INTRODUCTION TO LOTION MAKING

T -	- 1	 of	C -	4		
12	n	OT		nt	'er) TC
ı u	\sim	\mathbf{v}				

INTRODUCTION TO LOTION MAKING	9
THE BASICS OF LOTION MAKING	
LOTION: AN EXAMPLE RECIPE AN EXAMPLE RECIPE	10 <i>10</i>
WHAT YOU'LL NEED TO MAKE LOTION (EQUIPMENT AND CONCEPTS) EQUIPMENT THE DOUBLE BOILER THE DIFFERENT PHASES BASIC INSTRUCTIONS FOR MAKING A LOTION (THE HEAT & HOLD METHOD)	12 12 13 13 13
GOOD MANUFACTURING PROCESSES SOME TIPS ON LOTION MAKING SOME TIPS ON BOTTLING YOUR LOTION SOME TIPS ON INTERPRETING RECIPES AND INCREASING BATCH SIZE INTERPETING THE INCI NAME OF YOUR INGREDIENTS	14 15 16 16 17
BASIC LOTION RECIPE BASIC LOTION RECIPE Oils Butters Emulsifier Water. Preservative. Thickener Fragrance Skin loving goodies	18 18 18 19 19 19 20 20 20
HUMECTANTS ARE A GIRL'S BEST FRIEND MODIFIED BASIC LOTION RECIPE WITH HUMECTANTS	21 <i>21</i>
TWEAKING THE BASIC RECIPES SUNFLOWER & SHEA LOTION AVOCADO & MANGO LOTION	22 22 23
BASIC CREAM RECIPE RECIPE FOR A THICKER FOOT CREAM	24 <i>24</i>
BASIC BODY BUTTER RECIPE BASIC BODY BUTTER RECIPE MODIFIED TO BE DRIER FEELING	26 26 27
BASIC LIGHT LOTION RECIPE BASIC LIGHT LOTION RECIPE	28 <i>28</i>
BASIC FACIAL MOISTURIZER RECIPE BASIC FACIAL MOISTURIZER RECIPE	30 <i>33</i>

THE CHEMISTRY OF LOTIONS

EMULSIFICATION: WHAT'S THAT THEN?	35
WHAT DOES AN EMULSIFIER LOOK LIKE?	35
EMULSIFYING WAX NF	36
POLAWAX (non-ionic emulsifier) HOW MUCH POLAWAX TO USE	36 36
INCROQUAT BTMS-50 (cationic emulsifier)	36 36
AN ASIDE: HOW TO CALCULATE YOUR OIL PHASE	37
THE ARGUMENT FOR HEATING & HOLDING OUR LOTIONS	38
CHEMISTRY: PHASE INVERSION TEMPERATURE (OR PIT)	40
CHEMISTRY: SOLUBILITY	41
CHEMISTRY: THE DIFFERENCE BETWEEN SOLUBLE AND DISPERSIBLE	42
CHEMISTRY: WEIGHT VS. VOLUME	43
CHEMISTRY: ANIONIC, CATIONIC, AND NON-IONIC	44
CHEMISTRY: pH AND OUR SKIN'S ACID MANTLE	45
CHEMISTRY: OUR SKIN!	47
CHEMISTRY: WHEN LOTIONS GO WRONG!	49
COALESCENCE	49
SEDIMENTATION OR CREAMING	49
ENGULFMENT	51
QUESTION: CAN I SAVE A SEPARATED LOTION?	52
CHEMISTRY: EMOLLIENTS, OCCLUSION, AND HUMECTANTS	53
EMOLLIENTS	53
HUMECTANTS	53
OCCLUSION	53
INGREDIENTS WE USE IN LOTIONS	
INGREDIENTS: EMOLLIENTS	55
INGREDIENTS: EMOLLIENTS - CARRIER OIL PROFILES	56
APRICOT KERNEL OIL	56
AVOCADO OIL	<i>57</i>
CASTOR OIL	58
COCONUT OIL	60
FRACTIONATED COCONUT OIL MAKING A LIGHT LOTION WITH FRACTIONATED COCONUT OIL	<i>62</i> 62
GRAPESEED OIL	65
HAZELNUT OIL	67
HEMP SEED OIL	68
JOJOBA OIL	70
SHAVING LOTION WITH JOJOBA OIL	71
MACADAMIA NUT OIL	73

OLIVE OIL	75
FOOT CREAM WITH OLIVE OIL AND BUTTERS	76
OLIVE OIL BODY BUTTER	78
RICE BRAN OIL	80
HAND LOTION WITH RICE BRAN OIL	80
SESAME OIL	83
SESAME OIL & SHEA BUTTER LOTION	83
SOY BEAN OIL	85
SOY BEAN OIL IN A BODY BUTTER	86
SUNFLOWER OIL	88
SWEET ALMOND OIL	89
VIRGIN COCONUT OIL	91
WHEAT GERM OIL	92
INGREDIENTS: EMOLLIENTS - BUTTER PROFILES	94
COCOA BUTTER	94
MANGO BUTTER	96
MANGO BUTTER AND HAZELNUT LOTION	96
SHEA BUTTER	98
AN ASIDE: CAN I USE GROCERY STORE OILS IN MY PRODUCTS?	100
AN ASIDE: WHY USE MORE THAN ONE OIL IN A LOTION?	100
INGREDIENTS: EMOLLIENTS - EXOTIC BUTTERS	102
ILLIPE BUTTER	102
MOWRAH BUTTER	102
KOKUM BUTTER	102
SAL BUTTER	103
MURUMURU BUTTER	103
BABASSU OIL	104
INGREDIENTS: EMOLLIENTS - EXOTIC OILS	105
BORAGE OIL	105
CALENDULA OIL	106
CAMELLIA OIL	107
CARROT TISSUE OIL	108
CRANBERRY OIL	109
EVENING PRIMROSE OIL	111
POMEGRANATE OIL	112
PUMPKIN OIL	113
ROSEHIP OIL	114
SEA BUCKTHORN OIL	115
AN ASIDE: HOW DO I KNOW WHEN TO ADD INGREDIENTS?	118
INGREDIENTS: HUMECTANTS	120
GLYCERIN	120
SODIUM LACTATE	121
SODIUM PCA (salt of pyrrolidone carboxylic acid)	121
HYDROVANCE	122
ALOE VERA	122
INGREDIENTS: THICKENING AGENTS	126

STEARIC ACID	126
CETYL ALCOHOL	127
AN ASIDE: CETYL ALCOHOL VS. STEARIC ACID	127
CETEARYL ALCOHOL	128
CETYL ESTERS	129
INGREDIENTS: EXTRACTS	131
ALLANTOIN	131
CHRYSTANTHEMUM OR FEVERFEW EXTRACT	134
COMFREY ROOT	135
CUCUMBER EXTRACT	136
GINSENG EXTRACT	138
GRAPESEED EXTRACT	139
GREEN TEA EXTRACT	141
SHAVING LOTION MODIFIED TO INCLUDE GREEN TEA EXTRACT	145
HONEYSUCKLE EXTRACT	147
HORSETAIL EXTRACT	148
LIQUORICE EXTRACT	150
ORCHID EXTRACT	151
PAPAYA EXTRACT	152
ROSEMARY EXTRACT	15 <u>2</u> 154
ST. JOHN'S WORT	158
STRAWBERRY EXTRACT	160
WHITE WILLOW BARK	162
WITCH HAZEL	163
INGREDIENTS: HYDROSOLS	164
Chamomile hydrosol	164
Clary sage hydrosol	164
Honeysuckle hydrosol	164
Lavender hydrosol	165
Melissa hydrosol	165
Orange flower or orange blossom (neroli) hydrosol	165
Peppermint hydrosol	165
Rose hydrosol	165
Rosemary hydrosol	165
INGREDIENTS: SALICYLIC ACID (or BHAs)	166
INGREDIENTS: ALPHA HYDROXY ACIDS (AHAs)	167
INGREDIENTS: HYDROLYZED PROTEINS	169
HYDROLYZED OAT PROTEIN	170
HYDROLYZED SILK PROTEIN	170
PHYTOKERATIN	171
USING HYDROLYZED PROTEINS IN YOUR LOTIONS & CREAMS	172
SHAVING LOTION	172
SHAVING LOTION WITH HYDROLYZED PROTEINS	172
USING HYDROLYZED PROTEINS IN BODY BUTTERS	173
BASIC BODY BUTTER WITH OAT PROTEIN RECIPE	173
INGREDIENTS: PANTHENOL	174

LOTION RECIPES

HAND LOTION RECIPES	175
HAND LOTION RECIPE FOR WINTER	175
HAND LOTION RECIPE, modified for winter	176
LESS GREASY HAND LOTION MODIFIED FOR WINTER	1 <i>78</i>
WINTER TIME HAND LOTION, modified to be less greasy	178
FORMULATING A DRIER FEELING HAND LOTION	<i>17</i> 9
BASIC DRY FEELING HAND OR BODY LOTION	180
DRIER FEELING LOTION WITH ASTRINGENT OILS AND BTMS-50	181
BODY LOTION RECIPES	182
BODY LOTION FOR WINTER MONTHS	182
HAND LOTION RECIPE MODIFIED TO BE A BODY LOTION FOR SILLY WOMEN WHO REFUSE TO	
COVER UP IN THE WINTER	183
BODY LOTION FOR DRY, AGING SKIN	184
BODY LOTION FOR AGING, DRY SKIN	185
MODIFIED LOTION FOR THE SUMMER	186
BODY LOTION FOR SUMMER TIME CAMPING FUN!	188
FORMULATING A SORT OF ALL NATURAL LOTION	189
ANOTHER VERSION OF A SUMMER TIME BODY LOTION (A MORE NATURAL ONE)	190
FORMULATING A SUMMER BODY LOTION IN A COMPLETELY DIFFERENT WAY	190
ANOTHER VERSION OF A SUMMER TIME BODY LOTION	191
BODY BUTTERS	192
TWEAKING THE BASIC BODY BUTTER RECIPE	192
MODIFIED BODY BUTTER RECIPE	193
USING ALLANTOIN IN BODY BUTTERS	194
BODY BUTTER WITH ALLANTOIN AND HYDROLYZED PROTEINS	195
BODY BUTTER SUITABLE FOR SUMMER	196
SUMMER MODIFIED BODY BUTTER	197
BODY BUTTER SUITABLE FOR WINTER MONTHS	198
WINTER BODY BUTTER FOR WITH INCREASED BARRIER INGREDIENTS	198
BODY BUTTER FOR ITCHY SKIN	200
MODIFIED BODY BUTTER FOR ITCHY, WINTER SKIN	201
BODY BUTTER FOR DRY SKIN	202
MODIFIED BODY BUTTER FOR DRY SKIN	205
BODY BUTTER FOR OILY SKIN	206
MODIFIED BODY BUTTER FOR OILY SKIN	209
BODY BUTTER FOR BRUISED SKIN	210
BODY BUTTER FOR BRUISED, DRY SKIN	210
FOOT LOTIONS AND CREAMS	212
MAKING A BASIC FOOT LOTION	212
BODY LOTION MODIFIED TO BE A FOOT LOTION	214
MAKING A THICKER FOOT CREAM	215
RECIPE FOR A THICKER FOOT CREAM	215
FOOT CREAM WITH DIMETHICONE	216
FOOT CREAM FOR INTENSELY DAMAGED FEET	217
INTENSELY MOISTURIZING FOOT CREAM FOR REALLY DAMAGED FEET WITH BTMS-50	219
LICHTIOTIONS	221

LIGHT, SPRAYABLE LOTION OR BODY MILKS	221
LIGHT SPRAYABLE LOTION	221
LIGHT, SPRAYABLE SUMMER LOTION	222
MODIFIED LIGHT SPRAYABLE LOTION FOR THE SUMMER	222
FACIAL MOISTURIZERS - GENERAL	224
LIGHT FACIAL MOISTURIZER	224
FACIAL MOISTURIZER RECIPE	224
WINTER TIME MOISTURIZER	225
FACIAL MOISTURIZER WITH HEMP SEED AND MACADAMIA NUT OIL	226
FACIAL MOISTURIZER FOR DRY SKIN	227
MODIFIED FACIAL MOISTURIZER FOR DRY SKIN	229
MOISTURIZER FOR DRY, WRINKLED SKIN	230
MODIFIED MOISTURIZER FOR DRY, WRINKLED SKIN	231
SILICONE BASED MOISTURIZER	232
SILICONE BASED MOISTURIZER FOR DRY, WRINKLED SKIN	233
MOISTURIZERS FOR OILY SKINNED GIRLS	233
MODIFIED CATIONIC OIL-FREE FACIAL MOISTURIZER FOR OILY, RESISTANT SKIN	235
MODIFIED CATIONIC OIL-FREE MOISTURIZER FOR ACNE PRONE OR ROSACEA TYPE SKIN	235
MODIFIED CATIONIC OIL-FREE MOISTURIZER FOR OILY, AGING OR WRINKLED SKIN	236
OIL FREE MOISTURIZER	236
CATIONIC OIL FREE FACIAL MOISTURIZER	238 238
SHAVING LOTIONS	240
SHAVING LOTION	240
USING EXTRACTS IN A SHAVING LOTION	241
MODIFIED SHAVING LOTION WITH BOTANICAL EXTRACTS	242
AFTER SHAVE LOTIONS	242
AFTER SHAVE LOTION (for men & women)	243
BASIC MOISTURIZING AFTER SHAVE RECIPE OR MEN'S MOISTURIZER	245
MODIFYING LOTIONS	246
FOOT CREAM WITH AVOCADO OIL AND BUTTERS	246
AN ASIDE: CAN I MAKE UP BATCHES OF PRODUCT AND SCENT IT LATER?	247
KEEPING YOUR LOTIONS SAFE: ANTI-OXIDANTS AND PRESERVATIVES	
CHEMISTRY: RANCIDITY: A PRIMER	249
CHEMISTRY: MECHANISMS OF RANCIDITY	250
OXIDATIVE RANCIDITY	250
PHOTO-OXIDATION	250
AUTO-OXIDATION	250
HYDROLYTIC RANCIDITY	251
MICROBIAL RANCIDITY	251
CHEMISTRY: ANTI-OXIDANTS	252
VITAMIN E	252
VITAMIN C	252
AN ASIDE: IS THERE ANY VALUE IN COMBINING ANTI-OXIDANTS?	253

LOTION	MAKING	101	by Susan	Barclay	Nichols '
--------	--------	-----	----------	---------	-----------

APPENDIX - FATTY ACIDS

	_

291

CHEMISTRY: SEQUESTERING AND CHELATING AGENTS EDTA CITRIC ACID	254 <i>254</i> <i>25</i> 5
INTRODUCTION TO PRESERVATIVES	257
PRESERVATIVES: WHAT MIGHT CONTAMINATE OUR LOTIONS Gram positive bacteria Gram negative bacteria Fungus How do we avoid contamination?	258 258 258 258 258
PRESERVATIVES: HOW DO THEY WORK?	259
PRESERVATIVES: FORMALDEHYDE DONORS	260
PRESERVATIVES: CHEMICALS WE FIND IN OUR PRESERVATIVES ORGANIC ACIDS & SODIUM BENZOATE PARABENS IMIDIAZOLIDINYL AND DIAZOLIDINYL UREA PHENOXYETHANOL IODOPROPYNYL BUTYLCARBAMATE (IPBC)	261 261 263 264 265 266
INGREDIENTS: PRESERVATIVES COSMOCIL CQ GEOGARD ULTRA GERMABEN II LIQUID GERMALL PLUS LIQUIPAR OIL LIQUIPAR OPTIMA LIQUIPAR PE MIKROKILL COS OPTIPHEN OPTIPHEN ND OR ROKONSAL ND OPTIPHEN PLUS PHENONIP SUTTOCIDE A TINOSAN SDC	267 268 270 271 272 273 274 275 276 277 278 279 280 281
PRESERVATIVES: WHY GRAPEFRUIT SEED EXTRACT IS NOT A PRESERVATIVE	282
PRESERVATIVES: INACTIVATION OF PRESERVATIVES BY OUR INGREDIENTS INACTIVATION BY NON-IONIC INGREDIENTS INACTIVATION BY PIGMENTS INACTIVATION BY CELLULOSE DERIVATIVES	282 282 282 283
PRESERVATIVES: CHOOSING THE RIGHT PRESERVATIVE FOR YOUR PRODUCTS	284
DETERMINING THE SHELF LIFE OF YOUR LOTION	285
PACKAGING AND CONTAMINATION	288
APPENDICES: USEFUL INFORMATION ON OILS AND BUTTERS	

LOTION MAKING 101 by Susan Barclay Nichols	8
APPENDIX - HYDROGENATION, FATTY ACID SHAPES, AND TRANS FATS	293
HYDROGENATION	293
FATTY ACID SHAPES	293
CIS AND TRANS FATS	294
APPENDIX - FATTY ACIDS YOU MIGHT FIND IN OILS	295
PALMITIC ACID	<i>2</i> 95
STEARIC ACID	295
LINOLEIC ACID	295
OLEIC ACID	297
GAMMA LINOLEIC ACID	298
CONJUGATED LINOLEIC ACID AND CONJUGATED LINOLENIC ACID	299
APPENDIX - OTHER THINGS YOU MIGHT FIND IN OILS AND BUTTERS	301
VITAMIN E – TOCOPHEROLS AND TOCOTRIENOLS	301

A LITTLE INFORMATION ON MY YOUTH GROUPS AND YOUR CONTRIBUTIONS

301

303

305

POLYPHENOLS

PHYTOSTEROLS