

## Chemical and Product Classes of Substances Tested in the BCOP Assay

Substance	CASRN <sup>1</sup>	Chemical Class	Product Class
1-1 (#1)	-	Formulation	Insect repellent
1-2 (#2)	-	Formulation	Insect repellent
1-3 (#3)	-	Formulation	Insect repellent
2-4 (#4)	-	Formulation	Insect repellent
2-7 (#7)	-	Formulation	Insect repellent
2-8 (#8)	-	Formulation	Insect repellent
Acetone	67-64-1	Ketone	Solvent; Antiseptic; Chemical intermediate; Raw material
Alkyl phosphoric acid ester/amine salt	-	Organic salt, Ester, Amine	Petroleum product
All Purpose Cleaner (#5)	-	Formulation	Cleaner
All Purpose Cleaner (#7)	-	Formulation	Cleaner
Allyl alcohol	107-18-6	Alcohol	Pesticide
Aluminum hydroxide	21645-51-2	Alkali, Aluminum compound	Chemical intermediate, Dessicant
2-Aminophenol	95-55-6		Chemical intermediate
Ammonium nitrate	6484-52-2	Inorganic salt, Onium compound	Fertilizer; Chemical intermediate; Industrial explosive
Amway all fabric bleach	-	Formulation	Detergent
Amway automatic dishwashing compound for soft water	-	Formulation	Detergent
Amway automatic dishwashing compound, standard formula	-	Formulation	Detergent

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Amway concrete floor cleaner	-	Formulation	Cleaner
Amway Dish Drops dishwashing liquid	-	Formulation	Detergent
Amway dry chlorine bleach	-	Formulation	Bleach
Amway fabric softener	-	Formulation	Fabric softener
Amway Kool Wash delicate fabric detergent	-	Formulation	Detergent
Amway LOC all purpose cleaner	-	Formulation	Cleaner
Amway prewash liquid	-	Formulation	Detergent
Amway Pursue disinfectant cleaner	-	Formulation	Cleaner
Amway Redu dye stain remover	-	Formulation	Stain remover
Amway SA8 laundry liquid	-	Formulation	Detergent
Amway SA8 limited phos laundry powder	-	Formulation	Detergent
Anthracene	120-12-7	Polycyclic	Dye manufacturing agent
Anti-Dandruff Shampoo (HZY) 100%	-	Formulation	Surfactant-containing formulation
Aromatic hydrocarbon #1	-	Hydrocarbon (cyclic)	Solvent/industrial chemical; Petrochemical product
Aromatic hydrocarbon #2	-	Hydrocarbon (cyclic)	Solvent/industrial chemical; Petrochemical product
Aryl phosphonates	-	Not classified	Lubricant additive; Petrochemical product
L-Aspartic acid	70-47-3	Amino acid	Organic intermediate; Fungicides; Germicides

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Baby Shampoo No. 1 (HZP)	-	Formulation	Surfactant-containing formulation
Baby Shampoo No. 2 (HZF)	-	Formulation	Surfactant-containing formulation
Bathroom Cleaner (#6)	-	Formulation	Cleaner
Benchmark-Group 1 (#12)	-	Formulation	Insect repellent
Benchmark-Group 2 (#13)	-	Formulation	Insect repellent
Benzalkonium chloride (100%)	8001-54-5	Onium compound	Surfactant (cationic); Bactericide; Fungicide; Preservative
Benzalkonium chloride (1 %)	8001-54-5	Inorganic salt, Onium compound	Fertilizer; Chemical intermediate; Industrial explosive
Benzalkonium chloride (10%)	8001-54-5	Onium compound	Surfactant (cationic); Bactericide; Fungicide; Preservative
Benzalkonium chloride (5%)	8001-54-5	Onium compound	Surfactant (cationic); Bactericide; Fungicide; Preservative
Benzethonium chloride	121-54-0	Amine, Onium compound	Bactericide
Benzoyl-L-tartaric acid	2743-38-6	Carboxylic acid, Ester	Optical resolution agent
Betaine monohydrate	590-47-6	Amino acid, Onium compound	Not classified
BRIJ-35	9002-92-0	Alcohol	Emulsifier
4-Bromophenetole	589-10-6	Ether	Not classified
Bubble Bath (HZK) 100%	-	Formulation	Surfactant-containing formulation
n-Butanol	71-36-3	Ketone	Solvent; Synthetic flavor; Drycleaning
2-Butoxyethanol	111-76-2	Alcohol	Solvent

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Butyl acetate	123-86-4	Ester	Solvent; Synthetic flavor ingredient
Butyl cellosolve	111-76-2	Alcohol, Ester	Solvent
Butyrolactone	96-48-0	Lactone, Heterocycle	Synthetic intermediate; Solvent
gamma-Butyrolactone	96-48-0	Heterocyclic, Lactone	Synthetic intermediate; Solvent
Captan 90 concentrate	133-06-2	Imide, Organic sulfur compound	Pesticide
4-Carboxybenzaldehyde	619-66-9	Carboxylic acid, Aldehyde	Not classified
Carboxylic acid amides	-	Formulation	Lubricant additive; Petrochemical product
Cetylpyridinium bromide (0.1%)	140-72-7	Heterocyclic, Onium compound	Surfactant (cationic); Germicide; Laboratory reagent
Cetylpyridinium bromide (1%)	140-72-7	Surfactant, cationic	Germicide; Laboratory reagent
Cetylpyridinium bromide (10%)	140-72-7	Heterocyclic, Onium compound	Surfactant (cationic); Germicide; Laboratory reagent
Cetylpyridinium bromide (6%)	140-72-7	Heterocyclic, Onium compound	Surfactant (cationic); Germicide; Laboratory reagent
Chlorhexidine	55-56-1	Amine/Amidine	Disinfectant; Mouthwash; Anti-infective agent
2-Chloro-2,4,4-trimethylpentane	-	Hydrocarbon (halogenated)	Solvent/industrial chemical; Petrochemical product
Clarified slurry oil	-	Hydrocarbon (cyclic)	Petrochemical product
Cleaner/Degreaser (#13)	-	Formulation	Cleaner
Cleansing Gel (HZQ) 100%	-	Formulation	Surfactant-containing formulation
Cutting fluid (conc.) #1	-	Formulation	Cutting fluid; Petrochemical product

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Substance	CASRN <sup>1</sup>	Chemical Class	Product Class
Cutting fluid (conc.) #2	-	Formulation	Cutting fluid; Petrochemical product
Cyclohexanol	108-93-0	Alcohol	Solvent; Chemical intermediate
Cyclohexanone	108-94-1	Ketone, Hydrocarbon (cyclic)	Solvent, Chemical intermediate
Degreaser (#16)	-	Formulation	Degreaser
Deoxycholic acid, sodium salt	302-95-4	Alcohol, Carboxylic acid (salt)	Detergent/Surfactant, Chemical intermediate
Diacetone alcohol	123-42-2	Ketone, Alcohol	Solvent
Dibenzyl phosphate	1623-08-1	Ester, Organophosphorus compound	Not classified
2,6-Dichlorobenzoyl chloride	4659-45-4	Acyl halide	Anti-infective; Anti-fungal; Preservative
2,4-Dichloro-5-sulfamoylbenzoic acid	2736-23-4	Amide, Organic sulfur compound	Intermediate for pharmaceuticals, pesticides, perfumes
2,4-Difluoronitrobenzene	446-35-5	Acyl halide	Anti-infective; Anti-fungal; Preservative
1,3-Diisopropylbenzene	99-62-7	Hydrocarbon (cyclic)	Not classified
Dimethylbiguanide	657-24-9	Amidine	Pharmaceutical
2,2-Dimethylbutanoic acid	595-37-9	Carboxylic acid	Pharmaceutical metabolite
2,5-Dimethylhexanediol	110-03-2	Alcohol	Intermediate for pharmaceuticals, pesticides, perfumes
Dimethyl sulfoxide	67-68-5	Organic sulfur compound	Solvent
Dodecane	112-40-3	Hydrocarbon (acyclic)	Not classified
EDTA, di-potassium salt	25102-12-9	Amine, Carboxylic acid (salt)	Chelator

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Ethanol	64-17-5	Alcohol	Solvent; Beverages; Antifreeze agent
Ethanol (#14)	64-17-5	Alcohol	Solvent
2-Ethoxyethanol	110-80-5	Alcohol	Solvent
Ethyl acetate	141-78-6	Ester	Solvent; Synthetic flavoring
Ethyl acetoacetate	141-97-9	Carboxylic acid, Ketone	Chemical intermediate, Flavoring agent
2-Ethylhexanol	104-76-7	Alcohol	Intermediate for pharmaceuticals, pesticides, perfumes
2-Ethyl-1-hexanol	104-76-7	Alcohol	Solvent; Plasticizer
Ethylhexyl acid phosphate ester	-	Ester, Carboxylic acid	Lubricant additive; Petrochemical product
5-Ethylidene-2-norbornene	16219-75-3	Not classified	Solvent/industrial chemical; Petrochemical product
Ethyl-2-methylacetoacetate	609-14-3	Ketone, Ester	Not classified
3-Ethyltoluene	620-14-4	Hydrocarbon (cyclic)	Not classified
Ethyl trimethyl acetate	3938-95-2	Ester	Solvent
Eye Make-Up Remover (HZH) 100%	-	Formulation	Surfactant-containing formulation
Facial Cleaning Foam (HZR) 25%	-	Formulation	Surfactant-containing formulation
Facial Cleanser (HZZ) 100%	-	Formulation	Surfactant-containing formulation
Floor Cleaner (#10)	-	Formulation	Cleaner
Floor Cleaner (#2)	-	Formulation	Cleaner

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Floor Stripper (#14)	-	Formulation	Floor stripper
Floor Stripper (#17)	-	Formulation	Floor stripper
Floor Stripper (#18)	-	Formulation	Floor stripper
Foam Bath (HZL) 100%	-	Formulation	Surfactant-containing formulation
Fomesafen	72128-02-0	Imide, Ether, Nitro compound	Pesticide
Furan	110-00-9	Heterocyclic	Chemical intermediate
Gel Cleanser (HZE) 100%	-	Formulation	Surfactant-containing formulation
General Cleaner (#11)	-	Formulation	Cleaner
General Cleaner (#12)	-	Formulation	Cleaner
Glass Cleaner (#19)	-	Formulation	Cleaner
Gluconolactone	90-80-2	Carboxylic acid, Lactone, Carbohydrate	Food additive
DL-Glutamic acid	19285-83-7	Amino acid	Not classified
Glycerol	56-81-5	Alcohol	Solvent; Plasticizer; Lubricant; Emollient; Drug vehicle
3-Glycidoxypropyltrimethoxysilane	2530-83-8	Organosilicon compound	Adhesive
Hand Soap (HZU) 25%	-	Formulation	Surfactant-containing formulation
Heavy Duty Cleaner (#15)	-	Formulation	Cleaner
Heavy Duty Cleaner/Degreaser (#9)	-	Formulation	Cleaner

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Hexadecyltrimethylammonium bromide	57-09-0	Organic salt, Onium compound	Agricultural chemical; Germicide; Drug/Therapeutic agent
1,5-Hexadiene	592-42-7	Hydrocarbon (acyclic)	Not classified
Hexane	110-54-3	Hydrocarbon (acyclic)	Solvent
n-Hexanol	111-27-3	Alcohol	Solvent; Chemical intermediate; Synthetic flavor ingredient
Imidazole	288-32-4	Heterocyclic	Anti-fungal; Enzyme inhibitor
Iminodibenzyl	494-19-9	Heterocyclic	Personal care product
Isobutanol	78-83-1	Alcohol	Solvent; Chemical intermediate; Flavor ingredient
Isopropanol	67-63-0	Alcohol	Solvent; Aerosol formulations (ingredient)
N-Lauroylsarcosine, sodium salt	7631-98-3	Amide, Amino acid (salt)	Surfactant (anionic)
Laurylsulfobetaine	14933-08-5	Amine, Onium compound	Detergent, Surfactant (zwitterionic)
Liquid Soap No. 2 (HZW) 25%	-	Formulation	Surfactant-containing formulation
Liquid Soap No. 1 (HZB) 25%	-	Formulation	Surfactant-containing formulation
Magnesium carbonate	56378-72-4	Inorganic salt	Chemical intermediate
Maneb	12427-38-2	Amine/Amidine, Organic salt, Urea compound	Pesticide
Meat Room Degreaser (#3)	-	Formulation	Degreaser
2-Mercaptopyrimidine	1450-85-7	Acyl halide	Anti-infective; Anti-fungal; Preservative
Metal Cleaner (#20)	-	Formulation	Cleaner



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Methanol	67-56-1	Alcohol	Solvent
2-Methoxyethanol	109-86-4	Alcohol	Solvent; Plasticizer
Methyl acetate	79-20-9	Ester	Solvent; Chemical intermediate; Synthetic flavor ingredient
Methyl cyanoacetate	105-34-0	Ester, Nitrile compound	Adhesive; Pharmaceutical intermediate
Methyl cyclopentadiene dimer	-	Cyclic hydrocarbon	Solvent/industrial chemical; Petrochemical product
Methylcyclopentane	96-37-7	Ketone	Solvent; Manufacture of lacquers, varnishes, cosmetics, pharmaceuticals
Methyl ethyl ketone	78-93-3	Ketone	Solvent; Manufacture of lacquers, varnishes, cosmetics, pharmaceuticals
Methyl isobutyl ketone	108-10-1	Ketone	Solvent; Synthetic flavor; Drycleaning
1-Methylpropyl benzene	135-98-8	Hydrocarbon (cyclic)	Not classified
Mild Shampoo (HZJ) 25%	-	Ketone	Solvent; Synthetic flavor; Drycleaning
MYRJ-45	-	Ketone	Solvent; Manufacture of lacquers, varnishes, cosmetics, pharmaceuticals
1-Naphthalene acetic acid	86-87-3	Carboxylic acid, Polycyclic compound	Pesticide
1-Naphthalene acetic acid, Na salt	61-31-4	Carboxylic acid (salt), Polycyclic compound	Pesticide
1-Nitropropane	108-03-2	Hydrocarbon (acyclic), Nitro compound	Solvent, Chemical intermediate
n-Octanol	111-87-5	Alcohol	Solvent; Fragrance
Parafluoriline	371-40-4	Amine/Amidine	Intermediate for herbicides; Dyes
2,4-Pentanedione	123-54-6	Ketone	Solvent; Plasticizer

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Petroleum ether	8032-32-4	Hydrocarbon (acyclic)	Solvent
Petroleum wax	-	Wax	Petrochemical product
Phenylbutazone	50-33-9	Heterocyclic	Pharmaceutical
1-Phenyl-3-pyrazolidone	92-43-3	Heterocyclic	Photographic agent
Polishing Scrub (HZT) 100%	-	Formulation	Surfactant-containing formulation
Polyalkenylsuccinate ester/amine salt	-	Amidine	Lubricant additive; Petrochemical product
Polyethylene glycol 400	25322-68-3	Alcohol, Polyether	Surfactant (nonionic), Lubricant, Plasticizer, Solvent
Polyethylene glycol 600	-	Alcohol, Polyether	Surfactant (nonionic)
Pot and Pan Cleaner (#8)	-	Formulation	Cleaner
Potassium cyanate	590-28-3	Inorganic salt	Herbicide; Pharmaceutical intermediate
Process oil	-	Oil	Petrochemical product
Promethazine hydrochloride	58-33-3	Amine/Amidine, Heterocyclic, Organic sulfur compound	Antihistamine; Anti-nausea drug
Propylene glycol	57-55-6	Alcohol	Solvent
Propyl-4-hydroxybenzoate	94-13-3	Carboxylic acid, Phenol	Antimicrobial
Pyridine	110-86-1	Heterocyclic	Solvent; Intermediate for pharmaceuticals, dyes, pesticides
Quinacrine	69-05-6	Heterocyclic	Drug/Therapeutic agent
Shampoo No. 1 (HZC) 25%	-	Formulation	Surfactant-containing formulation

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Shampoo No. 2 (HZX)	-	Formulation	Surfactant-containing formulation
Shampoo No. 3 (HZM) 25%	-	Formulation	Surfactant-containing formulation
Shampoo No. 4 (HZV) 25%	-	Formulation	Surfactant-containing formulation
Shampoo No. 5 (HZD) 25%	-	Formulation	Surfactant-containing formulation
Shampoo No. 6 (HZN) 25%	-	Formulation	Surfactant-containing formulation
Shampoo No. 7 (HZA)	-	Formulation	Surfactant-containing formulation
Shampoo No. 8 (HZG) 25%	-	Formulation	Surfactant-containing formulation
Shower Gel (HZS) 100%	-	Formulation	Surfactant-containing formulation
Skin Cleanser (HZI) 100%	-	Formulation	Surfactant-containing formulation
Sodium hydroxide (1%)	1310-73-2	Alkali	Caustic agent
Sodium hydroxide (10%)	1310-73-2	Alkali	Caustic agent
Sodium lauryl sulfate (15 %)	151-21-3	Carboxylic acid (salt)	Surfactant (anionic); Detergent
Sodium lauryl sulfate (3 %)	151-21-3	Carboxylic acid (salt)	Surfactant (anionic); Detergent
Sodium lauryl sulfate (30 %)	151-21-3	Carboxylic acid (salt)	Surfactant (anionic); Detergent
Sodium oxalate	62-76-0	Carboxylic acid (salt)	Textile finishing; Pyrotechnic, Industrial byproduct
Sodium perborate	10486-00-7	Inorganic salt, Boron compound	Household cleaner; Detergent
Tetraaminopyrimidine sulfate	5392-28-9	Amine, Heterocycle, Inorganic salt	Not classified

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Thiadiazole alkyl derivative	-		Lubricant additive; Petrochemical product
Thiourea	62-56-6	Organic sulfur compound	Photographic agent; Flame-retardant; Chelation reagent and catalyst; Chemical
Toilet Bowl Cleaner (#1)	-	Formulation	Cleaner
Toilet Bowl Cleaner (#4)	-	Formulation	Cleaner
Toluene	108-88-3	Hydrocarbon (cyclic)	Solvent
Trichloroacetic acid (3%)	76-03-9	Carboxylic acid	Caustic agent; Fixative; Herbicide
Trichloroacetic acid (30%)	76-03-9	Carboxylic acid	Caustic agent; Fixative; Herbicide
1,2,3-Trichloropropane	96-18-4	Hydrocarbon (halogenated)	Solvent
Triethanolamine	102-71-6	Amine, Alcohol	Antimicrobial, Chemical intermediate
1,2,4-Trimethylbenzene	95-63-6	Hydrocarbon (cyclic)	Chemical intermediate
Triton X-100 (1%)	9002-93-1	Ether	Surfactant (nonionic)
Triton X-100 (10 %)	9002-93-1	Ether	Surfactant (nonionic), Detergent, Emulsifier
Triton X-100 (5%)	9002-93-1	Ether	Surfactant (nonionic)
Triton X-155	9010-44-0	Ether	Surfactant (nonionic)
Tween 20	9005-64-5	Ester, Polyether	Surfactant (nonionic); Detergent
Xylene	1330-20-7	Hydrocarbon (cyclic)	Agricultural chemical

<sup>1</sup> CASRN = Chemical Abstracts Service Registry Number