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

| Substance | CASRN[1] | 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 |
| 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 |

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

| Substance | CASRN[1] | Chemical Class | Product Class |
|---|---|---|---|
| Aromatic hydrocarbon #1 | - | Hydrocarbon (cyclic) | Solvent/industrial chemical; Petrochemical product |
| Aromatic hydrocarbon #2 | - | Hydrocarbon (cyclic) | Solvent/industrial chemical; Petrochemical product |
| Aryl phosponates | - | Not classified | Lubricant additive; Petrochemical product |
| L-Aspartic acid | 70-47-3 | Amino acid | Organic intermediate; Fungicides; Germicides |
| 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 |
| 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 |

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

| Substance | CASRN[1] | Chemical Class | Product Class |
|---|---|---|---|
| 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 |
| 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 pharmaceticals, 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 pharmaceticals, 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 |
| 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 pharmaceticals, pesticides, perfumes |
| 2-Ethyl-1-hexanol | 104-76-7 | Alcohol | Solvent; Plasticizer |

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

| Substance | CASRN[1] | Chemical Class | Product Class |
|---|---|---|---|
| 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 |
| 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 |
| 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 |

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

| Substance | CASRN[1] | Chemical Class | Product Class |
|---|---|---|---|
| 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 |
| 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 |
| Parafluoraniline | 371-40-4 | Amine/Amidine | Intermediate for herbicides; Dyes |
| 2,4-Pentanedione | 123-54-6 | Ketone | Solvent; Plasticizer |
| Petroleum ether | 8032-32-4 | Hydrocarbon (acyclic) | Solvent |
| Petroleum wax | - | Wax | Petrochemical product |

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

| Substance | CASRN[1] | Chemical Class | Product Class |
|---|---|---|---|
| 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 intermdiate |
| 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 |
| 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 |

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| Substance | CASRN[1] | Chemical Class | Product Class |
|---|---|---|---|
| Tetraaminopyrimidine sulfate | 5392-28-9 | Amine, Heterocycle, Inorganic salt | Not classified |
| Thiadiazole alkyl derivative | - | | Lubricant additive; Petrochemical product |
| Thiourea | 62-56-6 | Organic sulfur compound | Photographic agent; Flame-retardant; Chelation reagent and catalyst; Chemical intermediate; Pesticide; Drug/Therapeutic agent |
| 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 intermdiate |
| 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 |

[1]CASRN = Chemical Abstracts Service Registry Number