

Appendix B

Chemical and Product Class Information for the Substances Tested in the IRE Test Method

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Appendix B1

Chemical and Product Class Information for the Substances Tested in the IRE Test Method

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Table of Chemical and Product Class Information

Substance	CASRN	Chemical Class	Product Class
Acetaldehyde	75-07-0	ORGANIC	Flammable liquid used in manufacture of acetic acid, perfumes, and flavors
Acetic acid	64-19-7	CARBOXYLIC ACID	Food preservative and acidifier, Solvent, Manuf of acetates, acetyl compounds, cellulose acetate, rayon, plastics and rubber in tanning
Acetone	67-64-1	KETONE	Solvent; Antiseptic; Chemical intermediate; Raw material
Acetone (F33)	67-64-1	KETONE	Solvent; Antiseptic; Chemical intermediate; Raw material
2-(Acetyloxy)-1-phenylethanone (F27)	-	KETONE, ESTER	Raw material
Allyl alcohol (F34)	107-18-6	ALCOHOL	Resins, Plasticizers, War gas, Allyl compounds
gamma-(Aminocarbonyl)-N-methyl-N,N-bis(1-methylethyl)-gamma-phenyl-, iodide (F14)	-	ONIUM, AMIDE	Active pharmaceutical ingredient
1-(5-Amino-2-methoxyphenyl) piperazine hydrochloride (F20)	-	HETEROCYCLE, AMINE	Chemical intermediate
tetra-Aminopyrimidine sulfate	5392-28-9	AMINE, HETEROCYCLE, SALT, INORGANIC	Developer
Ammonium nitrate	6484-52-2	SALT, INORGANIC, ONIUM	Fertilizer; Chemical intermediate; Industrial explosive
Ammonium nitrate (F36)	6484-52-2	SALT, INORGANIC, ONIUM	Fertilizer; Chemical intermediate; Industrial explosive
L-Aspartic acid	70-47-3	AMINO ACID	Organic intermediate; Fungicides; Germicides
Benzalkonium chloride	8001-54-5	INORGANIC SALT, ONIUM	Surfactant (cationic), Bactericide, Fungicide, Preservative
Benzalkonium chloride (1 %)	8001-54-5	ONIUM	Surfactant (cationic), Bactericide, Fungicide, Preservative
Benzalkonium chloride (10%)	8001-54-5	ONIUM	Surfactant (cationic), Bactericide, Fungicide, Preservative
Benzalkonium chloride (5%)	8001-54-5	ONIUM	Surfactant (cationic), Bactericide, Fungicide, Preservative
3-((Benzylthio)methyl)-6-chloro-,1,1-dioxide (F29)	-	ETHER, SULFUR COMPOUND, ORGANIC	Active pharmaceutical ingredient
Brij 35	9002-92-0	ALCOHOL	Detergent, Solubilizer, Emulsifier, Lubricant
Butanol	71-36-3	ALCOHOL	Solvent; Chemical intermediate; Flavor ingredient
iso-Butanol	78-83-1	ALCOHOL	Solvent; Chemical intermediate; Flavor ingredient
n-Butanol (F35)	71-36-3	ALCOHOL	Solvent; Chemical intermediate; Flavor ingredient

Table of Chemical and Product Class Information

Substance	CASRN	Chemical Class	Product Class
2-Butoxyethyl acetate	112-07-2	ESTER	Solvent, Textile dyeing and printing, Leather treatment, Production of plasticizers, Stabilizer
N-Butyl acetate	123-86-4	ESTER	Solvent; Synthetic flavor ingredient
n-Butyl acetate (F39)	123-86-4	ESTER	Solvent; Synthetic flavor ingredient
g-Butyrolactone	96-48-0	HETEROCYCLE, LACTONE	Synthetic intermediate; Solvent
Captan 90 concentrate	133-06-2	IMIDE, SULFUR COMPOUND, ORGANIC	Pesticide
4-Carboxybenzaldehyde	619-66-9	CARBOXYLIC ACID, ALDEHYDE	Manufacturing impurity (polyester); Developer intermediate
Cetylpyridium bromide (F37)	140-72-7	ONIUM, HETEROCYCLE	Surfactant (cationic), Germicide, Laboratory reagent
Cetylpyridinium bromide (0.1%)	140-72-7	ONIUM, HETEROCYCLE	Surfactant (cationic), Germicide, Laboratory reagent
Cetylpyridinium bromide (10%)	140-72-7	ONIUM, HETEROCYCLE	Surfactant (cationic), Germicide, Laboratory reagent
Cetylpyridinium bromide (6%)	140-72-7	ONIUM, HETEROCYCLE	Surfactant (cationic), Germicide, Laboratory reagent
5-Chloro-2,4-disulfamoyl chloroacetanilide (F22)	-	AMIDE	Raw material
Chloroform	67-66-3	HYDROCARBON, HALOGENATED COMPOUND, ORGANIC	Solvent
5-Chloro-3-methylbenzo[b]thiophene-2-sulfonyl chloride (F18)	-	SULFUR COMPOUND, ORGANIC	Raw material
5-Chloro-N-[4-methoxy-3-(1-piperaziny)phenyl]-3-methylbenzo[B]thiophene-2-sulfonamide monohydrochloride (F4)	-	HETEROCYCLE, ETHER, AMIDE	Active pharmaceutical ingredient
Chlorhexidine	55-56-1	AMIDINE	Disinfectant; Mouthwash; Anti-infective agent
Cyclohexanol	108-93-0	ALCOHOL	Solvent; Chemical intermediate
Dibenzoyl-L-tartaric acid	2743-38-6	CARBOXYLIC ACID	Optical resolution agent
Dibenzyl phosphate	1623-08-1	ESTER, ORGANOPHOSPHOROUS COMPOUND	Not classified
Dibutyltin chloride	683-18-1	ORGANOTIN COMPOUND	Molluscicide, Slime control in paper mills, Wood preservative, disinfectant, Biocide in cooling systems, Leather and textile processing
3,4-Dichloroaniline hydrochloride (F11)	-	AMINE, ORGANIC SALT, CYCLIC HYDROCARBON	Chemical intermediate
2,6-Dichlorobenzenesulfonyl chloride (F1)	6579-54-0	ORGANIC SALT, CYCLIC HYDROCARBON, SULFUR COMPOUND	Raw material
2,6-Dichlorobenzoyl chloride	4659-45-4	ACYL HALIDE	Anti-infective; Anti-fungal; Preservative
2,6-Dichloro-5-fluoro-beta-oxo-3-pyridinepropanoate (F16)	96568-04-6	ESTER, KETONE, HETEROCYCLE	Chemical intermediate
1-(3,4-Dichlorophenyl)-5-isopropylbiguanide HCl (F6)	537-21-3	AMIDINE	Active pharmaceutical ingredient
3,4-Dimethoxybenzaldehyde (F19)	120-14-9	ALDEHYDE	Raw material
2,2-Dimethylbutanoic acid	595-37-9	CARBOXYLIC ACID	Pharmaceutical metabolite

Table of Chemical and Product Class Information

Substance	CASRN	Chemical Class	Product Class
Dimethyl carbonate (F30)	616-38-6	CARBOXYLIC ACID	Raw material
2,5-Dimethylhexanediol	110-03-2	ALCOHOL	Intermediate for pharmaceuticals, pesticides, perfumes
Dimethyl sulfoxide	67-68-5	SULFUR COMPOUND	Solvent, Antifreeze, Paint and varnish remover,
Ethanol	64-17-5	ALCOHOL	Solvent; Beverages; Antifreeze agent
Ethyl acetate	141-78-6	ESTER	Solvent; Synthetic flavoring
2-Ethyl-1-hexanol	104-76-7	ALCOHOL	Solvent; Plasticizer
Ethyl-2-methylacetoacetate	609-14-3	KETONE, ESTER	Not classified
Ethyl trimethyl acetate	3938-95-2	ESTER	Solvent
Fluorescein, sodium	518-47-8	POLYCYCLIC COMPOUND, CYCLIC HYDROCARBON	Phthalic indicator dye; used to detect corneal lesions in ophthalmology
p-Fluoraniline	371-40-4	AMINE	Intermediate for herbicides; Dyes
Fomesafen, acid form (solid)	72128-02-0	IMIDE, ETHER, NITRO COMPOUND	Pesticide
Glycerol	56-81-5	ALCOHOL	Solvent; Plasticizer; Lubricant; Emollient; Drug vehicle
Glycerol	56-81-5	ALCOHOL	Solvent; Plasticizer; Lubricant; Emollient; Drug vehicle
Glycerol (F41)	56-81-5	ALCOHOL	Solvent; Plasticizer; Lubricant; Emollient; Drug vehicle
n-Hexane	110-54-3	ACYCLIC HYDROCARBON	Solvent; Adhesive; Gasoline additive
n-Hexanol	111-27-3	ALCOHOL	Solvent; Chemical intermediate; Synthetic flavor ingredient
3-Hydroxy-2-phenyl-4-quinolinecarboxylic acid (F24)	485-89-2	HETEROCYCLE, CARBOXYLIC ACID, ALCOHOL	Chemical intermediate
HZA-1	-	FORMULATION	Shampoos, Hair care
HZB-1	-	FORMULATION	Soaps and surfactants
HZC-1	-	FORMULATION	Shampoos, Hair care
HZD-1	-	FORMULATION	Shampoos, Hair care
HZE-1	-	FORMULATION	Soaps and surfactants
HZF-1	-	FORMULATION	Shampoos, Hair care
HZG-1	-	FORMULATION	Shampoos, Hair care
HZH-1	-	FORMULATION	Soaps and surfactants, cosmetics
HZI-1	-	FORMULATION	Soaps and surfactants
HZJ-1	-	FORMULATION	Shampoos, Hair care
HZK-1	-	FORMULATION	Soaps and surfactants
HZL-1	-	FORMULATION	Soaps and surfactants
HZM-1	-	FORMULATION	Shampoos, Hair care
HZN-1	-	FORMULATION	Shampoos, Hair care
HZP-1	-	FORMULATION	Shampoos, Hair care
HZQ-1	-	FORMULATION	Soaps and surfactants
HZR-1	-	FORMULATION	Soaps and surfactants
HZS-1	-	FORMULATION	Soaps and surfactants
HZT-1	-	FORMULATION	Soaps and surfactants
HZU-1	-	FORMULATION	Soaps and surfactants
HZV-1	-	FORMULATION	Shampoos, Hair care
HZW-1	-	FORMULATION	Soaps and surfactants
HZX-1	-	FORMULATION	Shampoos, Hair care
HZY-1	-	FORMULATION	Shampoos, Hair care
HZZ-1	-	FORMULATION	Soaps and surfactants
Imidazole	288-32-4	HETEROCYCLE	Anti-fungal; Enzyme inhibitor
1H-Indole-2,3-dione (F28)	91-56-5	HETEROCYCLE	Raw material
Iodine chloride with pyridine (1:1) (F10)	6443-90-9	HETEROCYCLE	Raw material

Table of Chemical and Product Class Information

Substance	CASRN	Chemical Class	Product Class
di-Isopropyl aminoethyl diphenyl acetamide (F15)	-	AMINE, AMIDE	Raw material
Isopropyl dicyanamide (F9)	35695-36-4	AMINE, NITRILE	Chemical intermediate
Maneb	12427-38-2	AMINE, SALT, ORGANIC, UREA	Pesticide
Mebrophen hydramine HCl (F5)	13977-28-1	ETHER, AMINE, SALT	Active pharmaceutical ingredient
Mercuric chloride	7546-30-7	INORGANIC	Topical antiseptic/disinfectant; corrosive agent
2-Methoxyethanol	109-86-4	ALCOHOL	Solvent
1-(2-Methoxyphenyl)piperazine hydrogen sulfate (F2)	-	HETEROCYCLE, SULFUR COMPOUND, ORGANIC SALT	Raw material
Methyl acetate	79-20-9	ESTER	Solvent; Chemical intermediate; Synthetic flavor ingredient
6-(Methylamino)-2-pyridine ethanol formate (1:1) (salt) (F17)	-	HETEROCYCLE, AMINE, CARBOXYLIC ACID, SALT	Chemical intermediate
Methyl cyanoacetate	105-34-0	ESTER, NITRILE	Adhesive; Pharmaceutical intermediate
Methylcyclopentane	96-37-7	HYDROCARBONS, CYCLIC	Solvent
4,4'-Methylenebis-(2,6-di-tert-butylphenol) (F43)	118-82-3	SULFUR COMPOUND, ORGANIC	Raw material
Methyl ethyl ketone	78-93-3	KETONE	Solvent; Manufacture of lacquers, varnishes, cosmetics, pharmaceuticals
Methyl ethyl ketone (F38)	78-93-3	KETONE	Solvent; Manufacture of lacquers, varnishes, cosmetics, pharmaceuticals
Methyl isobutyl ketone	108-10-1	KETONE	Solvent; Synthetic flavor; Drycleaning
1-Naphthalene acetic acid	86-87-3	CARBOXYLIC ACID, POLYCYCLIC COMPOUND	Pesticide
1-Naphthalene acetic acid, Na salt	61-31-4	SALT, ORGANIC, POLYCYCLIC COMPOUND, CARBOXYLIC ACID, SALT	Pesticide
2-Nitro-4-propoxyaniline (F23)	-	NITRO COMPOUND, AMINE, ETHER	Chemical intermediate
2-Nitro-4-thiocyananiline (F7)	54029-45-7	NITRO COMPOUND, AMINE, SULFUR COMPOUND, ORGANIC	Chemical intermediate
2-Nitro-4-thio-N-propylaniline (F21)	54393-89-4	AMINE, NITRO COMPOUND, SULFUR COMPOUND, ORGANIC	Chemical intermediate
n-Octanol	111-87-5	ALCOHOL	Solvent; Fragrance
tetra-N-Octylammonium bromide (F8)	14866-33-2	ONIUM	Raw material
2-(4-Oxopentyl)-1H-isoindole-1,3 (2H)-dione (F26)	3197-25-9	HETEROCYCLE	Chemical intermediate
(S)-1-Phenyl-N-propylamine (F13)	3789-59-1	AMINE, ORGANIC	Raw material
Polyethylene glycol 400	25322-68-3	ALCOHOL, ETHER	Surfactant (nonionic), Lubricant, Plasticizer, Solvent
Polyethylene glycol 400 (F44)	25322-68-3	ALCOHOL, ETHER	Surfactant (nonionic), Lubricant, Plasticizer, Solvent
Potassium cyanate	590-28-3	SALT, INORGANIC	Herbicide; Pharmaceutical intermediate
Promethazine HCl	58-33-3	AMINE, HETEROCYCLE, SULFUR COMPOUND, ORGANIC	Antihistamine; Anti-nausea drug
iso-Propanol	67-63-0	ALCOHOL	Solvent; Aerosol formulations (ingredient)

Table of Chemical and Product Class Information

Substance	CASRN	Chemical Class	Product Class
Propylene glycol (F42)	57-55-6	ALCOHOL	Antifreeze, Solvent, Emulsifier, Resins, Inhibitor of fermentation and mold growth
Pyridine	110-86-1	HETEROCYCLE	Solvent; Intermediate for pharmaceuticals, dyes, pesticides
4,4'-Pyridylpiperidine (F12)	-	HETEROCYCLE	Raw material
Quinacrine	69-05-6	AMINE, HETEROCYCLE, POLYCYCLIC COMPOUND	Anti-infective (anti-helminthic)
Silver nitrate	7761-88-8	INORGANIC	Germicide
Sodium dicyanamide (F3)	-	AMIDE	Raw material
Sodium dodecyl sulfate	151-21-3	ORGANIC SALT, CARBOXYLIC ACID, SALT	Anionic detergent, Emulsifier, Lubricant, Solubilizer
Sodium hydroxide	1310-73-2	INORGANIC, ALKALi	Acid neutralizer; caustic agent
Sodium hydroxide (1%)	1310-73-2	ALKALI	Caustic agent
Sodium hydroxide (10%)	1310-73-2	ALKALI	Caustic agent
Sodium hydroxide (F31)	1310-73-2	ALKALI	Caustic agent
Sodium lauryl sulfate (15 %)	151-21-3	SALT, ORGANIC, CARBOXYLIC ACID, SALT	Surfactant (anionic), Detergent
Sodium lauryl sulfate (3 %)	151-21-3	SALT, ORGANIC, CARBOXYLIC ACID, SALT	Surfactant (anionic), Detergent
Sodium oxalate	62-76-0	SALT, ORGANIC, CARBOXYLIC ACID, SALT	Textile finishing; Pyrotechnic, Industrial byproduct
Sodium perborate tetrahydrate	10486-00-7	SALT, INORGANIC, BORON COMPOUND	Household cleaner; Detergent
4,4'-Sulfonylbisbenzenamine (F25)	80-08-0	SULFUR COMPOUND, ORGANIC	Active pharmaceutical ingredient
Toluene	108-88-3	CYCLIC HYDROCARBON	Solvent; Gasoline additive; Manufacture of benzene derivatives, medicines, dyes, perfumes
Toluene	108-88-3	CYCLIC HYDROCARBON	Solvent; Gasoline additive; Manufacture of benzene derivatives, medicines, dyes, perfumes
Toluene (F40)	108-88-3	CYCLIC HYDROCARBON	Solvent; Gasoline additive; Manufacture of benzene derivatives, medicines, dyes, perfumes
Triacetin	102-76-1	ESTER	Solvent, Fixative
Tributyltin chloride	688-73-3	ORGANOTIN COMPOUND	Molluscicide, Slime control in paper mills, Wood preservative, disinfectant, Biocide in cooling systems, Leather and textile processing
Trichloroacetic acid (3%)	76-03-9	CARBOXYLIC ACID	Caustic agent; Fixative; Herbicide
Trichloroacetic acid (30%)	76-03-9	CARBOXYLIC ACID	Caustic agent; Fixative; Herbicide
Trichloroacetic acid (F32)	76-03-9	CARBOXYLIC ACID	Caustic agent; Fixative; Herbicide
Triethanolamine	102-71-6	AMINE, ALCOHOL	Chemical intermediate, Cosmetic ingredient, Vulcanization acelerator
Triton X-100 (10 %)	9002-93-1	ETHER	Surfactant (nonionic), Detergent, Emulsifier
Triton X-100 (5 %)	9002-93-1	ETHER	Surfactant (nonionic), Detergent, Emulsifier

Table of Chemical and Product Class Information

Substance	CASRN	Chemical Class	Product Class
Tween 20	9005-64-5	ESTER, ETHER	Surfactant (nonionic), Detergent

Appendix B2

Table of Formulation Components in Gettings et al. (1996)

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Formulation	Formulation Components	% (w/w)
HZA-Shampoo No. 7^a	Water	53.86
	Sodium lauryl sulfate (30%)	25.00
	Disodium laureth sulfocuccinate (40%)	15.00
	Lauramide DEA	0.50
	Butylene glucol	5.00
	Methyl and propylparabens	0.25
	Carageenan	0.35
	Methyl and methylchloroisothiazolinone	0.04
HZB-Liquid Soap No. 1	Water and volatiles	65-85
	Ammonium lauryl sulfate	1-10
	Sodium laureth sulfate	1-10
	Lauramide DEA	1-10
	Glycerine	1-10
	Isostearamidopropyl morpholine lactate	0.1-1.0
	Disodium ricinoleamido MEA-sulfosuccinate	0.1-1.0
	DMDM hydantoin	0.1-1.0
	Citric acid	0.1-1.0
	Triclosan	0.1-1.0
	Tetrasodium EDTA	<0.1
	FD&C Yellow No. 5	<0.1
FD&C Red No. 4	<0.1	
HZC-Shampoo No. 1	Water	14.037
	Laurylamidopropyl betaine (30%)	60.000
	Cetrimonium chloride	16.000
	PEG-3 cocamide	4.500
	Citric acid	3.500
	Sodium chloride	1.000
	Ditallowdimonium chloride (73%)	0.700
	Lauryl alcohol	0.250
Methyl and chloroisothiazolinone (1.5%)	0.033	

Formulation	Formulation Components	% (w/w)
HZD-Shampoo No. 5^a	Water	54.120
	Sodium laureth sulfate (26%)	38.00
	Cocamide DEA	3.000
	Cocamide propyl betaine (37%)	1.750
	Disodium EDTA	0.050
	Methylparaben	0.150
	Propylparaben	0.100
	Citric acid	0.250
	FD&C Yellow No. 5 (1%)	0.050
	D&C Red No. 33 (0.5%)	0.015
	DMDM hydantoin (54%)	0.300
	BHT	0.050
	Sodium glutamate	2.000
Sodium choride	0.170	
HZE-Gel Cleanser^a	Water	59.974
	Acylglutamate CT-12 (30%)	15.000
	Cocoamphodiacetate (50%)	15.000
	Sodium nonoxynol-6 phosphate (88.5%)	6.000
	Quaternium-26 (58%)	1.500
	PEG-120-methyl glucose dioleate	1.500
	Citric acid	0.100
	Sodium citrate	0.500
	Disodium EDTA	0.050
	Methylparaben	0.150
	DMDM hydentoin (55%)	0.200
	FD&C Yellow No. 10 (1%)	0.001
	D&C Blue No. 1 (0.746%)	0.025
HZF-Baby Shampoo No. 2^a	Water	57.653
	Sodium laureth (2EO) sulfate (28%)	21.430
	Disodium laureth-3-sulfosuccinate (40%)	9.090
	Cocamidopropyl betaine (30%)	10.000
	Lauramide DEA	1.500
	Kathon CG (1.5%)	0.067
	Tetrasodium EDTA (30%)	0.260

Formulation	Formulation Components	% (w/w)
HZG-Shampoo No. 8	Water	48.43
	Sodium laureth sulfate (28%)	20.00
	Sodium lauryl sulfate (30%)	25.00
	Lauramide-DEA	5.00
	Hydroxyethyl tallow glycinate	1.00
	Citric acid	0.20
	PEG-45M	0.20
	Methyl and propylparabens	0.13
	Methyl and chloromethyl-isothiazolinone	0.04
HZH-Eye Make-Up Remover^a	Water	96.242
	Sodium laureth sulfate (21%)	0.900
	Cocoamphocarboxyglycinate (40%)	1.100
	Hexylene glycol	1.000
	Dipotassium phosphate	0.394
	Potassium phosphate	0.102
	Allantoin	0.050
	Methyl paraben	0.150
	EDTA	0.150
	Rose water	0.008
	Thimerosal	0.003
HZI-Skin Cleanser	Water	44.0
	Sodium laureth sulfate (30%)	50.0
	Cocamide MEA	5.0
	Sodium chloride	0.4
	Disodium EDTA	0.2
	Imidizolidinyl urea	0.2
	Methylparaben	0.2
	Benzoic acid	0.1

Formulation	Formulation Components	% (w/w)
HZJ-Mild Shampoo^a	Water	52.09
	Tween 20	12.63
	Cocoamphodiacetate (24%)	21.25
	PEG 6000	2.60
	Cedepal TD403 (75%)	6.53
	Hydrochloric acid (15%)	1.68
	Arlacel 20	0.92
	Benzyl alcohol	0.10
	Dowicil 200	0.10
	D&C Yellow No. 10 (0.2%)	1.70
D&C Orange No. 4 (0.2%)	0.20	
HZK-Bubble Bath^a	Water	68.75
	Sodium laureth sulfate (60%)	25.00
	Lauramide DEA	4.50
	SD Alcohol 3-A	3.75
	Sodium chloride	0.80
	Triethanolamine	0.40
	Phosphoric acid (86.5%)	0.35
	Sorbic acid	0.20
HZL-Foam Bath	Water	47.760
	Sodium laureth sulfate (26%)	46.000
	Cocamido propyl betaine (30%)	2.500
	Sodium chloride	2.400
	Glycol monostearate	0.400
	Color solution	0.300
	DMDM hydantoin (54%)	0.250
	Methylparaben	0.200
	Propylparaben	0.100
	BHT	0.050
	Aloe vera gel	0.015
	Citric acid	0.016
	Tetrasodium EDTA	0.010

Formulation	Formulation Components	% (w/w)
HZM-Shampoo No. 3	Water	80-90
	Ammonium lauryl sulfate	5-10
	Lauramide DEA	1-5
	Cocamidopropyl sultaine	1-5
	Citric acid	<1.0
	Ammonium chloride	<1.0
	DMDM Hydantoin	<1.0
	Tetrasodium EDTA	<1.0
	Methylparaben	<1.0
	FD&C Yellow No. 5	<0.1
	D&C Yellow No. 10	<0.1
	FD&C Red No. 4	<0.1
PPG-9	q.s.	
HZN-Shampoo No. 6^a	Water	44.381
	Sodium laureth (2EO) sulfate (28%)	43.634
	cocamidopropyl betaine (30%)	11.760
	Tetrasodium EDTA	0.125
	Formalin	0.100
HZP-Baby Shampoo No. 1^a	Water	49.54
	PEG-80 sorbitan laurate (50%)	23.60
	Sodium trideceth sulfate (50%)	17.40
	Lauroamphocarboxyglycinate (50%)	5.40
	PEG-150 distearate (50%)	5.00
	Cocamidoroyl hydroxysultane (50%)	4.00
	Sodium laureth-13 carboxylate (50%)	1.00
	Quaternium 15	0.03
	Benzyl alcohol	0.05
	FD&C Yellow No. 5 (1.0%)	0.25
	FD&C Yellow No. 6 (1.0%)	0.05
	Citric acid	0.08

Formulation	Formulation Components	% (w/w)
HZQ-Cleansing Gel^a	Water	68.93
	Lauramphocarboxyglycinate (25%)	10.40
	Sodium trideceth sulfate (16%)	10.60
	TEA-lauryl sulfate (40%)	3.50
	Lauramide DEA	0.50
	PEG-150 distearate	2.80
	Propylene glycol	1.40
	Hexylene glycol	1.05
	Citric acid	0.28
	Diazolidinyl urea	0.20
	Methylparaben	0.20
	Sodium citrate	0.14
HZR-Facial Cleansing Foam	Water	32.97
	Sodium cocoyl isethionate	20.00
	Sodium lauroyl sarcosinate (30%)	25.00
	PPG-5-ceteth-10 phosphate	4.00
	Linoleamide DEA	2.00
	Sorbitol (70%)	2.75
	Glycol stearate	5.50
	Glycerin	2.00
	Diglycerol	2.00
	Cetearyl alcohol	2.75
	Mineral oil	0.50
	Methylparaben	0.15
	Propylparaben	0.10
	Trisodium EDTA	0.10
	Beeswax	0.10
Ceresin	0.06	
Sodium borate	0.02	

Formulation	Formulation Components	% (w/w)
HZS-Shower Gel	Water	27.567
	Sodium lauroyl sarcosinate (30%)	25.000
	Laurimidopropyl betaine (30%)	25.000
	Cocamidopropyl hydroxysultaine (50%)	15.000
	Linoleamide DEA	4.500
	Glycol stearate	1.000
	Polyquaternium-2	1.000
	Phosphoric acid (86.5%)	0.600
	Tetrasodium EDTA	0.200
	BHT	0.050
	PPG-12-buteth-16	0.050
	Methyl and chlorosothiazolinone (1.5%)	0.033
	HZT-Polishing Scrub	Water
Mineral oil		10.00
Lauroamphocarboxyglycinate (25%)		8.80
Sodium trideceth sulfate (16%)		9.40
Petrolatum		6.60
Isopropyl palmitate		6.60
Propylene glycol		5.00
Cetyl palmitate		4.40
Glyceryl stearate and PEG-100 stearate		4.40
Aluminum silicate		3.00
Cetyl alcohol		2.50
Polypropylene		2.50
Magnesium aluminum silicate		1.00
Titanium dioxide		0.50
Hexylene glycol		0.40
Imidazolidinyl urea		0.30
Methylparaben		0.30
Lactic acid		0.25
Propylparaben	0.20	

Formulation	Formulation Components	% (w/w)
HZU-Hand Soap	Water	37.95
	Sodium C14-16 olefin sulfonate (36%)	20.25
	Sodium lauroyl sarcosinate	20.00
	Cocamidopropyl hydroxysultaine	8.00
	Propylene glycol	3.00
	Glycerol stearate	3.00
	PPG-12-PEG-50 lanolin	3.00
	Polyquaternium-7	2.00
	Citric acid	1.00
	Hydrolysed animal protein	1.00
	Polyquaternium-10	0.50
	Quaternium-15	0.20
	Aloe vera gel	0.10
HZV-Shampoo No. 4	Water	80-90
	Ammonium lauryl sulfate	5-10
	Lauramide DEA	1-5
	Cocamidopropyl sultaine	<1.0
	Ammonium chloride USP	<1.0
	Citric acid	<1.0
	DMDM hydantoin	<1.0
	Tetrasodium EDTA	<1.0
	Methylparaben	<1.0
	FD&C Yellow No. 5	<1.0
	D&C Yellow No. 10	<1.0
	FD&C Red No. 4	<1.0
	PPG-9	q.s.
HZW-Liquid Soap No. 2	Water and volatiles	60-80
	TEA-lauryl sulfate	1-10
	Sodium laureth sulfate	1-10
	Sodium lauroyl sarcosinate	1-10
	Lauramide DEA	1-10
	Glycol distearate	1-10
	Isostearamideopropyl morpholine lactate	0.1-1.0
	Disodium ricinoleamido MEA-sulfosuccinate	0.1-1.0
	DMDM hydantoin	0.1-1.0
	Citric acid	0.1-1.0
Tetrasodium EDTA	<0.1	

Formulation	Formulation Components	% (w/w)
HZX-Shampoo No. 2	Water	69.1895
	Ammonium lauryl sulfate (25%)	25.0000
	Cocamide DEA	3.0000
	Hydroxypropyl methylcellulose	1.4500
	EDTA	0.6000
	Formaldehyde	0.2000
	Benzyl alcohol	0.2000
	Benzophenone-4 sodium hydroxide	0.0400
	Citric acid	0.0100
	Ammonium chloride	0.0100
FD&C Blue No. 1	0.0005	
HZY-Anti-Dandruff Shampoo	Water	27.13
	Sodium lauroyl sarcosinate (30%)	15.00
	Lauramide DEA	4.50
	TEA-lauryl sulfate (40%)	45.00
	Glycol distearate	3.00
	Zinc pyrithione	2.10
	Sodium chloride	1.20
	Citric acid	0.90
	Imidazolidinyl urea	0.50
	Methylparaben	0.30
	Propylparaben	0.10
Xanthan gum	0.27	

Formulation	Formulation Components	% (w/w)
HZZ-Facial Cleanser^a	Water	32.55
	Mineral oil	40.00
	Beeswax	2.30
	PEG-16 soya sterol	5.00
	PEG-8 dilaurate	2.00
	Cetearyl alcohol (70%)	0.80
	Ceteareth 20 (30%)	0.80
	Beheme acid	0.80
	Sodium borate	0.75
	Ceresin	0.50
	Carbopol dispersion (25%)	15.00
	Methylparaben	0.15
	Propylparaben	0.10
	Disodium EDTA	0.05

Abbreviations: 2EO = diethoxylated; BHT = Butylated hydroxytoluene; D&C = Drug and Cosmetic; DEA = Diethanolamide; EDTA = ethylenediaminetetraacetic acid; FD&C = Food, Drug, and Cosmetic; MEA = Monoethanolamide; PEG = Polyethylene glycol; PPG = Polypropylene glycol; TEA = Triethanolamine; USP = U.S. Pharmacopoeia; w/w = weight to weight ratio.

^aNoted formulations are included in the proposed recommended list of substances in **Section 12.0**.