Biomonitoring California
Priority Chemicals
February 2019

The following is a list of priority chemicals for Biomonitoring California.[a] The Scientific Guidance Panel (SGP) recommends priority chemicals from the designated chemicals list.

Targets for measurement in biomonitoring studies could include the parent chemical, metabolites and other chemical products formed in the body or the environment (e.g., hemoglobin adduct; environmental degradation product). The approach for biomonitoring a chemical may change as methods development proceeds. For some of the parent chemicals listed below, metabolites or other targets for measurement are shown indented underneath. Chemicals are grouped into categories (like "metals" and "pesticides"); some are included in more than one category. The Program determines the chemicals that are actually biomonitored and the appropriate targets for measurement. To jump to each footnote referenced in the list below, click on the relevant number.

Brominated and Chlorinated Organic Compounds used as Flame Retardants [1]

Allyl 2,4,6-tribromophenyl ether (ATE)
2,2-Bis(bromomethyl)-1,3-propanediol
2,2-Bis(chloromethyl)trimethylene bis[bis(2-chloroethyl)phosphate]
Bis(2-ethyl-1-hexyl)tetrabromophthalate (TBPH)
Bis(hexachlorocyclopentadieno)cyclooctane (Dechlorane Plus)
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)
2-Bromoallyl-2,4,6-tribromophenyl ether (BATE)
Chlorendic acid
Chlorinated paraffins
Decabromodiphenylethane (DBDPE)
1,2-Dibromo-4-(1,2-dibromoethyl)cyclohexane (TBECH)
2,4-Dibromophenol
2,3-Dibromopropyl-2,4,6-tribromophenyl ether (DPTE)
2-Ethyl-1-hexyl-2,3,4,5-tetrabromobenzoate (TBB)
    2,3,4,5-Tetrabromobenzoic acid (TBBA)
N,*N*′-Ethylenebis(tetrabromophthalimide)
Hexabromobenzene (HBB)
2,2′,4,4′,5,5′-Hexabromobiphenyl (BB 153)
Hexabromocyclododecane (HBCD)
Hexachlorocyclopentadienyl-dibromocyclooctane
2-Hydroxypropyl 2-(2-hydroxyethyl)ethyl tetrabromophthalate
Isobutoxypentabromocyclododecanes (iBPBCDs)
Octabromotrimethylphenylindane (OBIND)
Pentabromoethylbenzene (PBEB)
Pentabromophenol (PBP)
Pentabromotoluene (PBT)
1,1'-Sulfonylbis[3,5-dibromo-4-(2,3-dibromopropoxy) benzene
Tetrabromobisphenol A (TBBPA)
Tetrabromobisphenol A bis(2,3-dibromopropyl) ether (TBBPA-DBPE)
Tetrabromobisphenol A bis(2-hydroxyethyl) ether
Tetrabromobisphenol A diallyl ether
Tetrabromophthalic acid, mixed esters
Tetrabromophthalic anhydride
2,3,5,6-Tetrabromo-*p*-xylene
Tetrachlorophthalic anhydride
2,4,6-Tribromophenol
Tribromoneopentylalcohol
Tris(2-chloroethyl)phosphate (TCEP)
    Bis(2-chloroethyl)phosphate (BCEP)
Tris(1-chloro-2-propyl)phosphate (TCPP)
    Bis(1-chloro-2-propyl)phosphate (BCPP)
Tris(2,3-dibromopropyl) isocyanurate
Tris(2,3-dibromopropyl)phosphate (TDBPP)
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)
    Bis(1,3-dichloro-2-propyl)phosphate (BDCPP)
Tris(2,3-dichloro-1-propyl)phosphate
Tris(tribromoneopentyl)phosphate
2,4,6-Tris(2,4,6-tribromophenoxy)-1,3,5-triazine

Polybrominated diphenyl ethers (PBDEs)

2,2′,4-Tribromodiphenyl ether (BDE 17)
2,4,4′-Tribromodiphenyl ether (BDE 28)
2,2′,4,4′-Tetrabromodiphenyl ether (BDE 47)
2,3′,4,4′-Tetrabromodiphenyl ether (BDE 66)
2,2′,3,4,4′-Pentabromodiphenyl ether (BDE 85)
2,2′,4,4′,5-Pentabromodiphenyl ether (BDE 99)
2,2′,4,4′,6-Pentabromodiphenyl ether (BDE 100)
2,2′,4,4′,5,5′-Hexabromodiphenyl ether (BDE 153)
2,2′,4,4′,5,6′-Hexabromodiphenyl ether (BDE 154)
2,2′,3,4,4′,5′,6-Heptabromodiphenyl ether (BDE 183)
2,2′,3,3′,4,4′,5,6′-Octabromodiphenyl ether (BDE 196)
2,2′,3,3′,4,4′,6,6′-Octabromodiphenyl ether (BDE 197)

a. California Environmental Contaminant Biomonitoring Program, codified at Health and Safety Code section 105440 et seq.

2,2′,3,3′,4,5′,6,6′-Octabromodiphenyl ether (BDE 201)
2,2′,3,3′,5,5′,6,6′-Octabromodiphenyl ether (BDE 202)
2,2′,3,4,4′,5,5′,6-Octabromodiphenyl ether (BDE 203)
2,2′,3,3′,4,4′,5,5′,6-Nonabromodiphenyl ether (BDE 206)
2,2′,3,3′,4,4′,5,6,6′-Nonabromodiphenyl ether (BDE 207)
2,2′,3,3′,4,5,5′,6,6′-Nonabromodiphenyl ether (BDE 208)
2,2′,3,3′,4,4′,5,5′,6,6′-Decabromodiphenyl ether (BDE 209)

Hydroxy-PBDEs (Metabolites of PBDEs)

4′-Hydroxy-BDE 17
4-Hydroxy-BDE 42
3-Hydroxy-BDE 47
5-Hydroxy-BDE 47
6-Hydroxy-BDE 47
4′-Hydroxy-BDE 49
2′-Hydroxy-BDE 68
4-Hydroxy-BDE 90
5′-Hydroxy-BDE 99
6′-Hydroxy-BDE 99
3-Hydroxy-BDE 100
5′-Hydroxy-BDE 100
4′-Hydroxy-BDE 101
4′-Hydroxy-BDE 103

Cyclosiloxanes [1]

Decamethylcyclopentasiloxane (D5)
Dodecamethylcyclohexasiloxane (D6)
Octamethylcyclotetrasiloxane (D4)

Diesel Exhaust [2]

1-Nitropyrene
- 6-Hydroxy-1-nitropyrene
- 8-Hydroxy-1-nitropyrene

Diglycidyl Ethers of *p,p′*-Bisphenols [1]

Bisphenol A diglycidyl ether (BADGE)
Bisphenol F diglycidyl ether (BFDGE)

Environmental Phenols [3]

_p,p′_-Bisphenols [1]

Bisphenol A (BPA)
Bisphenol AF (BPAF)
Bisphenol B (BPB)
Bisphenol F (BPF)
Bisphenol S (BPS)
4,4′-Sulfonylbis[2-(2-propen-1-yl)phenol] (TGSA)

Brominated phenols [3, 4]

2,4-Dibromophenol
Pentabromophenol (PBP)
Tetrabromobisphenol A (TBBPA)
2,4,6-Tribromophenol

Chlorinated phenols [3, 5]

2,4-Dichlorophenol
2,5-Dichlorophenol
~~Pentachlorophenol~~ [6]
~~2,4,5-Trichlorophenol~~ [6]
~~2,4,6-Trichlorophenol~~ [6]
Triclosan

Parabens [3]

Butylparaben [7]
Ethylparaben
Methylparaben
n-Propylparaben

Metals [3]

Antimony [8]
Arsenic
- Arsenic (V) acid
- Arsenobetaine
- Arsenocholine
- Arsenous (III) acid
- Dimethylarsinic acid
- Monomethylarsonic acid
- Trimethylarsine oxide

Beryllium [8]
Cadmium
Cobalt
Lead
Manganese
Mercury
Molybdenum
Thallium
Tungsten
Uranium

Non-Halogenated Aromatic Phosphates [1]

Bisphenol A bis(diphenyl phosphate)
Butylated triphenyl phosphate
Butyldiphenyl phosphate
t-Butylphenyl diphenyl phosphate
Dibutylphenyl phosphate
2-Ethylhexyl diphenyl phosphate

Isodecyl diphenyl phosphate
Isopropyl phenyl diphenyl phosphate
Isopropylated triphenyl phosphate
Resorcinol bis(diphenyl phosphate)
Tribenzyl phosphate (TBzP)
  Dibenzyl phosphate (DBzP)
Tricresyl phosphate (TCP)
Tri-*o*-cresylphosphate (ToCP)
  Di-*o*-cresylphosphate (DoCP)
Tri-*p*-cresylphosphate (TpCP)
  Di-*p*-cresylphosphate (DpCP)
Triphenyl phosphate (TPP)
  Diphenyl phosphate (DPhP)

Perchlorate

Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) [1, 9]

Ammonium 4,8-dioxa-3H-perfluorononanoate (ADONA)
Bis(perfluorohexyl)phosphinic acid
Bis(perfluorooctyl)phosphinic acid
N-Ethyl-perfluorooctane sulfonamido acetic acid
6:2 Fluorotelomer acetate
8:2 Fluorotelomer acetate
10:2 Fluorotelomer acetate
6:2 Fluorotelomer acrylate
8:2 Fluorotelomer acrylate
10:2 Fluorotelomer acrylate
5:3 Fluorotelomer carboxylic acid
6:2 Fluorotelomer carboxylic acid
7:3 Fluorotelomer carboxylic acid
8:2 Fluorotelomer carboxylic acid
10:2 Fluorotelomer carboxylic acid
6:2 Fluorotelomer phosphate diester
6:2/8:2 Fluorotelomer phosphate diester
8:2 Fluorotelomer phosphate diester
6:2 Fluorotelomer phosphate monoester
8:2 Fluorotelomer phosphate monoester
4:2 Fluorotelomer sulfonic acid
6:2 Fluorotelomer sulfonic acid
8:2 Fluorotelomer sulfonic acid
6:2 Fluorotelomer unsaturated carboxylic acid
8:2 Fluorotelomer unsaturated carboxylic acid
10:2 Fluorotelomer unsaturated carboxylic acid
N-Methyl-perfluorooctane sulfonamido) acetic acid
Perfluorobutane sulfonic acid
Perfluorobutanoic acid
Perfluorodecane sulfonic acid
Perfluorodecanoic acid
Perfluorodecylphosphonic acid
Perfluorododecanoic acid
Perfluoroethylcyclohexane sulfonic acid
Perfluoroheptane sulfonic acid
Perfluoroheptanoic acid
Perfluorohexadecanoic acid
Perfluorohexane sulfonic acid
Perfluorohexanoic acid
Perfluorohexylperfluorooctylphosphinic acid
Perfluorohexylphosphonic acid
Perfluorononane sulfonic acid
Perfluorononanoic acid
Perfluorooctadecanoic acid
Perfluorooctane sulfonamide
Perfluorooctane sulfonic acid (PFOS), including linear and branched isomers
Perfluorooctanoic acid (PFOA), including linear and branched isomers
Perfluorooctylphosphonic acid
Perfluoropentane sulfonic acid
Perfluoropentanoic acid
Perfluorotetradecanoic acid
Perfluorotridecanoic acid
Perfluoroundecanoic acid
Sodium bis-[2-(*N*-ethylperfluorooctane-1-sulfonamido)ethyl] phosphate
Sodium 2-(*N*-ethylperfluorooctane-1-sulfonamido)ethyl phosphate
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid
1,1,2,2-Tetrafluoro-2-({1,1,1,2,3,3-hexafluoro-3-[(trifluorovinyl)oxy]-2-propanyl}oxy)ethane sulfonic acid

Pesticides [3, 10]

Herbicides [3]

2,4-Dichlorophenoxyacetic acid (2,4-D), salts and esters
  2,4-Dichlorophenoxyacetic acid
  2,4-Dichlorophenol

Organochlorine Pesticides [3]

Dichlorodiphenyltrichloroethane (DDT) (including *p,p′*-DDT and *o,p′*-DDT)
  p,p′-Dichlorodiphenyldichloroethene (*p,p′*-DDE)

Organophosphate Insecticides [3]

Acephate
Azinphos methyl
  Dimethyldithiophosphate
  Dimethylphosphate
  Dimethylthiophosphate
Chlorethoxyphos
  Diethylphosphate
  Diethylthiophosphate

- Chlorpyrifos
  - Diethylphosphate
  - Diethylthiophosphate
  - 3,5,6-Trichloro-2-pyridinol (TCPy)
- Chlorpyrifos methyl
  - Dimethylphosphate
  - Dimethylthiophosphate
  - 3,5,6-Trichloro-2-pyridinol (TCPy)
- Coumaphos
  - 3-Chloro-7-hydroxy-4-methyl-2H-chromen-2-one/ol
  - Diethylphosphate
  - Diethylthiophosphate
- Diazinon
  - Diethylphosphate
  - Diethylthiophosphate
  - 2-Isopropyl-4-methyl-6-hydroxypyrimidine (IMPY)
- Dichlorvos (DDVP)
  - Dimethylphosphate
- Dicrotophos
  - Dimethylphosphate
- Dimethoate
  - Dimethyldithiophosphate
  - Dimethylphosphate
  - Dimethylthiophosphate
- Disulfoton
  - Diethyldithiophosphate
  - Diethylphosphate
  - Diethylthiophosphate
- Ethion
  - Diethyldithiophosphate
  - Diethylphosphate
  - Diethylthiophosphate
- Fenitrothion
  - Dimethylphosphate
  - Dimethylthiophosphate
- Fenthion
  - Dimethylphosphate
  - Dimethylthiophosphate
- Isazophos-methyl
  - 5-Chloro-1,2-dihydro-1-isopropyl-[3H]-1,2,4-triazol-3-one
  - Dimethylphosphate
  - Dimethylthiophosphate
- Malathion
  - Dimethyldithiophosphate
  - Dimethylphosphate
  - Dimethylthiophosphate
  - Malathion dicarboxylic acid
- Methamidophos
- Methidathion
  - Dimethyldithiophosphate
  - Dimethylphosphate
  - Dimethylthiophosphate
- Methyl parathion
  - Dimethylphosphate
  - Dimethylthiophosphate
  - *p*-Nitrophenol
- Naled
  - Dimethylphosphate
- Oxydemeton-methyl
  - Dimethylphosphate
  - Dimethylthiophosphate
- Parathion (Ethyl parathion)
  - Diethylphosphate
  - Diethylthiophosphate
  - *p*-Nitrophenol
- Phorate
  - Diethyldithiophosphate
  - Diethylphosphate
  - Diethylthiophosphate
- Phosmet (Imidan)
  - Dimethyldithiophosphate
  - Dimethylphosphate
  - Dimethylthiophosphate
- Pirimiphos-methyl
  - 2-(Diethylamino)-6-methylpyrimidin-4-ol/one
  - Dimethylphosphate
  - Dimethylthiophosphate
- Sulfotep
  - Diethylphosphate
  - Diethylthiophosphate
- Temephos
  - Dimethylphosphate
  - Dimethylthiophosphate
- Terbufos
  - Diethyldithiophosphate
  - Diethylphosphate
  - Diethylthiophosphate
- Tetrachlorvinphos
  - Dimethylphosphate

Pyrethroid Pesticides [3]

- Allethrin
  - *cis/trans*-Dimethylvinylcyclopropane carboxylic diacid
- Cyfluthrin
  - *cis*-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*cis*-DCCA)
  - *trans*-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*trans*-DCCA)
  - 4-Fluoro-3-phenoxybenzoic acid
- Cyhalothrin (including *lamba*- and *gamma*-)
  - 3-Phenoxybenzoic acid (3-PBA)

Cypermethrin (including *cis*- and *trans*-)
- *cis*-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*cis*-DCCA)
- *trans*-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*trans*-DCCA)
- 3-Phenoxybenzoic acid (3-PBA)

Deltamethrin
- *cis*-3-(2,2-Dibromovinyl)-2,2-dimethylcyclopropane carboxylic acid
- 3-Phenoxybenzoic acid (3-PBA)

Fenpropathrin
- 3-Phenoxybenzoic acid (3-PBA)

Permethrin (including *cis*- and *trans*-)
- *cis*-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*cis*-DCCA)
- *trans*-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*trans*-DCCA)
- 3-Phenoxybenzoic acid (3-PBA)

Pyrethrin 1
- *cis/trans*-Dimethylvinylcyclopropane carboxylic diacid

Resmethrin
- *cis/trans*-Dimethylvinylcyclopropane carboxylic diacid

Tralomethrin
- 3-Phenoxybenzoic acid (3-PBA)

Other Pesticides

1,4-Dichlorobenzene (*p*-Dichlorobenzene)
- 2,5 Dichlorophenol

ortho-Phthalates [1]

Benzylbutyl phthalate (BzBP)
- Mono-benzyl phthalate (MBzP)
- Mono-*n*-butyl phthalate (MnBP)

Diallyl phthalate

Di-*n*-butyl phthalate (DnBP)
- Mono-n-butyl phthalate (MnBP)
- Mono-3-hydroxybutyl phthalate (MHBP)

Di-isobutyl phthalate (DIBP)
- Mono-isobutyl phthalate (MIBP)
- Mono-2-methyl-2-hydroxypropyl phthalate

Dicyclohexyl phthalate (DCHP)
- Mono-cyclohexyl phthalate (MCHP)

Diethyl phthalate (DEP)
- Mono-ethyl phthalate (MEP)

Di-2-ethylhexyl phthalate (DEHP)
- Mono-(2-carboxymethylhexyl) phthalate
- Mono-(2-ethyl-5-carboxypentyl) phthalate (MECPP)
- Mono-2-ethylhexyl phthalate (MEHP)
- Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)
- Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)

Di-*n*-hexyl phthalate

Di-isodecyl phthalate (DIDP)
- Mono-(carboxynonyl) phthalate (MCNP)

Di-isoheptyl phthalate

Di-isononyl phthalate (DINP)
- Mono-(carboxyoctyl) phthalate (MCOP)
- Mono-(hydroxyisononyl) phthalate
- Mono-isononyl phthalate (MINP)
- Mono-(oxoisononyl) phthalate

Dimethyl phthalate (DMP)
- Mono-methyl phthalate (MMP)

Di-*n*-octyl phthalate (DnOP)
- Mono-(3-carboxypropyl) phthalate (MCPP)
- Mono-*n*-octyl phthalate (MnOP)

Di-*n*-pentyl phthalate

Di-2-propylheptyl phthalate

Diundecyl phthalate

Di-isoundecyl phthalate

Di-isotridecyl phthalate

Polychlorinated Biphenyls (PCBs), Dioxin-Like [3]

Coplanar PCBs [3]

3,4,4′,5-Tetrachlorobiphenyl (PCB 81)
3,3′,4,4′,5-Pentachlorobiphenyl (PCB 126)
3,3′,4,4′,5,5′-Hexachlorobiphenyl (PCB 169)

Mono-*ortho*-Substituted PCBs [3]

2,3,3′,4,4′-Pentachlorobiphenyl (PCB 105)
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)
2,3′,4,4′,5-Pentachlorobiphenyl (PCB 118)
2',3,4,4',5-Pentachlorobiphenyl (PCB 123)
2,3,3′,4,4′,5-Hexachlorobiphenyl (PCB 156)
2,3,3′,4,4′,5′-Hexachlorobiphenyl (PCB 157)
2,3′,4,4′,5,5′-Hexachlorobiphenyl (PCB 167)
2,3,3′,4,4′,5,5′-Heptachlorobiphenyl (PCB 189)

Polychlorinated Biphenyls (PCBs), Non-Dioxin-Like [3]

2,2′,5-Trichlorobiphenyl (PCB 18)
2,4,4′-Trichlorobiphenyl (PCB 28)
2,2′,3,5′-Tetrachlorobiphenyl (PCB 44)
2,2′,4,5′-Tetrachlorobiphenyl (PCB 49)
2,2′,5,5′-Tetrachlorobiphenyl (PCB 52)
2,3′,4,4′-Tetrachlorobiphenyl (PCB 66)
2,4,4′,5-Tetrachlorobiphenyl (PCB 74)
2,2′,3,4,5′-Pentachlorobiphenyl (PCB 87)
2,2′,4,4′,5-Pentachlorobiphenyl (PCB 99)
2,2′,4,5,5′-Pentachlorobiphenyl (PCB 101)
2,3,3′,4′,6-Pentachlorobiphenyl (PCB 110)
2,2′,3,3′,4,4′-Hexachlorobiphenyl (PCB 128)

2,2′,3,4,4′,5′-Hexachlorobiphenyl (PCB 138)
2,2′,3,4′,5,5′-Hexachlorobiphenyl (PCB 146)
2,2′,3,4′,5′,6-Hexachlorobiphenyl (PCB 149)
2,2′,3,5,5′,6-Hexachlorobiphenyl (PCB 151)
2,2′,4,4′,5,5′-Hexachlorobiphenyl (PCB 153)
2,3,3′,4,4′,6-Hexachlorobiphenyl (PCB 158)
2,2′,3,3′,4,4′,5-Heptachlorobiphenyl (PCB 170)
2,2′,3,3′,4,5,5′-Heptachlorobiphenyl (PCB 172)
2,2′,3,3′,4,5′,6′-Heptachlorobiphenyl (PCB 177)
2,2′,3,3′,5,5′,6-Heptachlorobiphenyl (PCB 178)
2,2′,3,4,4′,5,5′-Heptachlorobiphenyl (PCB 180)
2,2′,3,4,4′,5′,6-Heptachlorobiphenyl (PCB 183)
2,2′,3,4′,5,5′,6-Heptachlorobiphenyl (PCB 187)
2,2′,3,3′,4,4′,5,5′-Octachlorobiphenyl (PCB 194)
2,2′,3,3′,4,4′,5,6-Octachlorobiphenyl (PCB 195)
2,2′,3,3′,4,4′,5,6′-Octachlorobiphenyl (PCB 196)
2,2′,3,3′,4,5,5′,6-Octachlorobiphenyl (PCB 199)
2,2′,3,4,4′,5,5′,6-Octachlorobiphenyl (PCB 203)
2,2′,3,3′,4,4′,5,5′,6-Nonachlorobiphenyl (PCB 206)
2,2′,3,3′,4,4′,5,5′,6,6′-Decachlorobiphenyl (PCB 209)

Polychlorinated Biphenyls (PCBs)

Hydroxy-PCBs (Metabolites of PCBs) [11]

4-Hydroxy-PCB 107
4-Hydroxy-PCB 120
4′-Hydroxy-PCB 130
3′-Hydroxy-PCB 138
4-Hydroxy-PCB 146
3-Hydroxy-PCB 153
4′-Hydroxy-PCB 172
3′-Hydroxy-PCB 180
4-Hydroxy-PCB 187
4′-Hydroxy-PCB 193

Polycyclic Aromatic Hydrocarbons (PAHs) [3, 12]

3-Hydroxybenzo[a]pyrene
6-Hydroxychrysene
3-Hydroxyphenanthrene

Tobacco Smoke

Nicotine
- Cotinine
- Hydroxycotinine

NNK (4-[Methylnitrosamino]-1-[3-pyridyl]-1-butanone)
- NNAL (4-[Methylnitrosamino)-1-(3-pyridyl)-1-butanol)

Notes

[1] All members of the chemical class are priority chemicals, including, but not limited to, the chemicals listed.

[2] Diesel exhaust is a complex mixture that contains many components, one or more of which may be useful as an indicator for biomonitoring.

[3] All members of the chemical class are not priority chemicals; only the specific chemicals listed are priority chemicals.

[4] These brominated phenols are part of the chemical group "brominated and chlorinated organic compounds used as flame retardants", which are listed as priority chemicals. The brominated phenols are also included in the category "environmental phenols" because the laboratory measures them with other environmental phenols.

[5] These chlorinated phenols, with the exception of triclosan, are metabolites of certain pesticides that are listed as priority chemicals. These chlorophenols are also included in the category "environmental phenols" because the laboratory measures them with other environmental phenols.

[6] Pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol have been removed from the priority list, because they were mistakenly added in a previous version of the list. These three phenols are designated chemicals only.

[7] Includes *n*-butylparaben and isobutylparaben.

[8] The SGP recommended that the Program develop methods for antimony and beryllium that meet the Program's quality assurance/quality control (QA/QC) standards.

[9] PFASs are fluorinated aliphatic substances that contain the moiety C_nF_{2n+1}. In a perfluoroalkyl substance (also known as a "perfluorochemical"), all carbon atoms, except for carbon atoms associated with functional groups (such as an aldehyde group), are fully fluorinated. In a polyfluoroalkyl substance, at least one (but not all) of the carbon atoms is fully fluorinated

[10] Fungicides, herbicides, and insecticides are grouped under the general heading of "Pesticides."

[11] Hydroxy-PCBs are measured as biomarkers of exposure to the listed PCBs.

[12] The SGP recommended that the three hydroxy-PAHs shown be listed as priority chemicals. These three hydroxy-PAHs are metabolites of benzo[a]pyrene, chrysene and phenanthrene, respectively.