration" OR "bioconcentrations")) OR (tiab: ("sediments" OR "soil" OR "soils" OR "air" OR "waters" OR "seawater" OR "groundwater" OR "wastewater")))) OR (tiab: ("geochemical" OR "meteorological" OR "hydrogeological" OR "environmental"))) OR (tiab: ("biomonitoring" OR "monitoring" OR "assessment" OR "sampling" OR "biological monitoring" OR "monitoring data" OR "air monitoring" OR "human exposure" OR "occupational exposure" OR "exposures" OR "exposure assessment" OR "environmental" OR "guidelines" OR "benchmarks")) OR (tiab: ("source" OR "sources" OR "occurrence" OR "occurrences")) OR (tiab: ("disposal" OR "pollution prevention" OR "recycling" OR "remediation" OR "manufacturing" OR "biodesulfurization" OR "desulfurization" OR "cleaning")) OR (tiab: ("fate" OR "persistent" OR "persistence" OR "leaching" OR "leachate" OR "leachates" OR "emissions")))

## Environmental Media

((tiab: ("air" OR "airborne" OR "atmosphere" OR "atmospheric" OR "particulate" OR "particulates" OR "particulate matter" OR "pm10" OR "pm2.5")) OR ((tiab: ("bottled water" OR "community water" OR "filtered water" OR "freshwater" OR "fresh water" OR "groundwater" OR "ground water" OR "melt water" OR "natural water" OR "overland flow" OR "potable water" OR "rainwater" OR "reclaimed water" OR "river water" OR "storm water" OR "surface runoff" OR "surface water" OR "tap water" OR "water supply" OR "water supplies" OR "well water" OR "river" OR "rivers" OR "seawater" OR "lake" OR "streams" OR "aquifer" OR "surface water" OR "surface waters" OR "snow" OR "lakes" OR "stream" OR "tap")) OR ((tiab: ("water" OR "waters")) AND (tiab: ("contaminant" OR "contaminants" OR "contaminated" OR "contamination" OR "contaminations" OR "district" OR "districts" OR "drinking" OR "pollutant" OR "pollutants" OR "pollution" OR "quality" OR "source" OR "sources" OR "pesticide" OR "pesticides" OR "concentrations" OR "chemicals" OR "substances" OR "origin" OR "residue" OR "soil" OR "organic compounds" OR "residues" OR "exposure" OR "compounds")))) OR (tiab: ("sewage" OR "sewer" OR "sludge" OR "biosolids" OR "effluent" OR "effluents" OR "wastewater" OR "wastewaters" OR "waste water" OR "wwtp" OR "wwtps")) OR (tiab: ("dust" OR "dusts" OR "house" OR "indoor" OR "wood")) OR (tiab: ("soil" OR "soils" OR "clayey" OR "humus" OR "loam" OR "loamy" OR "sandy" OR "rock" OR "rocks" OR "bedrock" OR "alluvial" OR "surficial")) OR (tiab: ("sediment" OR "sediments" OR "sedimentation" OR "silt")) OR (tiab: ("aquatic biota" OR "aquatic organisms" OR "avian" OR "bird" OR "birds" OR "fish" OR "fishes" OR "wildlife" OR "aquatic" OR "lake" OR "biota" OR "ecosystems" OR "invertebrates" OR "terrestrial" OR "benthos" OR "algae" OR "reptiles" OR "cetaceans" OR "benthic" OR "phytoplankton" OR "bivalves" OR "other species")) OR (tiab: ("incineration" OR "incinerator" OR "incinerator" OR "landfill" OR "landfills" OR "leaching" OR "leachate" OR "furnace" OR "combustion" OR "compost" OR "refinery" OR "tire" OR "exhaust" OR "slag" OR "gasoline" OR "fires" OR "fuel")) OR (tiab: ("food" OR "foods" OR "beef" OR "bread" OR "cereal" OR "cereals" OR "chicken" OR "dairy" OR "dietary" OR "eggs" OR "fats" OR "flour" OR "fruits" OR "infant formula" OR "market basket" OR "meat" OR "meats" OR "milk" OR "pasta" OR "poultry" OR "rice" OR "vegetables" OR "cheese" OR "molasses" OR "strawberry" OR "olive oil" OR "potatoes" OR "tomatoes")) OR (tiab: ("seafood" OR "fish" OR "fishes" OR "shellfish" OR "cetaceans" OR "clams" OR "bivalves" OR "tuna" OR "mussels" OR "shrimp" OR "seaweed" OR "algae" OR "tunicates" OR "ospreys" OR "oyster")) OR ((tiab: ("agriculture" OR "agricultural" OR "farming" OR "fertilizer" OR "irrigation")) OR ((tiab: ("crops" OR "crop" OR "grains" OR "dairy" OR "poultry" OR "chicken" OR "cheese" OR "corn" OR "rice" OR "meat" OR "flour" OR "cereal" OR "potatoes" OR "beef" OR "molasses" OR "vanilla" OR "maize" OR "potato" OR "tomatoes" OR "bean" OR "apple" OR "food" OR "coffee" OR "honey" OR "cotton" OR "apples" OR "vegetable" OR "tomato" OR "milk" OR "butter" OR "compost" OR "pineapple")) AND (tiab: ("contaminant" OR "contaminants" OR "contaminated" OR "contamination" OR "contaminations" OR "district" OR "districts" OR "drinking" OR "pollutant" OR "pollutants" OR "pollution" OR "quality" OR "source" OR "sources" OR "pesticide" OR "pesticides" OR "concentrations" OR "chemicals" OR "residue" OR "soil" OR "organic compounds" OR "residues" OR "spectrometry" OR "samples")))) OR (tiab: ("fate" OR "transport" OR "persistence" OR "leaching" OR "leachate" OR "bioaccumulation" OR "volatilization" OR "desorption" OR "bioconcentration" OR "biomagnification")) OR (tiab: ("organic compounds" OR "organic chemical" OR "organic chemicals" OR "volatile organic" OR "chlorinated" OR "perfluorinated" OR "monoaromatic" OR "nonmethane" OR "halocarbon")) OR (tiab: ("pollutant" OR "pollutants" OR "pollution" OR "contamination" OR "contaminant" OR "contaminants" OR "emissions" OR "micropollutants" OR "residues" OR "pesticide" OR "discharges" OR "organic pollutants" OR "exposure levels" OR "exposures" OR "exposure assessment" OR "human exposure" OR "occupational exposure" OR "acrylamide exposure" OR "exposure data" OR "health risk" OR "organ toxicity")))

## Environmental Concentrations

((tiab: ("mg/m3" OR "ppm" OR "ug/m3" OR "µg/m3" OR "concentration levels" OR "exposure levels" OR "residue levels" OR "trace levels" OR "bioaccumulation" OR "bioconcentration" OR "concentrations" OR "loads" OR "burdens" OR "km values" OR "exposures" OR "higher concentrations" OR "highest concentrations" OR "high concentrations" OR "contaminant concentrations" OR "average concentrations" OR "lower concentrations" OR "low concentrations" OR "outdoor concentrations" OR "occupational exposure")) OR ((tiab: ("mg/m3" OR "ppm" OR "ug/m3" OR "µg/m3" OR "concentration levels" OR "exposure levels" OR "residue levels" OR "trace levels" OR "bioaccumulation" OR "bioconcentration" OR "concentrations" OR "loads" OR "burdens" OR "km values" OR "exposures" OR "higher concentrations" OR "highest concentrations" OR "high concentrations" OR "contaminant concentrations" OR "average concentrations" OR "lower concentrations" OR "low concentrations" OR "outdoor concentrations" OR "occupational exposure")) AND ((tiab: ("air" OR "airborne" OR "airflow" OR "atmosphere" OR "atmospheric" OR "pm10" OR "pm(10)" OR "pm2.5" OR "pm(2.5)" OR "particulate" OR "particulates")) OR ((tiab: ("bottled water" OR "bottled waters" OR "community water" OR "community waters" OR "direct water" OR "direct waters" OR "doubly labeled water" OR "doubly labeled waters" OR "doubly labelled water" OR "doubly labelled waters" OR "estuarine water" OR "estuarine waters" OR "filtered water" OR "filtered waters" OR "freshwater" OR "freshwaters" OR "fresh water" OR "fresh waters" OR "groundwater" OR "groundwaters" OR "ground water" OR "ground waters" OR "indirect water" OR "indirect waters" OR "irrigation water" OR "irrigation waters" OR "meltwater" OR "meltwaters" OR "melt water" OR "melt waters" OR "natural water" OR "natural waters" OR "overland flow" OR "overland flows" OR "potable water" OR "potable waters" OR "rainwater" OR "rainwaters" OR "rain water" OR "rain waters" OR "reclaimed water" OR "reclaimed waters" OR "recreational water" OR "recreational waters" OR "riverine water" OR "riverine waters" OR "riverwater" OR "riverwaters" OR "river water" OR "river waters" OR "springwater" OR "springwaters" OR "spring water" OR "spring waters" OR "stormwater" OR "stormwaters" OR "storm water" OR "storm waters" OR "surface runoff" OR "surface runoffs" OR "surface water" OR "surface waters" OR "tapwater" OR "tapwaters" OR "tap water" OR "tap waters" OR "total water" OR "total waters" OR "water supply" OR "water supplies" OR "waterwork" OR "waterworks" OR "water work" OR "water works" OR "wellwater" OR "wellwaters" OR "well water" OR "well waters")) OR ((tiab: ("water" OR "waters")) AND (tiab: ("drinkable" OR "drinking" OR "medias" OR "pollution" OR "sources" OR "contaminants" OR "contamination" OR "source" OR "contaminant" OR "pollutants" OR "pollutant" OR "district" OR "contaminations" OR "districts" OR "sourced")))) OR (tiab: ("biosolid" OR "biosolids" OR "bio solid" OR "bio solids" OR "effluent" OR "effluents" OR "potw" OR "potws" OR "sewage" OR "sewages" OR "sewer" OR "sewers" OR "sludge" OR "sludge" OR "wastewater" OR "waste waters" OR "gray water" OR "gray waters" OR "graywater" OR "graywaters" OR "grey water" OR "grey waters" OR "greywater" OR "greywaters" OR "sullage" OR "sullages" OR "wrrf" OR "wrrf" OR "wwtp" OR "wwtps" OR "leachate" OR "leachates")) OR (tiab: ("dust" OR "dusts" OR "dustbin" OR "dustbins" OR "dusty" OR "dusting" OR "housedust" OR "housedusts")) OR (tiab: ("clay" OR "clayey" OR "clays" OR "humate" OR "humates" OR "humic" OR "humus" OR "loam" OR "loams" OR "loamy" OR "sand" OR "sands" OR "sandy" OR "soil" OR "soils" OR "sanding" OR "sandblasting" OR "sandstone")) OR (tiab: ("dumping ground" OR "dumping grounds" OR "garbage dump" OR "garbage dumps" OR "incineration" OR "incinerator" OR "incinerators" OR "landfill" OR "landfills" OR "leaching" OR "leachate" OR "leachates")) OR (tiab: ("silt" OR "silts" OR "sediment" OR "sediments" OR "peat" OR "aquifer" OR "shales")) OR (tiab: ("baby formula" OR "baby formulas" OR "beef" OR "bread" OR "breads" OR "breastmilk" OR "cereal" OR "cereals" OR "chicken" OR "colostrum" OR "dairy" OR "diet" OR "dietary" OR "eggs" OR "fats" OR "flour" OR "flours" OR "food" OR "foods" OR "foodstuff" OR "foodstuffs" OR "foremilk" OR "fruit" OR "fruits" OR "grains" OR "hindmilk" OR "infant formula" OR "infant formulas" OR "lamb" OR "market basket" OR "market baskets" OR "meat" OR "meats" OR "milk" OR "pasta" OR "pastas" OR "pork" OR "poultry" OR "rice" OR "serving size" OR "serving sizes" OR "vegetable" OR "vegetables")) OR (tiab: ("finfish" OR "fish" OR "fishes" OR "seafood" OR "seafoods" OR "shellfish" OR "sportsfishing" OR "sportsfish" OR "sportsfisher" OR "sportsfishers")) OR (tiab: ("blush" OR "blushes" OR "brow pencil" OR "brow pencil" OR "cheek color" OR "cheek colors" OR "cheek colour" OR "cheek colours" OR "concealer" OR "concealers" OR "cosmeceutic" OR "cosmeceutics" OR "cosmetic" OR "cosmetics" OR "eyebrow pencil" OR "eyebrow pencils" OR "eye color" OR "eye colors" OR "eye colour" OR "eye colours" OR "eyeliner" OR "eyeliners" OR "eye liner" OR "eye liners" OR "eyeshadow" OR "eyeshadows" OR "eye shadow" OR "eye shadows" OR "face powder" OR "face powders" OR "facial powder" OR "facial powders" OR "foundation" OR "foundations" OR "lipcolor" OR "lipcolors" OR "lipcolour" OR "lipcolours" OR "lip color" OR "lip colors" OR "lip colour" OR "lip colours" OR "lipstick" OR "lipsticks" OR "makeup" OR "make up" OR "mascara" OR "mascaras")) OR (tiab: ("aftershave" OR "aftershaves" OR "after shave" OR "after shaves" OR "antiperspirant" OR "antiperspirants" OR "anti perspirant" OR "anti perspirants" OR "bath capsule" OR "bath capsules" OR "bath oil" OR "bath oils" OR "bath product" OR "bath products" OR "bath salt" OR "bath salts" OR "bath tablet" OR "bath tablets" OR "bathing" OR "body cream" OR "body creams" OR "body spray" OR "body spray" OR "bodywash" OR "bodywashes" OR "body wash" OR "body washes" OR "breath freshener" OR "breath fresheners" OR "care product" OR "care products" OR "cleanser" OR "cleansers" OR "cuticle cream" OR "cuticle creams" OR "cuticle oil" OR "cuticle oils" OR "dental floss" OR "dental flosses" OR "deodorant" OR "deodorants" OR "face cream" OR "face creams" OR "face serum" OR "face serums" OR "facial cream" OR "facial creams" OR "facial serum" OR "facial serums" OR "fingernail polish" OR "fingernail polishes" OR "foot cream" OR "foot creams" OR "foot powder" OR "foot powders" OR "foot spray" OR "foot sprays" OR "gel wash" OR "gel washes" OR "hand cream" OR "hand creams" OR "hand sanitizer" OR "hand sanitizers" OR "lotion" OR "lotions" OR "manicure" OR "manicures" OR "moisturizer" OR "moisturizers" OR "moisturizing" OR "mouthwash" OR "mouthwashes" OR "mouth wash" OR "mouth washes" OR "nail adhesive" OR "nail adhesives" OR "nail enamel" OR "nail enamels" OR "nail polish" OR "nail polishes" OR "pedicure" OR "pedicures" OR "personal care" OR "personal hygiene" OR "polish remover" OR "polish removers" OR "shave cream" OR "shave creams" OR "shaving cream" OR "shaving creams" OR "shower gel" OR "shower gels" OR "showering" OR "skincare" OR "skin care" OR "soap" OR "soaps" OR "sunblock" OR "sunblocks" OR "sun block" OR "sun block" OR "sunless tanner" OR "sunless tanners" OR "sunscreen" OR "sunscreens" OR "sun screen" OR "sun screens" OR "toenail polish" OR "toenail polishes" OR "toiletry" OR "toiletries" OR "toothpaste" OR "toothpastes")) OR (tiab: ("hair bleach" OR "hair bleaches" OR "haircare" OR "hair care" OR "haircolor" OR "haircolors" OR "haircolour" OR "haircolours" OR "hair color" OR "hair colors" OR "hair colour" OR "hair colours" OR "hair conditioner" OR "hair conditioners" OR "hair dye" OR "hair dyes" OR "hair product" OR "hair products" OR "hair relaxer" OR "hair relaxers" OR "hair rinse" OR "hair rinses" OR "hairspray" OR "hairsprays" OR "hair spray" OR "hair sprays" OR "hair straightener" OR "hair straighteners" OR "hair tint" OR "hair tints" OR "hair tonic" OR "hair tonics" OR "permanent wave" OR "permanent waves" OR "shampoo" OR "shampoos" OR "shampooing")) OR (tiab: ("cologne" OR "colognes" OR "eau de toilette" OR "eau de toilettes" OR "fragrance" OR "fragrances" OR "perfume" OR "perfumes")) OR (tiab: ("chamber experiment" OR "chamber experiments" OR "chamber stud" OR "chamber studs" OR "chamber test" OR "chamber tests")) OR (tiab: ("air freshener" OR "air fresheners" OR "bleach" OR "bleaches" OR "cleaner" OR "cleaners" OR "cleaning" OR "deodorizer" OR "deodorizers" OR "detergent" OR "detergents" OR "dishsoap" OR "dishsoaps" OR "dishwash" OR "dishwashes" OR "dish wash" OR "dish washes" OR "disinfectant" OR "disinfectants" OR "soap" OR "soaps" OR "spot remover" OR "spot removers" OR "stain remover" OR "stain removers")) OR (tiab: ("bakeware" OR "bakewares" OR "bake ware" OR "bake wares" OR "cookware" OR "cookwares" OR "cook ware" OR "cook wares" OR "pan" OR "pans" OR "pot" OR "pots" OR "utensil" OR "utensils")) OR (tiab: ("nonstick" OR "non stick" OR "nonsticking" OR "non sticking")) OR (tiab: ("beanbag" OR "beanbags" OR "bean bag" OR "bean bags" OR "bedding" OR "beddings" OR "blanket" OR "blankets" OR "furnishing" OR "furnishings" OR "furniture" OR "rug" OR "rugs" OR "upholstery")) OR (tiab: ("apparel" OR "bra" OR "bras" OR "cloth" OR "clothes" OR "clothing" OR "colorfast" OR "color fast" OR "diaper" OR "diapers" OR "dresses" OR "fabric" OR "fabrics" OR "footwear" OR "garment" OR "garments" OR "jeans" OR "polyester" OR "polyesters" OR "ribbon" OR "ribbons" OR "shirt" OR "shirts" OR "shoe" OR "shoes" OR "socks" OR "textile" OR "textiles" OR "trouser" OR "trousers")) OR (tiab: ("liquid repellant" OR "liquid repellants" OR "liquid repellency" OR "liquid resistance" OR "liquid resistant" OR "outdoor cloth" OR "outdoor clothes" OR "waterproof" OR "waterproofing" OR "water proof" OR "water proofing" OR "water repellant" OR "water repellants" OR "water repellency" OR "water resistant" OR "water resistance")) OR (tiab: ("stain proof" OR "stain repellant" OR "stain repellency" OR "stain resistant")) OR (tiab: ("food pack" OR "food packs" OR "food wrap" OR "food wraps" OR "microwave container" OR "microwave containers" OR "microwave popcorn bag" OR "microwave popcorn bags" OR "pizza box" OR "pizza boxes" OR "plastic bag" OR "plastic bags" OR "plastic container" OR "plastic containers" OR "plastic wrap" OR "plastic wraps" OR "sandwich wrap" OR "sandwich wraps" OR "takeout container" OR "takeout containers")) OR (tiab: ("apartment" OR "apartments" OR "appliance" OR "appliances" OR "architectural" OR "architecture" OR "architectures" OR "building" OR "buildings" OR "carpet" OR "carpeting" OR "carpets" OR "cement" OR "cements" OR "concrete" OR "condominium" OR "condominiums" OR "condominia" OR "drywall" OR "drywalls" OR "ductwork" OR "ductworks" OR "duct work" OR "duct works" OR "floor" OR "flooring" OR "floors" OR "home" OR "homes" OR "house" OR "houses" OR "insulation" OR "insulations" OR "molding" OR "moldings" OR "paint" OR "paintchip" OR "paintchips" OR "paints" OR "plaster" OR "plasters" OR "residential" OR "roof" OR "roofs" OR "room volume" OR "room volumes" OR "townhouse" OR "townhouses")) OR (tiab: ("antifreeze" OR "anti freeze" OR "automobile" OR "automobiles" OR "automotive" OR "automotives" OR "car" OR "cars" OR "carseat" OR "carseats" OR "coolant" OR "coolants" OR "motor" OR "motors" OR "tire" OR "tires" OR "vehicle" OR "vehicles" OR "vehicular")) OR (tiab: ("acaricide" OR "acaricides" OR "adhesive" OR "adhesives" OR "antiseptic" OR "antiseptics" OR "anti septic" OR "anti septics" OR "batteries" OR "battery" OR "blowing agent" OR "blowing agents" OR "bonding agent" OR "bonding agents" OR "camping tent" OR "camping tents" OR "camp tent" OR "camp tents" OR "cigar" OR "cigars" OR "circuit board" OR "circuit boards" OR "circuitry" OR "colorant" OR "colorants" OR "computer" OR "computers" OR "consumer product" OR "consumer products" OR "degreaser" OR "degreasers" OR "degreasing" OR "diesel" OR "doll" OR "dolls" OR "drycleaning" OR "dry cleaning" OR "drycleaner" OR "drycleaners" OR "dry cleaner" OR "dry cleaners" OR "dye" OR "dyes" OR "electronic" OR "electronics" OR "embalming" OR "fertilizer" OR "fertilizers" OR "fiberglass" OR "fiberglasses" OR "fiber glass" OR "fiber glasses" OR "fire extinguisher" OR "fire extinguishers" OR "firefighting" OR "fire fighting" OR "fireproof" OR "fireproofing" OR "fire proof" OR "fire proofing" OR "fire retardant" OR "fire retardants" OR "flameproof" OR "flameproofing" OR "flame proof" OR "flame proofing" OR "flame retardant" OR "flame retardants" OR "foam" OR "foams" OR "fumigant" OR "fumigants" OR "fungicide" OR "fungicides" OR "gasoline" OR "glue" OR "glues" OR "herbicide" OR "herbicides" OR "ink" OR "inkjet" OR "inkjets" OR "insecticide" OR "insecticides" OR "kerosene" OR "lacquer" OR "lacquers" OR "larvicide" OR "larvicides" OR "leather" OR "leathers" OR "lubricant" OR "lubricants" OR "miticide" OR "miticides" OR "packaging" OR "packing material" OR "packing materials" OR "paper" OR "parasiticide" OR "parasiticide" OR "pesticide" OR "pesticides" OR "petrochemical" OR "petrochemicals" OR "petrol" OR "petroleum" OR "pharmaceutical" OR "pharmaceuticals" OR "pigment" OR "pigments" OR "piscicide" OR "piscicides" OR "plastic" OR "plasticizer" OR "plasticizers" OR "plastics" OR "pottery" OR "preservative" OR "preservatives" OR "pretreatment" OR "pretreatments" OR "propellant" OR "propellants" OR "pupicide" OR "pupicides" OR "resin" OR "resins" OR "refrigerant" OR "refrigerants" OR "remover" OR "remover" OR "repellent" OR "repellents" OR "retardant" OR "retardants" OR "rodenticide" OR "rodenticides" OR "rust inhibitor" OR "rust inhibitors" OR "rust preventative" OR "rust preventatives" OR "sealant" OR "sealants" OR "ski wax" OR "ski waxs" OR "slimicide" OR "slimicides" OR "solvent" OR "solvents" OR "sporting equipment" OR "sporting goods" OR "sports equipment" OR "stuffed animal" OR "stuffed animals" OR "surfactant" OR "surfactants" OR "teddy bear" OR "teddy bears" OR "tobacco" OR "toner" OR "toners" OR "toy" OR "toys" OR "varnish" OR "varnishes" OR "weed killer" OR "weed killers" OR "wetting agent" OR "wetting agents")))) OR (tiab: ("percentage by weight" OR "percentages by weight" OR "percent by weight" OR "percents by weight" OR "percentage weight" OR "percentages weight" OR "percent weight" OR "percent weights" OR "weight fraction" OR "weight fractions" OR "weight percentage" OR "weight percentages")) OR (((tiab: ("pollutant" OR "pollutants" OR "pollution" OR "residue" OR "residues" OR "contaminant" OR "contaminants" OR "health risk" OR "health risks" OR "contamination" OR "micropollutants" OR "microcontaminants" OR "pesticides" OR "emissions" OR "exposures")) OR (tiab: ("chromium" OR "arsenic" OR "copper" OR "tin" OR "lead" OR "selenium" OR "antimony" OR "mn" OR "vanadium" OR "cu" OR "cd" OR "mercury" OR "zinc" OR "cadmium" OR "beryllium")) OR (tiab: ("volatile organic" OR "organic compounds" OR "volatile compounds" OR "opes" OR "sccps" OR "pfass" OR "inorganic" OR "vocs" OR "phthalates" OR "ocps" OR "organochlorines" OR "plasticizers" OR "acrylamide" OR "hydrocarbons" OR "pahs" OR "pbde" OR "pbdes" OR "ddts" OR "pfcs" OR "chlordanes" OR "pops" OR "hchs" OR "pah" OR "btex" OR "hbcds" OR "hpahs" OR "ocs" OR "organohalogen" OR "pfas" OR "micropollutants" OR "hbcd" OR "chlordecone" OR "parabens" OR "hexabromocyclododecanes" OR "pcdd" OR "paraffins" OR "bde" OR "organochlorine" OR "voc" OR "pcb" OR "congeners" OR "pcbs" OR "haas" OR "perfluorocarboxylates" OR "pce" OR "tridecanes" OR "apeos" OR "dodecanes" OR "pfrs" OR "123pcbs" OR "hexabdes" OR "pfsas" OR "alkanes" OR "ddt"))) OR ((tiab: ("mg/m3" OR "ppm" OR "ug/m3" OR "µg/m3" OR "concentration levels" OR "exposure levels" OR "residue levels" OR "trace levels" OR "bioaccumulation" OR "bioconcentration" OR "concentrations" OR "loads" OR "burdens" OR "km values" OR "exposures" OR "higher concentrations" OR "highest concentrations" OR "high concentrations" OR "contaminant concentrations" OR "average concentrations" OR "lower concentrations" OR "low concentrations" OR "outdoor concentrations" OR "occupational exposure")) AND (tiab: ("organic chemical" OR "organic chemicals" OR "pollution" OR "contaminant" OR "contaminants" OR "pollutant" OR "pollutants" OR "chemicals" OR "metals" OR "pahs" OR "pesticides" OR "hydrocarbons" OR "pops" OR "hydrocarbon" OR "halocarbon" OR "chlorophenols" OR "ppcps" OR "pesticide" OR "btex" OR "haas" OR "paes" OR "chlorobiphenyls" OR "chlorophenols" OR "terpenes" OR "contaminants" OR "dioxins" OR "nitrophenols" OR "nitroaromatics" OR "perfluorochemicals" OR "chlorobenzenes" OR "nitroaromatic" OR "pfcs" OR "alkylphenols" OR "pbdes" OR "ddt" OR "pcbs" OR "compounds")))))

## Human Exposure Measures

((tiab: ("exposed" OR "kg/day" OR "g/day" OR "workers exposed" OR "exposed workers" OR "unexposed" OR "occupationally exposed" OR "exposure" OR "exposures" OR "daily intake" OR "daily intakes" OR "dietary exposure" OR "human exposure" OR "exposure assessment" OR "occupational exposure" OR "inhalation exposure" OR "exposure levels" OR "exposure data")) OR (((tiab: ("drinks" OR "eat" OR "eaten" OR "eating" OR "intakes" OR "diet" OR "diets" OR "dietary" OR "consumed" OR "consume" OR "consumption")) OR ((tiab: ("consume" OR "consumed" OR "intake" OR "consumption" OR "intakes" OR "ingestion" OR "ingest" OR "consumptions")) AND (tiab: ("mouth" OR "oral exposure")))) OR ((tiab: ("geophagia" OR "geophagy" OR "pica")) OR ((tiab: ("consume" OR "consumed" OR "eat" OR "eaten" OR "eating" OR "intake" OR "consumption" OR "intakes" OR "ingestion" OR "ingest" OR "consumptions")) AND (tiab: ("nondietary" OR "non dietary" OR "paints" OR "painting" OR "soil" OR "paint"))))) OR ((tiab: ("consume" OR "consumed" OR "drinks" OR "eat" OR "eaten" OR "eating" OR "intake" OR "consumption" OR "intakes" OR "ingestion" OR "ingest" OR "consumptions")) AND (tiab: ("beef" OR "bread" OR "breads" OR "breastmilk" OR "cereal" OR "cereals" OR "chicken" OR "colostrum" OR "dairy" OR "diet" OR "dietary" OR "fats" OR "fish" OR "flour" OR "flours" OR "foremilk" OR "fruits" OR "hindmilk" OR "meat" OR "meats" OR "milk" OR "pasta" OR "pastas" OR "pork" OR "poultry" OR "seafood" OR "nutrition" OR "foods" OR "food" OR "shellfish" OR "vegetables" OR "foodstuffs" OR "market basket" OR "infant formula" OR "beverage" OR "beverages" OR "foodstuff" OR "foodborne" OR "serving size" OR "market basket" OR "cheese" OR "food safety" OR "food consumption" OR "food industry"))) OR ((tiab: ("workers exposed" OR "exposed workers" OR "unexposed" OR "exposure" OR "exposures" OR "daily intake" OR "daily intakes" OR "dietary exposure" OR "human exposure" OR "exposure assessment" OR "occupational exposure" OR "exposure data" OR "children" OR "smoking" OR "geometric" OR "urine samples")) AND (tiab: ("dermal" OR "dermis" OR "epidermal" OR "epidermis" OR "skin" OR "hair" OR "saliva" OR "transdermal" OR "human skin"))) OR ((tiab: ("expose" OR "exposed" OR "exposes" OR "exposing" OR "exposure" OR "exposures" OR "intake" OR "intakes")) AND (tiab: ("breath" OR "breathing" OR "inhalation" OR "inhalations" OR "inhale" OR "inhaled" OR "inhales" OR "inhaling" OR "respiration" OR "airborne" OR "indoor" OR "exhaled" OR "gas" OR "voc" OR "sniffing" OR "sniff" OR "sniffed" OR "smoke" OR "smoking" OR "dust" OR "gaseous" OR "environmental" OR "vocs" OR "industrial" OR "particulate" OR "air" OR "atmospheric" OR "outdoor"))) OR (tiab: ("skin contact" OR "dermal" OR "dermal exposure")) OR (tiab: ("body burden" OR "body burdens")) OR (tiab: ("biomonitoring" OR "biological monitoring" OR "biomarkers" OR "biomarker" OR "biomonitored" OR "biological marker" OR "biomonitors" OR "monitoring")) OR (tiab: ("banned" OR "authorised" OR "national" OR "governmental" OR "national health")) OR (tiab: ("breastfeeding" OR "breastfed" OR "infants" OR "milk" OR "neonates" OR "human milk" OR "breast milk" OR "newborn" OR "newborns")) OR ((tiab: ("volatile organic" OR "organic compounds" OR "arsenic" OR "vanadium" OR "mercury" OR "opes" OR "sccps" OR "pfass" OR "inorganic" OR "vocs" OR "toxicant" OR "toxicants" OR "phthalates" OR "ocps" OR "organochlorines")) OR ((tiab: ("workers exposed" OR "exposed workers" OR "unexposed" OR "exposure" OR "exposures" OR "daily intake" OR "daily intakes" OR "dietary exposure" OR "human exposure" OR "exposure assessment" OR "occupational exposure" OR "exposure data" OR "children" OR "smoking" OR "geometric" OR "urine samples")) AND (tiab: ("organic chemical" OR "organic chemicals" OR "pollution" OR "contaminant" OR "contaminants" OR "pollutant" OR "pollutants" OR "chemicals" OR "metals" OR "pahs" OR "pesticides" OR "hydrocarbons" OR "pops" OR "hydrocarbon" OR "halocarbon" OR "chlorophenols" OR "ppcps" OR "pesticide" OR "btex" OR "haas" OR "paes" OR "chlorobiphenyls" OR "chlorophenols" OR "terpenes" OR "contaminants" OR "dioxins" OR "nitrophenols" OR "nitroaromatics" OR "perfluorochemicals" OR "chlorobenzenes" OR "nitroaromatic" OR "pfcs" OR "alkylphenols" OR "pbdes" OR "ddt" OR "pcbs" OR "compounds")))))

## Environmental Fate and Transport

((tiab: ("fate" OR "transport" OR "leaching" OR "leachate" OR "biodegradation" OR "runoff")) OR ((tiab: ("accumulation" OR "sorption" OR "removal" OR "solubility" OR "adsorption" OR "release" OR "degradation" OR "transport" OR "leaching" OR "biotransformation" OR "biodegradation" OR "contamination" OR "uptake" OR "dissipation" OR "bioconcentration" OR "decomposition" OR "photodegradation" OR "oxidation")) AND ((tiab: ("water" OR "waters" OR "aquifer" OR "groundwater" OR "river" OR "seawater" OR "water column" OR "surface waters" OR "river water" OR "lake" OR "coastal" OR "rivers" OR "stream" OR "oceans" OR "wetland" OR "estuarine" OR "watercourse" OR "catchment" OR "streams" OR "freshwater" OR "snow" OR "snowmelt")) OR (tiab: ("air" OR "atmospheric" OR "tropospheric" OR "aerosol" OR "outdoor air" OR "indoor" OR "airborne" OR "stratospheric" OR "pm10" OR "atmosphere" OR "respirable" OR "ozone" OR "particulate" OR "indoor air" OR "particulate matter")) OR (tiab: ("ground" OR "soil" OR "soils" OR "sediment" OR "peat" OR "humus" OR "sediments" OR "cropland" OR "sand")) OR (tiab: ("ecosystems" OR "environment" OR "environments" OR "environmental" OR "biota")))) OR ((tiab: ("degrade" OR "degrades" OR "degraded" OR "dissolved" OR "decompose" OR "removal" OR "remove" OR "removed")) OR (tiab: ("incineration" OR "wwtps" OR "landfills" OR "fires" OR "compost" OR "landfill" OR "furnace" OR "composting" OR "ash" OR "sludge" OR "sewage" OR "waste" OR "wastes" OR "stps" OR "weee" OR "slurry" OR "wastewater"))) OR (tiab: ("bioaccumulation" OR "bioconcentration" OR "biodegradability" OR "biodegradation" OR "biomagnification" OR "biotransformation" OR "dechlorination" OR "degradation" OR "dehalogenation" OR "fate" OR "food web" OR "groundwater" OR "landfill" OR "persistence" OR "photodegradation" OR "photolysis" OR "phototransformation" OR "sediment" OR "sludge" OR "soil" OR "volatilization" OR "waste" OR "wastewater" OR "ozonation")) OR (tiab: ("pollution" OR "pollutant" OR "pollutants" OR "contamination" OR "contaminant" OR "contaminants" OR "pesticides" OR "micropollutants" OR "decontamination" OR "herbicides" OR "biocides")) OR (tiab: ("agriculture" OR "fertilizer" OR "manure" OR "compost" OR "biosolids")))

## Physical Chemical Properties

(((tiab: ("physical properties" OR "chemical properties" OR "mechanical properties" OR "physicochemical properties" OR "photophysical properties" OR "thermodynamic properties" OR "thermal properties" OR "physiochemical properties" OR "thermophysical properties" OR "volume characteristics" OR "photoelectrochemical properties" OR "toxicologic properties" OR "electrical properties" OR "catalytic properties" OR "electronic properties" OR "pharmacological properties" OR "pharmacokinetic properties")) OR (tiab: ("toxicological profile" OR "chemical profile" OR "profile")) OR (tiab: ("mechanistic data" OR "mechanistic information" OR "mechanistic" OR "mechanistical")) OR (tiab: ("behavior" OR "behaviour" OR "behaviors" OR "behave" OR "behaved" OR "phase behavior")) OR (tiab: ("spectroscopic studies" OR "molecular structure" OR "structural information" OR "mass spectrometer" OR "spectroscopies" OR "ir spectroscopy" OR "nmr spectroscopy" OR "ray diffraction" OR "raman spectroscopy"))) OR (tiab: ("syntheses" OR "copolymerization" OR "efficient route" OR "cyclodehydration" OR "copolymerisation" OR "photochemical formation" OR "polycondensation" OR "alkylation" OR "crosslinking" OR "organometallic" OR "covalent" OR "bimetallic" OR "heterocyclic" OR "microporous" OR "noncovalent" OR "nonplanar" OR "bifunctional" OR "multifunctional" OR "dinuclear" OR "chiral" OR "multicomponent" OR "ambipolar" OR "polymeric" OR "difunctional" OR "nanostructured" OR "micellar" OR "trifunctional")) OR (tiab: ("solubility" OR "solubilities" OR "solvent" OR "water partition" OR "partitioning" OR "partition coefficient" OR "lipophilicity" OR "kow")) OR (tiab: ("molecular weight" OR "mw" OR "molar fraction" OR "mole fraction" OR "molar weight" OR "molar" OR "molar volume" OR "molar volumes" OR "micromolar" OR "equimolar" OR "molar ratio" OR "apparent molar" OR "excess molar" OR "supramolecular")) OR (tiab: ("temperature" OR "temperatures" OR "k" OR "exothermic" OR "endothermic")) OR (tiab: ("enthalpy" OR "enthalpies" OR "enthalpic" OR "isenthalpic" OR "entropy" OR "entropies" OR "entropic" OR "isentropic" OR "gibbs" OR "thermodynamic")) OR (tiab: ("viscosity" OR "viscosities")) OR (tiab: ("carcinogenic" OR "carcinogenicity" OR "carcinogenicities")) OR (tiab: ("monograph" OR "monographs")) OR (tiab: ("hydrogen bond" OR "hydrogen bonds" OR "bond" OR "atom" OR "atoms" OR "chains" OR "backbone")) OR (tiab: ("liquid phase" OR "gas phase" OR "phase diagrams" OR "phase diagram" OR "phase transition" OR "phase liquid" OR "phase separation" OR "aqueous phase" OR "solid phase" OR "phase behavior")) OR (tiab: ("half life" OR "half lives" OR "breakdown" OR "break down" OR "degradation")) OR (tiab: ("reaction mechanism" OR "reaction mechanisms" OR "transformation mechanism" OR "transformation mechanisms" OR "biotransformation mechanism" OR "biotransformation mechanisms" OR "transport mechanism" OR "transport mechanisms" OR "reaction pathway" OR "reaction pathways" OR "transformation pathway" OR "transformation pathways" OR "biotransformation pathway" OR "biotransformation pathways" OR "transport pathway" OR "transport pathways")))

## Populations

((tiab: ("adults" OR "american" OR "americans" OR "communities" OR "epidemiologic" OR "gender" OR "mother" OR "mothers" OR "persons" OR "population" OR "women" OR "subjects" OR "residents" OR "individuals")) OR (tiab: ("children" OR "child" OR "adolescent" OR "adolescents" OR "age" OR "aged" OR "ages" OR "baby" OR "boys" OR "girls" OR "infant" OR "infants" OR "neonatal" OR "newborn" OR "newborns" OR "seniors" OR "toddlers" OR "year olds" OR "years old" OR "neonates")) OR (tiab: ("pregnancy" OR "pregnant" OR "mother" OR "mothers" OR "maternal" OR "lactating" OR "lactation" OR "postpartum" OR "postnatal" OR "prenatal" OR "during pregnancy" OR "pregnant women")) OR (tiab: ("workplace" OR "workplaces" OR "employee" OR "employees" OR "factory" OR "factories" OR "migrants" OR "occupation" OR "occupational" OR "occupations" OR "profession" OR "professional" OR "soldiers" OR "time weighted average" OR "workers" OR "worker" OR "exposed workers")) OR (tiab: ("ethnicity" OR "hispanic" OR "mexican america" OR "minorities" OR "race" OR "countries" OR "urban" OR "communities" OR "nationals" OR "metropolitan")) OR ((tiab: ("disadvantaged" OR "disproportionate" OR "environmental justice" OR "highly exposed" OR "inequities" OR "lifestyle" OR "residential" OR "sensitivities" OR "urban" OR "sociodemographic" OR "socioeconomic" OR "occupational" OR "nonoccupational")) OR ((tiab: ("occupational" OR "nonoccupational" OR "past" OR "sectional" OR "adverse health")) AND (tiab: ("disease" OR "conditions" OR "condition" OR "diseases" OR "diseased" OR "cases" OR "disorders" OR "subjects")))) OR (tiab: ("activity patterns" OR "swimming" OR "outdoor" OR "playground" OR "living")) OR (tiab: ("home" OR "homes" OR "residents" OR "indoor" OR "house" OR "houses" OR "residential" OR "residences")))

## Engineering

((tiab: ("occupational exposure" OR "exposed workers" OR "workers exposed" OR "employees" OR "soldiers" OR "workplace" OR "workers" OR "residents" OR "persons" OR "houses")) OR (((tiab: ("occupational" OR "industrial" OR "air" OR "chemical" OR "soil" OR "membrane")) AND (tiab: ("exposure" OR "pollution" OR "contamination"))) OR ((tiab: ("leached" OR "released" OR "terrestrial" OR "dissolved" OR "diffusive" OR "dust" OR "reactive" OR "commercial" OR "organic" OR "inorganic")) AND (tiab: ("soil" OR "pollutants" OR "groundwater" OR "sediments" OR "sediment" OR "samples taken" OR "samples obtained" OR "sampling period" OR "sludge samples" OR "biological samples" OR "fish samples" OR "air samples" OR "soil samples" OR "groundwater samples"))) OR (tiab: ("exposure limits" OR "TWA" OR "STEL" OR "REL" OR "threshold limit value" OR "threshold" OR "mdl" OR "maximum adsorption" OR "lower limit"))) OR ((tiab: ("pollution prevention" OR "conservation" OR "reuse" OR "contaminant" OR "groundwater" OR "fate" OR "pollution" OR "pollutants" OR "monitoring")) OR ((tiab: ("pollution" OR "pollutants" OR "emission" OR "emissions" OR "mtbe" OR "N2O" OR "GAC" OR "TCE" OR "contaminant" OR "pollutants" OR "leachability" OR "discharges" OR "dioxins" OR "pfcas" OR "pfoa" OR "ppcps" OR "carbon source" OR "contaminant concentrations" OR "organic pollutants" OR "atrazine" OR "carbon sources" OR "point source" OR "air pollution" OR "environmental pollutants")) AND ((tiab: ("industrial processes" OR "manufacturing" OR "ferrous" OR "wastewater treatment" OR "radiochemical" OR "combustion" OR "wastewater" OR "steam" OR "anthropogenic")) OR (tiab: ("biological monitoring" OR "monitoring data" OR "samplings"))))) OR (tiab: ("manufacturing" OR "manufacture" OR "operating" OR "operational" OR "batch" OR "installation")) OR ((tiab: ("recycling" OR "remediation" OR "waste" OR "wastes" OR "cleaning" OR "combustion" OR "finishing" OR "incineration" OR "biodegradation" OR "bioremediation" OR "composting" OR "reuse" OR "pyrolysis" OR "manufacture")) OR ((tiab: ("consumer products" OR "industrial" OR "from commercially" OR "agricultural")) AND (tiab: ("plastics" OR "paint" OR "textile" OR "diesel" OR "ceramic" OR "rubber" OR "wood" OR "polypropylene" OR "coal" OR "radiochemical" OR "mineral" OR "petroleum")))) OR ((tiab: ("wastewater" OR "landfill" OR "wastewaters" OR "groundwater" OR "reclaimed" OR "manure" OR "landfills" OR "wastes" OR "compost" OR "effluents" OR "effluent" OR "waste" OR "sewage sludge")) OR (tiab: ("wastewater treatment" OR "water treatment" OR "plant" OR "sludge" OR "treatment plants" OR "sewage treatment" OR "activated sludge" OR "sewage sludge"))) OR (tiab: ("incineration" OR "disposal" OR "pollution prevention" OR "recycling" OR "biodegradation" OR "bioremediation" OR "remediation" OR "reuse" OR "disinfection" OR "decontamination" OR "phytoremediation" OR "removal" OR "farming" OR "cultivation" OR "manufacturing" OR "degradation" OR "dechlorination" OR "biodesulfurization" OR "desulfurization" OR "photocatalysis" OR "dehalogenation" OR "combustion")))

## Consumer

(((tiab: ("concentrations" OR "level" OR "levels" OR "exposure" OR "exposures" OR "bioaccumulation" OR "toxicity" OR "contaminant concentrations" OR "concentration" OR "dietary exposure" OR "cca" OR "tobacco smoke" OR "commission" OR "dehp" OR "exposure data" OR "emissions" OR "contaminants" OR "compounds" OR "volatile compounds" OR "perfluorinated compounds" OR "carbonyl compounds" OR "organic compounds")) AND ((tiab: ("food" OR "foods" OR "baby formula" OR "baby formulas" OR "beef" OR "bread" OR "breads" OR "breastmilk" OR "cereal" OR "cereals" OR "chicken" OR "colostrum" OR "dairy" OR "diet" OR "dietary" OR "eggs" OR "fats" OR "flour" OR "flours" OR "foodstuff" OR "foodstuffs" OR "foremilk" OR "fruit" OR "fruits" OR "grains" OR "hindmilk" OR "infant formula" OR "infant formulas" OR "lamb" OR "market basket" OR "market baskets" OR "meat" OR "meats" OR "milk" OR "pasta" OR "pastas" OR "pork" OR "poultry" OR "rice" OR "serving size" OR "serving sizes" OR "vegetable" OR "vegetables")) OR (tiab: ("finfish" OR "fish" OR "fishes" OR "seafood" OR "seafoods" OR "shellfish" OR "sportsfishing" OR "sportsfish" OR "sportsfisher" OR "sportsfishers")) OR ((tiab: ("baby" OR "babies" OR "infant" OR "infants" OR "newborn" OR "newborns" OR "children" OR "adults" OR "individuals")) AND (tiab: ("hair care" OR "soap" OR "shampoo" OR "shampoos" OR "washing" OR "care products" OR "powder" OR "preservatives" OR "paint" OR "solvents" OR "diluents"))) OR (tiab: ("blush" OR "blushes" OR "brow pencil" OR "brow pencil" OR "cheek color" OR "cheek colors" OR "cheek colour" OR "cheek colours" OR "concealer" OR "concealers" OR "cosmeceutic" OR "cosmeceutics" OR "cosmetic" OR "cosmetics" OR "eyebrow pencil" OR "eyebrow pencils" OR "eye color" OR "eye colors" OR "eye colour" OR "eye colours" OR "eyeliner" OR "eyeliners" OR "eye liner" OR "eye liners" OR "eyeshadow" OR "eyeshadows" OR "eye shadow" OR "eye shadows" OR "face powder" OR "face powders" OR "facial powder" OR "facial powders" OR "foundation" OR "foundations" OR "lipcolor" OR "lipcolors" OR "lipcolour" OR "lipcolours" OR "lip color" OR "lip colors" OR "lip colour" OR "lip colours" OR "lipstick" OR "lipsticks" OR "makeup" OR "make up" OR "mascara" OR "mascaras")) OR (tiab: ("aftershave" OR "aftershaves" OR "after shave" OR "after shaves" OR "antiperspirant" OR "antiperspirants" OR "anti perspirant" OR "anti perspirants" OR "bath capsule" OR "bath capsules" OR "bath oil" OR "bath oils" OR "bath product" OR "bath products" OR "bath salt" OR "bath salts" OR "bath tablet" OR "bath tablets" OR "bathing" OR "body cream" OR "body creams" OR "body spray" OR "body spray" OR "bodywash" OR "bodywashes" OR "body wash" OR "body washes" OR "breath freshener" OR "breath fresheners" OR "care product" OR "care products" OR "cleanser" OR "cleansers" OR "cuticle cream" OR "cuticle creams" OR "cuticle oil" OR "cuticle oils" OR "dental floss" OR "dental flosses" OR "deodorant" OR "deodorants" OR "face cream" OR "face creams" OR "face serum" OR "face serums" OR "facial cream" OR "facial creams" OR "facial serum" OR "facial serums" OR "fingernail polish" OR "fingernail polishes" OR "foot cream" OR "foot creams" OR "foot powder" OR "foot powders" OR "foot spray" OR "foot sprays" OR "gel wash" OR "gel washes" OR "hand cream" OR "hand creams" OR "hand sanitizer" OR "hand sanitizers" OR "lotion" OR "lotions" OR "manicure" OR "manicures" OR "moisturizer" OR "moisturizers" OR "moisturizing" OR "mouthwash" OR "mouthwashes" OR "mouth wash" OR "mouth washes" OR "nail adhesive" OR "nail adhesives" OR "nail enamel" OR "nail enamels" OR "nail polish" OR "nail polishes" OR "pedicure" OR "pedicures" OR "personal care" OR "personal hygiene" OR "polish remover" OR "polish removers" OR "shave cream" OR "shave creams" OR "shaving cream" OR "shaving creams" OR "shower gel" OR "shower gels" OR "showering" OR "skincare" OR "skin care" OR "soap" OR "soaps" OR "sunblock" OR "sunblocks" OR "sun block" OR "sun block" OR "sunless tanner" OR "sunless tanners" OR "sunscreen" OR "sunscreens" OR "sun screen" OR "sun screens" OR "toenail polish" OR "toenail polishes" OR "toiletry" OR "toiletries" OR "toothpaste" OR "toothpastes")) OR (tiab: ("hair bleach" OR "hair bleaches" OR "haircare" OR "hair care" OR "haircolor" OR "haircolors" OR "haircolour" OR "haircolours" OR "hair color" OR "hair colors" OR "hair colour" OR "hair colours" OR "hair conditioner" OR "hair conditioners" OR "hair dye" OR "hair dyes" OR "hair product" OR "hair products" OR "hair relaxer" OR "hair relaxers" OR "hair rinse" OR "hair rinses" OR "hairspray" OR "hairsprays" OR "hair spray" OR "hair sprays" OR "hair straightener" OR "hair straighteners" OR "hair tint" OR "hair tints" OR "hair tonic" OR "hair tonics" OR "permanent wave" OR "permanent waves" OR "shampoo" OR "shampoos" OR "shampooing")) OR (tiab: ("cologne" OR "colognes" OR "eau de toilette" OR "eau de toilettes" OR "fragrance" OR "fragrances" OR "perfume" OR "perfumes")) OR (tiab: ("air freshener" OR "air fresheners" OR "bleach" OR "bleaches" OR "cleaner" OR "cleaners" OR "cleaning" OR "deodorizer" OR "deodorizers" OR "detergent" OR "detergents" OR "dishsoap" OR "dishsoaps" OR "dishwash" OR "dishwashes" OR "dish wash" OR "dish washes" OR "disinfectant" OR "disinfectants" OR "soap" OR "soaps" OR "spot remover" OR "spot removers" OR "stain remover" OR "stain removers")) OR (tiab: ("bakeware" OR "bakewares" OR "bake ware" OR "bake wares" OR "cookware" OR "cookwares" OR "cook ware" OR "cook wares" OR "pan" OR "pans" OR "pot" OR "pots" OR "utensil" OR "utensils")) OR (tiab: ("nonstick" OR "non stick" OR "nonsticking" OR "non sticking")) OR (tiab: ("beanbag" OR "beanbags" OR "bean bag" OR "bean bags" OR "bedding" OR "beddings" OR "blanket" OR "blankets" OR "furnishing" OR "furnishings" OR "furniture" OR "rug" OR "rugs" OR "upholstery")) OR (tiab: ("fabric" OR "leather" OR "gloves" OR "equipment")) OR (tiab: ("apparel" OR "bra" OR "bras" OR "cloth" OR "clothes" OR "clothing" OR "colorfast" OR "color fast" OR "diaper" OR "diapers" OR "dresses" OR "fabric" OR "fabrics" OR "footwear" OR "garment" OR "garments" OR "jeans" OR "polyester" OR "polyesters" OR "ribbon" OR "ribbons" OR "shirt" OR "shirts" OR "shoe" OR "shoes" OR "socks" OR "textile" OR "textiles" OR "trouser" OR "trousers")) OR (tiab: ("liquid repellant" OR "liquid repellants" OR "liquid repellency" OR "liquid resistance" OR "liquid resistant" OR "outdoor cloth" OR "outdoor clothes" OR "waterproof" OR "waterproofing" OR "water proof" OR "water proofing" OR "water repellant" OR "water repellants" OR "water repellency" OR "water resistant" OR "water resistance")) OR (tiab: ("stain proof" OR "stain repellant" OR "stain repellency" OR "stain resistant")) OR (tiab: ("apartment" OR "apartments" OR "appliance" OR "appliances" OR "architectural" OR "architecture" OR "architectures" OR "building" OR "buildings" OR "carpet" OR "carpeting" OR "carpets" OR "cement" OR "cements" OR "concrete" OR "condominium" OR "condominiums" OR "condominia" OR "drywall" OR "drywalls" OR "ductwork" OR "ductworks" OR "duct work" OR "duct works" OR "floor" OR "flooring" OR "floors" OR "home" OR "homes" OR "house" OR "houses" OR "insulation" OR "insulations" OR "molding" OR "moldings" OR "paint" OR "paintchip" OR "paintchips" OR "paints" OR "plaster" OR "plasters" OR "residential" OR "roof" OR "roofs" OR "room volume" OR "room volumes" OR "townhouse" OR "townhouses")) OR (tiab: ("food pack" OR "food packs" OR "food wrap" OR "food wraps" OR "microwave container" OR "microwave containers" OR "microwave popcorn bag" OR "microwave popcorn bags" OR "pizza box" OR "pizza boxes" OR "plastic bag" OR "plastic bags" OR "plastic container" OR "plastic containers" OR "plastic wrap" OR "plastic wraps" OR "sandwich wrap" OR "sandwich wraps" OR "takeout container" OR "takeout containers")) OR (tiab: ("acaricide" OR "acaricides" OR "adhesive" OR "adhesives" OR "antiseptic" OR "antiseptics" OR "anti septic" OR "anti septics" OR "batteries" OR "battery" OR "blowing agent" OR "blowing agents" OR "bonding agent" OR "bonding agents" OR "camping tent" OR "camping tents" OR "camp tent" OR "camp tents" OR "cigar" OR "cigars" OR "circuit board" OR "circuit boards" OR "circuitry" OR "colorant" OR "colorants" OR "computer" OR "computers" OR "consumer product" OR "consumer products" OR "degreaser" OR "degreasers" OR "degreasing" OR "diesel" OR "doll" OR "dolls" OR "drycleaning" OR "dry cleaning" OR "drycleaner" OR "drycleaners" OR "dry cleaner" OR "dry cleaners" OR "dye" OR "dyes" OR "electronic" OR "electronics" OR "embalming" OR "fertilizer" OR "fertilizers" OR "fiberglass" OR "fiberglasses" OR "fiber glass" OR "fiber glasses" OR "fire extinguisher" OR "fire extinguishers" OR "firefighting" OR "fire fighting" OR "fireproof" OR "fireproofing" OR "fire proof" OR "fire proofing" OR "fire retardant" OR "fire retardants" OR "flameproof" OR "flameproofing" OR "flame proof" OR "flame proofing" OR "flame retardant" OR "flame retardants" OR "foam" OR "foams" OR "fumigant" OR "fumigants" OR "fungicide" OR "fungicides" OR "gasoline" OR "glue" OR "glues" OR "herbicide" OR "herbicides" OR "ink" OR "inkjet" OR "inkjets" OR "insecticide" OR "insecticides" OR "kerosene" OR "lacquer" OR "lacquers" OR "larvicide" OR "larvicides" OR "leather" OR "leathers" OR "lubricant" OR "lubricants" OR "miticide" OR "miticides" OR "packaging" OR "packing material" OR "packing materials" OR "paper" OR "parasiticide" OR "parasiticide" OR "pesticide" OR "pesticides" OR "petrochemical" OR "petrochemicals" OR "petrol" OR "petroleum" OR "pharmaceutical" OR "pharmaceuticals" OR "pigment" OR "pigments" OR "piscicide" OR "piscicides" OR "plastic" OR "plasticizer" OR "plasticizers" OR "plastics" OR "pottery" OR "preservative" OR "preservatives" OR "pretreatment" OR "pretreatments" OR "propellant" OR "propellants" OR "pupicide" OR "pupicides" OR "resin" OR "resins" OR "refrigerant" OR "refrigerants" OR "remover" OR "remover" OR "repellent" OR "repellents" OR "retardant" OR "retardants" OR "rodenticide" OR "rodenticides" OR "rust inhibitor" OR "rust inhibitors" OR "rust preventative" OR "rust preventatives" OR "sealant" OR "sealants" OR "ski wax" OR "ski waxs" OR "slimicide" OR "slimicides" OR "solvent" OR "solvents" OR "sporting equipment" OR "sporting goods" OR "sports equipment" OR "stuffed animal" OR "stuffed animals" OR "surfactant" OR "surfactants" OR "teddy bear" OR "teddy bears" OR "tobacco" OR "toner" OR "toners" OR "toy" OR "toys" OR "varnish" OR "varnishes" OR "weed killer" OR "weed killers" OR "wetting agent" OR "wetting agents")) OR (tiab: ("diluent" OR "diluents" OR "spray" OR "sprays" OR "combustibles" OR "photoinitiators" OR "xylene" OR "copier" OR "copiers" OR "spice" OR "spices" OR "oil" OR "oils" OR "fat" OR "fats" OR "bottle" OR "bottles" OR "container" OR "containers" OR "subfloor" OR "woodworking" OR "darkroom" OR "printmaking" OR "plywood" OR "highway" OR "cigarette" OR "cigarettes")))) OR (tiab: ("mass" OR "content" OR "contents" OR "compositions")) OR (tiab: ("consumption" OR "food" OR "intake" OR "dietary" OR "milk" OR "vegetable" OR "feeds" OR "flour" OR "concentrate" OR "edible" OR "juice" OR "sample" OR "water")) OR (tiab: ("consumer" OR "products")) OR (tiab: ("contaminant" OR "contaminants" OR "dehp" OR "volatile compounds" OR "perfluorinated compounds" OR "carbonyl compounds" OR "organic compounds" OR "aroma compounds" OR "related compounds" OR "hydrocarbons" OR "vocs" OR "organophosphorus pesticides" OR "contaminant concentrations" OR "aromatic hydrocarbons" OR "phthalates")))

## Consumer (TSCA)

(((tiab: ("concentrations" OR "level" OR "levels" OR "exposure" OR "exposures" OR "bioaccumulation" OR "toxicity" OR "contaminant concentrations" OR "concentration" OR "dietary exposure" OR "cca" OR "tobacco smoke" OR "commission" OR "dehp" OR "exposure data" OR "emissions" OR "contaminants" OR "compounds" OR "volatile compounds" OR "perfluorinated compounds" OR "carbonyl compounds" OR "organic compounds")) AND ((tiab: ("air freshener" OR "air fresheners" OR "bleach" OR "bleaches" OR "cleaner" OR "cleaners" OR "cleaning" OR "deodorizer" OR "deodorizers" OR "detergent" OR "detergents" OR "dishsoap" OR "dishsoaps" OR "dishwash" OR "dishwashes" OR "dish wash" OR "dish washes" OR "disinfectant" OR "disinfectants" OR "soap" OR "soaps" OR "spot remover" OR "spot removers" OR "stain remover" OR "stain removers")) OR (tiab: ("bakeware" OR "bakewares" OR "bake ware" OR "bake wares" OR "cookware" OR "cookwares" OR "cook ware" OR "cook wares" OR "pan" OR "pans" OR "pot" OR "pots" OR "utensil" OR "utensils")) OR (tiab: ("nonstick" OR "non stick" OR "nonsticking" OR "non sticking")) OR (tiab: ("beanbag" OR "beanbags" OR "bean bag" OR "bean bags" OR "bedding" OR "beddings" OR "blanket" OR "blankets" OR "furnishing" OR "furnishings" OR "furniture" OR "rug" OR "rugs" OR "upholstery")) OR (tiab: ("fabric" OR "leather" OR "gloves" OR "equipment")) OR (tiab: ("apparel" OR "bra" OR "bras" OR "cloth" OR "clothes" OR "clothing" OR "colorfast" OR "color fast" OR "diaper" OR "diapers" OR "dresses" OR "fabric" OR "fabrics" OR "footwear" OR "garment" OR "garments" OR "jeans" OR "polyester" OR "polyesters" OR "ribbon" OR "ribbons" OR "shirt" OR "shirts" OR "shoe" OR "shoes" OR "socks" OR "textile" OR "textiles" OR "trouser" OR "trousers")) OR (tiab: ("liquid repellant" OR "liquid repellants" OR "liquid repellency" OR "liquid resistance" OR "liquid resistant" OR "outdoor cloth" OR "outdoor clothes" OR "waterproof" OR "waterproofing" OR "water proof" OR "water proofing" OR "water repellant" OR "water repellants" OR "water repellency" OR "water resistant" OR "water resistance")) OR (tiab: ("stain proof" OR "stain repellant" OR "stain repellency" OR "stain resistant")) OR (tiab: ("apartment" OR "apartments" OR "appliance" OR "appliances" OR "architectural" OR "architecture" OR "architectures" OR "building" OR "buildings" OR "carpet" OR "carpeting" OR "carpets" OR "cement" OR "cements" OR "concrete" OR "condominium" OR "condominiums" OR "condominia" OR "drywall" OR "drywalls" OR "ductwork" OR "ductworks" OR "duct work" OR "duct works" OR "floor" OR "flooring" OR "floors" OR "home" OR "homes" OR "house" OR "houses" OR "insulation" OR "insulations" OR "molding" OR "moldings" OR "paint" OR "paintchip" OR "paintchips" OR "paints" OR "plaster" OR "plasters" OR "residential" OR "roof" OR "roofs" OR "room volume" OR "room volumes" OR "townhouse" OR "townhouses")) OR (tiab: ("food pack" OR "food packs" OR "food wrap" OR "food wraps" OR "microwave container" OR "microwave containers" OR "microwave popcorn bag" OR "microwave popcorn bags" OR "pizza box" OR "pizza boxes" OR "plastic bag" OR "plastic bags" OR "plastic container" OR "plastic containers" OR "plastic wrap" OR "plastic wraps" OR "sandwich wrap" OR "sandwich wraps" OR "takeout container" OR "takeout containers")) OR (tiab: ("acaricide" OR "acaricides" OR "adhesive" OR "adhesives" OR "antiseptic" OR "antiseptics" OR "anti septic" OR "anti septics" OR "batteries" OR "battery" OR "blowing agent" OR "blowing agents" OR "bonding agent" OR "bonding agents" OR "camping tent" OR "camping tents" OR "camp tent" OR "camp tents" OR "cigar" OR "cigars" OR "circuit board" OR "circuit boards" OR "circuitry" OR "colorant" OR "colorants" OR "computer" OR "computers" OR "consumer product" OR "consumer products" OR "degreaser" OR "degreasers" OR "degreasing" OR "diesel" OR "doll" OR "dolls" OR "drycleaning" OR "dry cleaning" OR "drycleaner" OR "drycleaners" OR "dry cleaner" OR "dry cleaners" OR "dye" OR "dyes" OR "electronic" 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"petrol" OR "petroleum" OR "pharmaceutical" OR "pharmaceuticals" OR "pigment" OR "pigments" OR "piscicide" OR "piscicides" OR "plastic" OR "plasticizer" OR "plasticizers" OR "plastics" OR "pottery" OR "preservative" OR "preservatives" OR "pretreatment" OR "pretreatments" OR "propellant" OR "propellants" OR "pupicide" OR "pupicides" OR "resin" OR "resins" OR "refrigerant" OR "refrigerants" OR "remover" OR "remover" OR "repellent" OR "repellents" OR "retardant" OR "retardants" OR "rodenticide" OR "rodenticides" OR "rust inhibitor" OR "rust inhibitors" OR "rust preventative" OR "rust preventatives" OR "sealant" OR "sealants" OR "ski wax" OR "ski waxs" OR "slimicide" OR "slimicides" OR "solvent" OR "solvents" OR "sporting equipment" OR "sporting goods" OR "sports equipment" OR "stuffed animal" OR "stuffed animals" OR "surfactant" OR "surfactants" OR "teddy bear" OR "teddy bears" OR "tobacco" OR "toner" OR "toners" OR "toy" OR "toys" OR "varnish" OR "varnishes" OR "weed killer" OR "weed killers" OR "wetting agent" OR "wetting agents")) OR (tiab: ("diluent" OR "diluents" OR "spray" OR "sprays" OR "combustibles" OR "photoinitiators" OR "xylene" OR "copier" OR "copiers" OR "spice" OR "spices" OR "oil" OR "oils" OR "fat" OR "fats" OR "bottle" OR "bottles" OR "container" OR "containers" OR "subfloor" OR "woodworking" OR "darkroom" OR "printmaking" OR "plywood" OR "highway" OR "cigarette" OR "cigarettes")))) OR (tiab: ("mass" OR "content" OR "contents" OR "compositions")) OR (tiab: ("consumption" OR "food" OR "intake" OR "dietary" OR "milk" OR "vegetable" OR "feeds" OR "flour" OR "concentrate" OR "edible" OR "juice" OR "sample" OR "water")) OR (tiab: ("consumer" OR "products")) OR (tiab: ("contaminant" OR "contaminants" OR "dehp" OR "volatile compounds" OR "perfluorinated compounds" OR "carbonyl compounds" OR "organic compounds" OR "aroma compounds" OR "related compounds" OR "hydrocarbons" OR "vocs" OR "organophosphorus pesticides" OR "contaminant concentrations" OR "aromatic hydrocarbons" OR "phthalates")))