

Appendix B

Chemical and Product Class Information for the Substances Tested in the HET-CAM Test Method

B1	Table of Chemical and Product Class Information	B-3
B2	Table of Formulation Components in Gettings et al. (1991)	B-19
B3	Table of Formulation Components in Gettings et al. (1994)	B-25
B4	Table of Formulation Components in Gettings et al. (1996)	B-35

[This Page Intentionally Left Blank]

Appendix B1

Table of Chemical and Product Class Information

[This Page Intentionally Left Blank]

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Acetic acid	64-19-7	-	Carboxylic acid	-
Acetoacetic acid glycolester	5459-04-1	-	Acetate	-
Acetone	67-64-1	-	Ketone	Solvent; Antiseptic; Chemical intermediate; Raw material
Acetonitrile	75-05-8	-	Nitrile	-
7-Acetoxyheptanal	-	-	-	-
n-Acetyl-Methionine	1115-47-5	N-acetyl-DL- methionine	Amino acid	-
Acetylsalicylic acid	50-78-2	-	Carboxylic acid	Analgesic
Acrylamide	79-06-1	-	Amide, Hydrocarbon	Laboratory reagent
Allyl alcohol	107-18-6	-	Alcohol	-
Aluminium hydroxide	21645-51-2	-	Alkali	-
Ambuphylline	5634-34-4	-	Heterocyclic	-
4-Amino-azobenzene-4-sulfonic acid	-	-	Acid	-
4-Amino-5-methoxy-2-methylbenzenesulfonic acid	6471-78-9	4-Amino-5-methoxy-o-toluenesulfonic acid	Hydrocarbon, Sulfur containing	-
Ammonium nitrate	6484-52-2	-	Inorganic	Fertilizer; Chemical intermediate; Industrial explosive
Ammonium persulfate	7727-54-0	-	Inorganic	-
Aniline	62-53-3	-	Amine	-
p-Anisidine	104-94-9	-	Amine	-
Anisole	100-66-3	Anisole D	Ether; Phenol	-
9,10-Anthracenedione	84-65-1	-	Quinone	-
Arcopal	-	-	-	-
Ascorbic acid	50-81-7	-	Acid	Metabolite
Aspartic acid	56-84-8	-	Amino acid	Neurotransmitter

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
L-Aspartic acid	70-47-3	-	Acid	Organic intermediate; Ingredient of Aspartame; Fungicides; Germicides
Azelaic acid	123-99-9	-	Carboxylic acid	-
B 25	-	-	-	-
Behydima	-	-	-	-
Benzalkonium chloride	8001-54-5	-	Surfactant, Cationic	Bactericide; Fungicide; Cationic surface active agent; Preservative
Benzoic acid	65-85-0	-	Carboxylic acid	Preservative
Benzoyl-L-tartaric acid	2743-38-6	-	Acid	-
Bis-(3-triethoxysilylpropyl)-tetrasulfide	-	-	-	-
n-Butanal	123-72-8	-	Aldehyde	-
Butanol	71-36-3	-	Alcohol	-
n-Butanol	71-36-3	-	Alcohol	-
Butyl acetate	123-86-4	-	Acetate	Solvent; Synthetic flavor ingredient
Butyl carbamate	592-35-8	-	Carboxylic acid	
gamma-Butyrolactone	96-48-0	-	Lactone	Synthetic intermediate; Solvent
Caffeine sodium benzoate	8000-95-1	-	Heterocyclic	-
Caffeine sodium salicylate	8002-85-5	-	Heterocyclic	-
Camphen	79-92-5	Camphene	Hydrocarbon	-
Captan 90 concentrate	133-06-2	Captan	Sulfur containing; Heterocyclic	Pesticide
Carbon black	1333-86-4	-	Inorganic	-
4-Carboxybenzaldehyde	619-66-9	-	Aldehyde	-
Cerium-2-ethylhexanoate	24593-34-8	Cerium ethyl hexonate	Carboxylic acid	-
Cetylpyridinium bromide	140-72-7	-	Surfactant, Cationic	Germicide; Laboratory reagent

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Cetyltrimethylammonium bromide	57-09-0	-	Amine; surfactant, Anionic	-
Chlorhexidine	55-56-1	-	Amidine	Disinfectant; Mouthwash; Anti- infective agent
Chlorhexidine gluconate Solution (20% Solution)	18472-51-0	-	Gluconate	-
Chlorhexidine hydrochloride	3697-42-5	-	Hydrocarbon	Disinfectant; Mouthwash; Anti- infective agent
1-Chlorooctane-8-ol	-	-	Alcohol	-
4-Chloro-methanilic acid	98-36-2	-	Hydrocarbon, Sulfur containing	-
4-Chloro-4-Nitrodiphenylether	1836-74-4	-	Ether	-
Cupric sulfate	7758-98-7	-	Inorganic	-
Cyclohexanol	108-93-0	-	Alcohol	Solvent; Chemical intermediate
3-Cyclohexene-1-methanol	1679-51-2	-	Alcohol	-
DC 8	-	-	-	-
Di(2-ethylhexyl) sodium sulfosuccinate	577-11-7	-	Ester; Surfactant, Anionic	-
Dibenzyl phosphate	1623-08-1	-	Organophosphate	-
1,4-Dibutoxy-benzene	104-36-9	-	Hydrocarbon	-
2,6-Dichlorobenzoyl chloride	4659-45-4	-	Acyl halide	-
Diepoxid 126	2386-87-0	Epoxy cyclohexane carboxylate	Ester; Epoxide	-
Diethylhexyl phthalate	117-81-7	-	Carboxylic acid	-
3-5-Dihydroxy-acetophenone	35086-59-0	-	Ketone	-
Diisopropanolamine	110-97-4	-	Alcohol; Amine	-
N,N-Dimethylacetamide	127-19-5	-	Amide	-
2,2-Dimethylbutanoic acid	595-37-9	-	Acid	Pharmaceutical metabolite
2,5-Dimethylhexanediol	110-03-2	-	Diol	-

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
2,5-Dimethylhexanediol	110-03-2	-	Diol	-
3,6-Dimethyloctanol	-	-	Alcohol	-
4,4-Dimethyl-3-oxo-pentanenitrile	59997-51-2	-	Nitrile	-
1-(2,6-dimethylphenoxy)-2-propanone	53012-41-2	-	Ketone	-
m-Dinitrobenzene	99-65-0	-	Cyclocarbon	-
Diphocars	-	-		-
1,2-Dodecanediol	1119-87-5	-	Alcohol	-
Domiphen bromide	538-71-6	-	Amine; Surfactant, Cationic	-
DTPA Pentasodium salt	140-01-2	Pentasodium pentetate	Amine; Carboxylic acid	-
E4	-	-	-	-
Ede 140	-	-	-	-
EDTA	60-00-4	-	Amine; Carboxylic acid	Pharmaceutical intermediate, Food additive
EDTA-4-Na salt	13235-36-4	-	Amine; Carboxylic acid	-
1,2-Epoxyoctane	286-62-4	-	Hydrocarbon	-
1,2-Epoxydodecane	285-67-6	-	Hydrocarbon	-
1,2-Epoxydodecane	2855-19-8	-	Hydrocarbon	-
Ethanol	64-17-5	-	Alcohol	Solvent; Beverages; Antifreeze agent
Ethiosan	-	-	-	-
Ethyl acetate	141-78-6	-	Carboxylic acid	Solvent; Synthetic flavoring
Ethylacrolein	922-63-4	-	Aldehyde	-
Ethyl butanal	97-96-1	-	Aldehyde	-
2-Ethyl-1-hexanol	104-76-7	-	Alcohol	Solvent; Plasticizer
Ethyl-2-methylacetoacetate	609-14-3	-	Acetate	-
Ethyl trimethyl acetate	3938-95-2	-	Acetate	Solvent
Fomesafen	72128-02-0	-	Amide	Pesticide
Gadopentetic acid dimeglumine salt	86050-77-3	Gadolinium complex N- methyl glucamine salt	Amine; Carboxylic acid	-

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Genagen	68139-91-3	-	-	-
Genomoll	115-96-8	Chlorophosphate ethanol	Organophosphate	-
C12/C14-Glucoside	-	-	-	-
Glutamic acid	56-86-0	-	Amino acid	Neurotransmitter
L-Glutamic acid hydrochloride	138-15-8	-	Amino acid	Neurotransmitter
Glycediol	-	-	Alcohol	-
Glycerin	56-81-5	-	Alcohol	-
Glycerol	56-81-5	-	Alcohol	Solvent; Plasticizer; Lubricant; Emollient; Drug vehicle
Glycolic acid	79-14-1	-	Carboxylic acid	-
Granuform	30525-89-4	Para-formaldehyde	Aldehyde	-
Hexachlorocyclopentadiene	77-47-4	-	Hydrocarbon	-
Hexahydrofarnesyl- acetone	502-69-2	-	Hydrocarbon	-
Hexamethylenetetramine	100-97-0	-	Amine	Antibacterial agent
2,5-Hexandion	110-13-4	-	Ketone	-
n-Hexane	110-54-3	-	Hydrocarbon	-
1,2,6-Hexanetriol	106-69-4	-	Alcohol	-
n-Hexanol	111-27-3	-	Alcohol	Solvent; Chemical intermediate; Synthetic flavor ingredient
Hnol	-	-	-	-
Hoe MBF	-	-	-	-
Hoe T 3761	-	-	-	-
Hydo 98	-	-	-	-
Hydroalcoholic Formulation 1-5% Alcohol Containing Formulation (PROD-00187)	-	-	Formulation	Fragrances
Hydroalcoholic Formulation 2-10% Alcohol Containing Formulation (PROD-00183)	-	-	Formulation	Cosmetics

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Hydroalcoholic Formulation 3-15% Alcohol Containing Formulation (PROD-00186)	-	-	Formulation	Cosmetics
Hydroalcoholic Formulation 4-20% Alcohol Containing Formulation (PROD-00185)	-	-	Formulation	Cosmetics
Hydroalcoholic Formulation 5-33% Alcohol Containing Formulation (PROD-00184)	-	-	Formulation	Lotions
Hydroalcoholic Formulation 6-40% Alcohol Containing Formulation (PROD-00189)	-	-	Formulation	Cosmetics
Hydroalcoholic Formulation 7-55% Alcohol Containing Formulation (PROD-00188)	-	-	Formulation	Sunscreens
Hydroalcoholic Formulation 8-65% Alcohol Containing Formulation (PROD-00180)	-	-	Formulation	Cosmetics
Hydroalcoholic Formulation 9-83% Alcohol Containing Formulation (PROD-00181)	-	-	Formulation	Fragrances
Hydroalcoholic Formulation 10-90% Alcohol Containing Formulation (PROD-00182)	-	-	Formulation	Cosmetics
2-Hydroxyethyliminodi-sodiumacetate	135-37-5	-	Carboxylic acid	-
2-Hydroxyisobutyric acid	594-61-6	-	Carboxylic acid; Fatty acid	-
2-Hydroxyisobutyric acid ethylester	80-55-7	-	Ester	-
Hypo 20	-	-	-	-
Hypo 36	-	-	-	-

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Hypo 45	-	-	-	-
Hypo 54	-	-	-	-
Hyton	-	-	-	-
Imidazole	288-32-4	-	Heterocyclic	Laboratory reagent
Iminodiacetic acid	142-73-4	Acetocacetic acid isopropyl ester	Carboxylic acid; Imine	-
Isobornyl acetate	125-12-2		Hydrocarbon	-
Isobutanal	78-84-2	Isobutyraldehyde	Aldehyde	-
Isobutanol	78-83-1	-	Alcohol	Solvent; Chemical intermediate; Flavor ingredient
Isodecylglucoside	-	-	-	-
Isononylaldehyde	35127-50-5	Isononanal	Aldehyde	-
Isopropanol	67-63-0	-	Alcohol	Solvent; Aerosol formulations (ingredient)
Isopropyl acetoacetate	542-08-5	-	Carboxylic acid	-
Isotridecanal	61497-46-9	-	-	-
Kerobit TP	-	-	-	-
alpha-Ketoglutaric acid	328-50-7	-	Carboxylic acid	-
Kuppler 43	-	-		-
Lactic acid	50-21-5	-	Carboxylic acid	-
alpha-Lactid	4511-42-6	Dimethyl dioxane dione	Heterocyclic	-
Lial-111-Glucoside	-	-	-	-
L-Lysine Monohydrate	39665-12-8	-	Amino acid	-
Maneb	12427-38-2	-	Carboxylic acid; Organometallic compound	Pesticide
Mecre	-	-	-	-
3-Mercapto-1,2,4-triazole	3179-31-5	-	Heterocyclic, Sulfur containing	-
m-Methoxybenzaldehyde	591-31-1	-	Aldehyde	-
Methyl acetate	79-20-9	-	Carboxylic acid	Solvent; Chemical intermediate; Synthetic flavor ingredient

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Methyl acetate	79-20-9	-	Carboxylic acid	-
Methyl cyanoacetate	105-34-0	-	Acetate	-
Methylcyclopentane	96-37-7	-	Hydrocarbon	-
Methyl ethyl ketone	78-93-3	-	Ketone	-
Methyl isobutyl ketone	108-10-1	-	Ketone	-
5-Methyl-1,3,4-thiadiazol-2-amine	108-33-8	-	Amine	-
Methylpentynol	77-75-8	-	Alcohol	-
N-(2-methylphenyl)-Imidodi-carbonimidic diamide	93-69-6	o-Tolyl biguanidine	Amide	-
Methylphosphonic acid bis (oxianylmethyl) ester	77275-34-9	-	Ester	-
2-Methyl-1-propanol	78-83-1	Isobutyl alcohol	Alcohol	-
Methyltetraglycol	9004-74-4	-	Alcohol	-
Methyltriglycol	112-35-6	-	Alcohol	-
Monoethanolamine	141-43-5	-	Alcohol; Amine	Surfactant, Laboratory reagent
1-Naphthalene acetic acid	86-87-3	-	Carboxylic acid	Pesticide
1-Naphthalene acetic acid, Na salt	61-31-4	-	Carboxylic acid	Pesticide
Napt	-	-	-	-
Nicotinamide	98-92-0	-	Amide	-
Nitroaniline	88-74-4	-	Amine	-
Nitrobenzene	98-95-3	-	Hydrocarbon	-
p-Nitrobenzoic acid	62-23-7	-	Carboxylic acid	-
Nitro-bis-octylamide	-	-	-	-
Nitropropane	108-03-2	-	Hydrocarbon	-
n-Octanol	111-87-5	-	Alcohol	-
Oil/Water Emulsion-HZA	-	-	Formulation	Conditioners, Hair
Oil/Water Emulsion-HZC	-	-	Formulation	Emollients
Oil/Water Emulsion-HZE	-	-	Formulation	Lotions
Oil/Water Emulsion-HZF	-	-	Formulation	Sunscreens
Oil/Water Emulsion-HZH	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZI	-	-	Formulation	Conditioners, Hair

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Oil/Water Emulsion-HZJ	-	-	Formulation	Cream
Oil/Water Emulsion-HZL	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZM	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZN	-	-	Formulation	Lotions
Oil/Water Emulsion-HZO	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZR	-	-	Formulation	Cleaners
Oil/Water Emulsion-HZS	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZT	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZU	-	-	Formulation	Sunscreens
Oil/Water Emulsion-HZV	-	-	Formulation	Cosmetics
Oil/Water Emulsion-HZW	-	-	Formulation	Roll-on Antiperspirant
Oil/Water Emulsion-HZY	-	-	Formulation	Shampoos, Hair
Olak	-	-	-	-
Ölesulf	-	-	-	-
Oxoöl 9N	-	-	-	-
P 32	-	-	-	-
Parafluoraniline	371-40-4	-	Aromatic	-
Phenol	108-95-2	-	Alcohol	Antiseptic, Disinfectant
o-Phenylenediamine	95-54-5	-	Amine	-
(-)Phenylephrine	59-42-7	-	Alcohol; Amine	-
(+)Phenylephrine	614-03-9	-	Alcohol; Amine	-
Phenylephrine hydrochloride	61-76-7	-	Alcohol; Amine	-
Phenylthiourea	103-85-5	-	Sulfur containing; Urea	-
Phosphonat A	-	-	-	-
Phthalic anhydride	85-44-9	-	Carboxylic acid	-
Piperazine	18833-13-1	Acefyllin piperazinate	Heterocyclic	-
PO 2	-	-	-	-
Polyethylene glycol 400	25322-68-3	-	Surfactant, nonionic	Polymer

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Polyethylene glycol butyl ether	9004-77-7	-	Alcohol	-
Polyethylene glycol dimethyl ether	24991-55-7	Dimethoxy polyethylene glycol	Ether	-
Polyethylene glycol	25322-68-3	-	Alcohol	-
Polyhexamethylene guanidine	-	-	-	Biocide
Polysolvan	7397-62-8	Butyl hydroxy acetate	Alcohol	-
Potassium cyanate	590-28-3	-	Inorganic	-
Potassium hexacyanoferrate II	14459-95-1	-	Inorganic	-
Potassium hexacyanoferrate III	13756-66-2	-	Inorganic	-
Potassium laurate	10124-65-9	-	Carboxylic acid; Surfactant, Cationic	-
Potato starch	56780-58-6	-	Hydrocarbon	-
Promethazine HCl	58-33-3	Phenergan, Promethergan	Sulfur containing; Heterocyclic	Pharmaceutical agent (antihistamine)
2-Propanol	67-63-0	-	Alcohol	Solvent, Disinfectant
Propylene glycol	57-55-6	-	Alcohol	
2-Pseudojonon	-	-	-	-
Pyridine	110-86-1	-	Heterocyclic	-
Quinacrine	69-05-6	Mepacrine	Heterocyclic; Hydrocarbon	Pharmaceutical agent (antiprotozoal)
Remolgan	-	-	-	-
beta-Resorcylic acid	89-86-1	-	Carboxylic acid	
Rigly	-	-	-	-
RK Blau	-	-	-	-
Rubinrot Y	-	-	-	-
Sacyclo	-	-	-	-
Salicylic acid	69-72-7	-	Carboxylic acid	
Sept	-	-	-	-
Silan 103	1067-25-0	Trimethoxypropyl silane	Hydrocarbon; Ether	-

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Silan 108	3069-40-7	Trimethoxyoctyl silane	Hydrocarbon; Ether	-
Silan 165	29055-11-6	Bis(3-trimethoxysilylpropyl)sulfide	Hydrocarbon; Ether; Sulfur containing	-
Silan 167	41453-78-5	3,3,14,14-Tetramethoxy-2,15-dioxo-7,8,9,10-tetrathia-3,14-disilahexadecane	-	-
Silan 253	18784-74-2	-	-	-
Silver nitrate	7761-88-8	-	Inorganic	-
Sodium bisulfite	7631-90-5	-	Inorganic	-
Sodium sulfite	7757-83-7	-	Inorganic	-
Sodium chloride	7647-14-5	-	Inorganic	-
Sodium cyanate	917-61-3	-	Cyanate	-
Sodium disilicate	13870-28-5	Silane 69	Inorganic	-
Sodium hydrogen sulfate	7681-38-1	Sodium bisulfate	Inorganic	-
Sodium hydroxide	1310-73-2	-	Alkali	-
Sodium lauryl ether sulfate	3088-31-1	Diethylene glycol monolauryl ether sodium sulfate	-	-
Sodium lauryl sulfate	151-21-3	-	Surfactant, Anionic	Detergent
Sodium monochloroacetate	3926-62-3	Sodium chloroacetate	Carboxylic acid	-
Sodium oxalate	62-76-0	-	Inorganic	-
Sodium perborate	10486-00-7	-	Inorganic	-
Sodium pyrosulfite	7681-57-4	Sodium metabisulfite	Inorganic	-
Stearyltrimethylammonium chloride	15461-40-2	-	Surfactant, Cationic	-
Styrene	100-42-5	-	Hydrocarbon	-
4-((2-sulfatoethyl)sulfonyl)-aniline	2494-89-5	2-Sulfanyl ethanol hydrogen sulfate	Amide	-

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Surfactant Based Formulation 1-HZA	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 2-HZB	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 3-HZC	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 4-HZD	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 5-HZE	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 6-HZF	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 7-HZG	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 8-HZH	-	-	Formulation	Cosmetics
Surfactant Based Formulation 9-HZI	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 10-HZJ	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 11-HZK	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 12-HZL	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 13-HZM	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 14-HZN	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 15-HZP	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 16-HZQ	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 17-HZR	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 18-HZS	-	-	Formulation	Soaps and Surfactants

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Surfactant Based Formulation 19-HZT	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 20-HZU	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 21-HZV	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 22-HZW	-	-	Formulation	Soaps and Surfactants
Surfactant Based Formulation 23-HZX	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 24-HZY	-	-	Formulation	Shampoos, Hair
Surfactant Based Formulation 25-HZZ	-	-	Formulation	Soaps and Surfactants
TA 01946 Alkylsilan	-	-	-	-
Tetraaminopyrimidine sulfate	5392-28-9	-	Heterocyclic	-
Tetrachloroethylene	127-18-4	-	Hydrocarbon	-
1,6,7,12-Tetrachloro-3,4,9,10-tetracarboxic acid anhydride	-	-	-	-
Tetrahydrofurfuryl alcohol	97-99-4	-	Alcohol	-
Theobromine	83-67-0	-	Heterocyclic	-
Theophylline sodium	3485-82-3	-	Heterocyclic	-
Theophylline sodium acetate	8002-89-9	-	Carboxylic acid	-
Thiourea	62-56-6	-	Sulfur containg	-
Tin-II-chloride	7772-99-8	-	Inorganic	-
Tocla	-	-	-	-
Toluene	108-88-3	-	Aromatic	-
Tributylamine	102-82-9	-	Amine	-
Trichloroacetic acid	76-03-9	-	Acid	-
Trichloroethane	71-55-6	-	Hydrocarbon	-
Triethanolamine	102-71-6	-	Alcohol; Amine	-
Triisooctylamine	25549-16-0	-	Amine	-
2,2,3-Trimethyl-3-Cyclopentene-1-acetaldehyde	4501-58-0	-	Aldehyde	-

Substances Used In HET-CAM Accuracy Analysis (Chemical and Product Classes)

Substance	CASRN	Synonyms	Chemical Class	Product Class
Trioxane	110-88-3	-	Heterocyclic	-
Triton X-100	9002-93-1	-	Surfactant, Nonionic	Detergent
Tween 20	9005-64-5	-	Surfactant, Nonionic	Detergent
Wessalith Slurry	-	-	-	-
Xanthinol nicotinate	437-74-1	-	Heterocyclic	-

Abbreviation: CASRN = Chemical Abstract Service Registry Number, EDTA = ethylenediaminetetraacetic acid.

Appendix B2

Table of Formulation Components in Gettings et al. (1991)

[This Page Intentionally Left Blank]

Components of Formulations in Gettings et al. (1991)

Formulation	Formulation Components	% (w/w)
5% Alcohol-Cologne	PPG-5 Ceteth-20	6.00
	SD Alcohol 40	5.00
	Methylchloroiothiazolinone/ Methylisothiazolinone	0.03
	Fragrance	1.00
	Water	87.97
10% Alcohol-Mouthwash	Sorbitol	20.000
	Cinnamon Oil	0.050
	Peppermint Oil	0.100
	Citric Acid	0.100
	FD&C Red No. 2	0.001
	Polysorbate 60	0.300
	SD Alcohol 40	10.000
	Water	69.349
15% Alcohol-Freshener	SD Alcohol 40	15.0
	Glycerin	2.0
	Allantoin	0.2
	Sodium Lactate	0.2
	Lactic Acid	0.2
	Imidizolidinyl Urea	0.1
	FD&C Color(s)	<0.01
	Fragrance	<0.01
	Water	Q.S.
20% Alcohol-Aftershave	SD Alcohol	21.10
	Methylparaben	0.20
	FD&C Blue No. 1*	0.10
	Water	78.60
	*(0.1% w/w solution)	
33% Alcohol-Perfumed Skin Lotion	Water	56.67
	SD Alcohol 40	33.00
	Isopropyl Palmitate	5.00
	Cetyl Alcohol	1.50
	PEG-40 Sterate	1.25
	Steareth-2	0.75
	Fragrance	0.50
	Oleth-10	0.50

Components of Formulations in Gettings et al. (1991)

Formulation	Formulation Components	% (w/w)
	Triethanolamine	0.38
	Carbomer	0.30
	Disodium EDTA	0.10
	Benzophenone-4	0.05
40% Alcohol-Deodorant	Water	56.5
	SD Alcohol 40	40.0
	Benzethonium chloride	0.5
	Urea	2.0
	Aluminum Chloride	1.0
55% Alcohol-Sunblock	SD Alcohol 40	55.00
	Water	20.75
	Methyl Gluceth-20	10.00
	Glycerin	10.00
	Ethyl Dihydroxypropyl PABA	3.00
	Hydroxypropylcellulose	1.25
65% Alcohol-Hair Styling Lotion	SD Alcohol 40	60.0
	PVP/VA Copolymer*	10.0
	Dimethicone Copolyol	0.2
	Fragrance	0.1
	Water	29.8
	*PVP/VA Copolymer is 50% alcohol; (i.e., contributes 5% alcohol to total)	
83% Alcohol-Cologne	SD Alcohol 40	82.35
	Fragrance	4.625
	Fragrance	5.375
	Water	7.5
	Benzophenone-2	0.1
	BHA	0.05
	FD&C Blue No. 1*	0.01 Q.S.
	D&C Orange No. 4*	0.01 Q.S.
	* (0.1% w/w solution)	
	* (2.0% w/w solution)	

Components of Formulations in Gettings et al. (1991)

Formulation	Formulation Components	% (w/w)
90% Alcohol-Pump Hair Spray	SD Alcohol 40	90.43
	Ethyl ester PVM/MA Copolymer	9.00
	Aminomethyl Propanol	0.45
	Fragrance	0.10
	Dimethicone Copolyol	0.02

Abbreviations: BHA = Butylated hydroxyanisole; D&C = Drug and Cosmetic; EDTA = ethylenediaminetetraacetic acid; FD&C = Food, Drug, and Cosmetic; PABA = *p*-Aminobenzoic acid; PEG = Polyethylene glycol; PPG = Polypropylene glycol; SD = Specially denatured.

[This Page Intentionally Left Blank]

Appendix B3

Table of Formulation Components in Gettings et al. (1994)

[This Page Intentionally Left Blank]

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
HZA-Hair Masque	Deionized water	80.163
	Emulsifying wax	6.000
	Glyceryl stearate	5.000
	Stearalkonium chloride	2.350
	Dye: Green Base HJI-01-180C	2.187
	Protein CPI	2.000
	Cocamidopropyl betaine	0.500
	Hydrochloric acid (10 w/w)	0.400
	Peach pit meal (30/100)	0.300
	Lanogel 21	0.250
	Glydant	0.150
	Methylparaben	0.150
	Extrapone #3	0.100
	Extrapone #5	0.100
	Extrapone Alpine Herbs Special	0.100
HZC-Emollient Cream	Emulsifying wax NP	5.00
	PPG-2 myristyl ether propionate	2.50
	Oleth-10	1.00
	Mineral Oil	0.50
	Squalane	3.00
	Beeswax	1.00
	Dimethicone	1.00
	Glycerin	5.00
	Imidazolidinyl urea	0.50
	Methylparaben	0.30
	Sodium borate	0.10
	Water	80.10

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
HZE-Hand and Body Lotion	Deionized water	84.10
	Glycerin, USP	5.00
	Mineral oil, 70 SUS	3.00
	Stearic acid	2.50
	Glycol stearate	1.50
	Triethanolamine 85-89%	1.00
	Acetulan	1.00
	Glyceryl monostearate C	0.70
	Cetyl alcohol	0.30
	Silicone oil 200 cSt ¹	0.20
	Veegum	0.20
	Methylparaben, USP	0.15
	Propylene glycol, USP	0.15
	Propylparaben, USP	0.10
	Carbopol 934	0.05
	Disodium sequestrene	0.05
HZF-Sunscreen SPF 15	Octyl methoxycinnamate	7.50
	Coconut oil	0.50
	Dimethicone	0.10
	Caprylic-capric triglyceride	0.50
	Squalane	0.50
	Tocopherol	0.10
	Stearic acid	2.50
	Glyceryl stearate	3.0
	Shea butter	0.25
	Butylparaben	0.10
	Propylparaben	0.15
	Octyl salicylate	0.50
	Benzphenone-3	6.00
	Propylene glycol	6.00
	Deionized water	60.96
	Methylparaben	0.30
	Triethanolamine (99%)	1.33
	Trisodium EDTA	0.10
Allantoin	0.10	
Imidazolidinyl urea	0.30	
Ethylparaben	0.10	

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
	Carbomer 934 (2% Aq)	9.00
	Polyacrylamide	0.01
	Fragrance	0.10
HZH-Cuticle Remover Cream	Carbopol 940	1.0
	Dewaxed lanolin	1.0
	Multi sterol base	1.0
	PDE (20M) sorbitan monolaurate	2.0
	Glycerin	10.0
	Potassium hydroxide 85%	1.4
	Deionized water	83.6
HZI-Hair Conditioner	Water	79.6
	Stearamidopropyl cetearyl dimonium tosylate (and) propylene glycol	3.5
	Cetearyl alcohol/cetareth-20	3.5
	Methyl gluceth-20	3.0
	PPG-10 lanolin ether	3.0
	C12-15 alcohols benzoate	1.5
	Cetyl alcohol	1.5
	Myristyl lactate	1.0
	Hydrolyzed animal protein	1.0
	Polyquaternium-10	0.75
	Citric acid	0.7
	DL-Panthenol	0.5
	Methylparaben	0.25
	Quaternium-15	0.2
HZJ-Foot Care Cream	Deionized water	70.5
	Veegum	2.0
	Triethanolamine 99%	1.25
	Pumice #1	1.0
	Methylparaben	0.30
	Stearic acid	4.0
	Paraffin wax	15.0
	Dimethyl polysiloxane	1.0
	Glyceryl monostearate	2.0
	Cetyl alcohol	1.0
	POE (40M) stearate	1.0

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
	POB (2M) stearyl alcohol	0.75
	Germall	0.2
HZL-Hydrophilic Ointment (5% SLS)	Methyl paraben	0.025
	Propyl paraben	0.015
	Sodium lauryl sulfate	5.0
	Propylene glycol	12.0
	Stearyl alcohol	25.0
	White petrolatum	25.0
	Purified water	33.0
HZM-Hydrophilic Ointment (10% SLS)	Methyl paraben	0.025
	Propyl paraben	0.015
	Sodium lauryl sulfate	10.0
	Propylene glycol	12.0
	Stearyl alcohol	25.0
	White petrolatum	25.0
	Purified water	28.0
HZN-Moisturizing Cream	Water	84.1
	Cetearyl alcohol	6.0
	Octyldodecanol	4.0
	PEG-7 glyceryl cocoate	3.5
	Sodium lauryl sulfate	2.0
	Quaternium-15	0.2
	Methylparaben	0.2
HZO-Cleansing Cream (1)	Deionized water	70-75
	Mineral oil	15-20
	Glycerine	1-5
	Octyl palmitate	1-5
	Cetearyl alcohol	1-5
	PEG stearate	1-5
	Steareth-2	1-5
	Carbopol	<1
	Preservatives	<1
	Triethanolamine	<1
	Botanical extract	<1

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
HZR-Hand Cleanser	Deionized water	50-95
	Mineral spirits	24-40
	Tall oil fatty acid	<4
	Nonoxynol-6	<4
	Nonoxynol-9	<4
	Carbomer-940	<1
	Sodium hydroxide	<1
	Lanolin	<0.5
	Methylparaben	<0.5
	Propylparaben	<0.5
HZS-Cleansing Cream	Water	52
	Paraffin	20
	Ceresin	8.0
	Stearic acid	9.0
	Triethanolamine	5.5
	Methyl, ethyl, and propyl parabens	0.4
	Imidazolidinyl urea	0.3
	Propylene glycol	3.0
HZT-Benzoyl Peroxide Cream (2.5%)	Deionized water	86.60
	Benzoyl peroxide (70%)	3.60
	Laureth-4	5.00
	Carbomer 940	1.00
	Butylene glycol	3.00
	Triethanolamine (99%)	0.50
	Trisodium EDTA	0.10
	Methylparaben	0.20
HZU-Sunscreen Lotion	Propylene glycol	5.0
	Lanolin	5.0
	Perfecta	2.5
	Methyl paraben	0.1
	Triethanolamine (99%)	1.0
	Hystrene 5016	4.0
	Water	74.3
	Sequestrene Na ₂	0.05
	Propyl paraben	0.05
	Homosalate	8.0

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
HZV-Hand and Nail Lotion	Deionized water	76.95
	2% Carbopol 934	9.0
	Hexyl laurate	2.50
	Stearic acid	2.00
	Sorbitol	1.50
	Cetyl alcohol	1.50
	Mineral oil 70 SUS	1.50
	Silicone 200/50 cSt ¹	1.00
	TEA 85-89%	0.95
	Cyclomethicone & dimethicone copolyol	0.75
	PEG-100 stearate	0.50
	Glycol stearate	0.50
	Glyceryl stearate	0.40
	Glydant	0.25
	Veegum, regular	0.20
	Methylparaben	0.15
	Propylparaben	0.10
0.5% Yellow #10	0.10	
0.5% Red #4	0.10	
Disodium EDTA	0.05	
HZW-Roll-on Antiperspirant	Water	50-75
	Aluminum zirconium tetrachlorohydrate GLY	20-35
	Magnesium aluminum silicate	1-5
	Modified starch	<4
	Glycine	<4
	Laureth-4	<4
	Laureth-23	<4
	Isopropyl myristate	<4
	Cetyl alcohol	<4
	Glyceryl stearate	<1
	Methylparaben	<1
	Propylparaben	<1
	Trisodium HEDTA	<1
	Triclosan	<0.5

Components of Formulations in Gettings et al. (1994)

Formulation	Formulation Components	% (w/w)
HZY-Cleansing Cream (II)	Deionized water	84.5
	Carbomer 934	0.3
	Propylene glycol	5.0
	Methylparaben	0.3
	Sodium lauryl sulfate*	1.0
	Sodium hydroxide	0.2
	Stearic acid	2.0
	Glyceryl stearate	2.0
	Mineral oil	3.0
	Isopropyl palmitate	1.5
	Propylparaben	0.2
	Methylchloroisothiazolinone (and) methylisothiazolinone	0.1
	* Anhydrous base	

Abbreviations: cSt = Centistokes; PEG = Polyethylene glycol; POB = polyoxybenzylene; POE = Polyoxyethylene; PPG = Polypropylene glycol; SUS = Saybolt Universal Seconds; TEA = Triethanolamine; USP = U.S. Pharmacopoeia; w/w = weight to weight ratio.

¹In Gettings et al. (1994), Cts is noted. However, it is proposed that the correct abbreviation is cSt.

[This Page Intentionally Left Blank]

Appendix B4

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

[This Page Intentionally Left Blank]

Formulation	Formulation Components	% (w/w)
HZA-Shampoo No. 7	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	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	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	Water
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	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	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	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	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	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	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	33.85
	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	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.