

Index

a

- acid mantle 104, 108, 121, 131, 203, 237, 248
- acne 17, 49, 126, 198–200, 204, 212, 217, 231, 233–236, 290
- Acne comedonica* 235
- Acne conglobata* 235
- acne creams
formulations 287–288
- Acne papulo-pustulosa* 235
- acne vulgaris 235
- administrative costs 59, 83, 84, 89
- after sun creams/lotions formulations 288–289, 292, 459
- age spots 197, 200, 201, 204, 212, 213, 244, 251
- agitators 338, 349
- airless dispenser 154, 163, 232, 276, 361–364, 399, 402, 422, 428, 429, 433, 437, 443–445, 450, 452
- alcoholic facial waters 235
- algae 221, 223, 224, 226, 295, 298, 462
- allantoin 139, 223, 238, 239, 247, 287, 300, 438, 443, 451
- allergies 135, 160, 218, 242, 243, 260, 293, 310, 330, 435
- almond oil 114, 139, 207, 208, 210, 245, 287, 293, 306, 422, 437, 443
- aloe vera 194, 196, 216, 284, 288, 443aloe vera, 194, 196, 216, 284, 288, 443
- α -hydroxy acids (AHA) 191, 193, 247, 277, 288, 300
- α -linolenic acid (ALA) 205
- α -lipoic acid (ALA) 163, 213, 277, 284, 288
- amino acids 123, 167, 170, 189, 191, 192, 194, 196, 213, 216, 224, 225, 241, 277, 288
- amphiphilic ingredients 123
- amphiphilic liposomes 167–168
- analysis certificate 420, 424, 433
- analysis report 426–429, 444, 445
- ANNEX of the Cosmetics Regulation 160, 161, 167, 179, 260, 417, 420, 422
- anti-acne creams, for blemished skin 231
- anti-acne tonic formulations 459
- anti-aging creams
aloe vera 216
 α -lipoic acid 213
amino acid 213–214
Coenzyme Q10 214
2-dimethylaminoethanol 214
enzymes 216
formulations 284, 457
grapes and raspberries 215
green tea 215
hyaluronic acid 214
kinetin 215
phytohormones 214–215
polyphenols 215–216
retinol 213
vitamin C 213
- anti-cellulite cream formulations 462
- anti-herpes cream 245–246

- antioxidants 134, 135, 140, 153, 162,
163–167, 170–171, 182–183,
198, 200–201, 208, 211, 212–216,
217–218, 223, 227, 236, 269, 271,
277, 288, 300
- aromatherapy 218, 314, 316, 318, 332
- ascorbic acid 189, 225
- ascorbyl palmitate 150, 164, 197
- ASEAN Cosmetic Directive (ACD)
16–17
- athlete's foot 231, 243–244, 300–302
- atopic dermatitis 205, 242, 246, 411
- Australia 38, 49, 264
- Autoxidation 163
- b**
- baby/babies 18, 33, 37, 43, 51, 108,
148, 161, 167, 175, 193, 223, 227,
231, 234, 237–239, 261, 271,
289–294, 306, 431, 433–436, 448
- baby creams
formulations 289
- baby's skin creams 237
- balance sheet 59, 62–64
- Bancroft rule 140, 170
- Basal cell carcinoma 253
- BASF 84–86, 105, 146, 149, 319
- basic modules 134
- batch production 345–349
- batch turnover number (BTO)
353
- bedsore cream formulations 295, 296,
460
- bedsores 175, 231, 239, 271, 295, 296,
460
- beeswax 1, 179, 239, 293
- Beiersdorf 55, 56, 87, 90, 96
- benzoyl peroxide 235, 287
- Berloque Dermatitis 330
- biotin 196, 200
- blackhead 231–235
- black skin cancer 253
- blemished skin, anti-acne creams for
232
- body lotion 247
analysis report 444
description 437
- exposure to product 444
- exposure to substances 444,
446–448
- formulations 301
- microbiological quality 444
- normal and reasonably foreseeable
use 444
- packaging material 444
- production instruction 443
- quantitative and qualitative
composition 438–443
- toxicological profile 449
- borage oil 211, 282
- bottles 75, 154, 249, 332, 342, 344,
361–366, 375, 427, 433
- brand names, searching for 9
- branded article concept 47, 92, 97
- brands 9, 31, 37–38, 47–51, 53–54, 81,
82, 91, 95–98, 309, 313
- broad-spectrum filter 254, 255, 260
- brick-mortar-model 109–110
- buffer substances 163–167
- c**
- callus removal cream formulations
300–301
- cellulite 20, 218, 231, 239–240
- Carbopol 158
- cellulite creams
formulations 295, 297, 298, 299–300
- Center for Food Safety and Applied
Nutrition (CFSAN) 15
- centrifuge test 154
- ceramides 107, 108, 110, 113, 170, 189,
199, 204, 242
chemical structures 110
- chamomile 135, 216, 218, 239, 271,
288, 293, 327
- Chemical Abstracts Service 12
- China
sunscreens 264
- Chinese cosmetics market 37–38
- Chypre 311
- citral 319, 321, 438, 451
- citric acids 134, 153, 161–163, 187,
193–194, 301, 335, 390, 424, 428,
433, 451

- clean-in-place (CIP) 73, 348–349, 374, 383, 392–396
- clinical acne 231, 233
- coemulsifier 131, 134, 140, 141, 146–151, 155, 157, 170, 247, 423, 441
- coenzyme 163, 170, 196, 199, 200, 213, 214, 225, 271, 284
- Coenzyme Q10 163, 170, 200, 213, 214, 284
- color index (CI) 7, 167
- Colorimeter 407, 409
- comedones 203, 205, 232, 233, 235, 287, 400
- competition-oriented pricing 95–97
- complete protection 261, 269
- complexing agents 134, 135, 140, 163–164, 166
- concrete 19, 251, 318, 435, 448
- consumer goods 50, 51, 55, 61, 65, 84, 86, 90–91, 92–93, 309, 328, 383, 387
- continuous production plant 350, 351
- cornea 108, 120, 121, 126, 189–191, 200, 201, 225, 246, 249
- corneocytes 107, 109–112, 121–123, 189, 198, 406
- corneodesmosomal pathway 123, 127
- Corneofix[®] 406
- Corneometer[®] 403
- cornified envelope 107
- CosIng 11–12, 14, 15, 431
- cosmeceuticals 21, 182, 231
 - anti-herpes cream 245–246
 - baby skin creams 237–239
 - blemished skin, anti-acne creams for 231–235
 - body lotion 247
 - cellulite 239–240
 - delimitation 232
 - eczema 242–243
 - foot cream 243–244
 - hand cream 244–245
 - itchy shins cream 248
 - pressure ulcers 239
 - reddened skin, after sun creams and lotions for 236
- self-tanning cream 248–249
- sunscreens
 - application and warning notices 261–262, 264–265
 - radiation-induced damage 252–254
 - solar radiation 249–250
 - substances 254–255, 259–260
 - sun protection measurement 265–268
 - UV rays character 250–252
 - thick horny layer cream 246–247
 - unwanted hair removal 241
- Cosmetic and Personal Care Industry 12–13
- cosmetic GMP (cGMP) 371–372, 375, 377, 380
- Cosmetic Ingredient Dictionary 12, 13
- cosmetic product safety report (CPSR)
 - assessment 419
 - information 417–419
- Cosmetic Products Notification Portal (CPNP) 9, 11
- cosmetic market
 - China 37–38
 - Europe 31–35
 - Germany 27–30
 - Japan 35–37
 - size 39–45
 - USA 35
 - World 38–39
- cosmetics
 - definition 2–3
 - delimitation 18–22
 - history 1
 - ingredient databases 11–15
 - label lettering and trademark 7–9
 - mandatory registration 11
 - regulations
 - in Asia 16–17
 - in Europe 4–6
 - in United States 15–16
 - typical cosmetic products 3–4
- cosmetics regulation (EC) directive 9
- COSMOS standard 181
- cost-intensive processes 65
- cost-oriented 85, 92–93

crushing 225, 310, 353
 CutiScan 406
 Cutometer® 406
 cyclodextrins 135, 153, 277, 284

d

Dead Sea 108, 240
 demand-oriented pricing 93–95
 depilatory cream 241
 formulations 463
 dermal exposure 429–434, 446
 dermatics 187–188
 dermis 104–106, 114–117, 169, 194,
 200, 250, 252–253, 331–332
 dexpanthenol 3, 199
 dihydroxyacetone (DHA) 248–249
 2-dimethylaminoethanol (DMAE)
 214, 284
 direct costs 62–63, 79, 81–82, 83,
 84–85
 D-panthenol 139, 199
 drugs 15, 19, 20, 22, 91, 112, 121, 124,
 126, 168–170, 184, 187, 188, 190,
 198, 223, 253, 261
 Directive 93/42/EEC 18
 dry skin 108, 126, 176, 188, 192, 194,
 207, 217, 218, 231, 243, 244, 246,
 247, 248, 276, 282–283, 288

e

Eau
 de Cologne (EdC) 311, 314, 330
 de Toilette (EdT) 311, 314
 de Parfum (EdP) 314
 EBIT 56, 59, 60, 84, 85, 86, 87, 90, 92
 ecolabels 178, 180
 economic importance
 Chinese market 37–38
 Estée Lauder Companies 53
 European market 31–35
 Germany
 market and distribution channels
 27–30
 shopping on internet 30–31
 global market volume 39–44
 Japan 35
 K.K. Shiseidō / Japan 53–54
 L'Oréal 48
 largest manufacturers worldwide
 45–47
 Nivea 55
 Procter & Gamble Company 51
 trends 45
 Unilever 50
 USA 35
 world division in market regions
 38–39
 eczema 108, 121, 187, 188, 210, 211,
 231, 242–243, 283
 elastosis 252
 electricity consumption 72
 electropolishing 384, 387, 388,
 390–392
 emollients 146, 155, 191, 194, 423, 441
 emulsifiers 140
 antioxidants, complexing agents and
 buffer substances 163–167
 consistency 155, 157–158
 macro emulsion
 boundary conditions 146
 C-chain compounds 142
 chemical structures 143
 ethoxylated fatty alcohol-based
 surfactants 142
 HLB 141
 nonionic surfactants 147–148
 oil droplets 140–141
 sorbitan and glycerides esters 146
 stability 141
 surfactants 142
 water droplets 140
 water-repellent and protective
 properties 148
 mini (nano) emulsions 149
 preservation 158–163
 stability 149, 152–154
 energy costs 64, 71–72, 75, 89
 Enfleurage 318
 enhancers 121–122, 132, 170, 203
 enzymes 216, 233, 254, 402
 epicutaneous test 399
 epidermis 2, 104–106, 109, 114–117,
 169, 188, 189, 191, 200, 204, 246,
 248, 252, 271, 276, 331, 405

- Essence absolue 318
- essential oils 124, 125, 138–139, 153, 216–219, 221, 240, 245, 252, 277, 287, 288, 293, 295, 310, 311, 312, 314, 315–318, 319, 321, 322, 325, 327–328, 330, 335, 402, 425, 426, 434–435, 438, 449, 451
- Estée Lauder Companies 53
- ethosomes 126, 167, 170, 177
- ethoxylated emulsifiers 146, 177
- ethylenediaminetetraacetic acid (EDTA) 164–165
- Eudermine 54
- Europe
 - cosmetics legal regulations 4–6
- European Community Number (EC Number) 11, 12, 438
- European Cosmetics Regulation 2, 16, 159, 231
- European Federation for Cosmetic Ingredients (EFFCI) 372
- European Hygienic Engineering and Design Group (EHEDG) 379
 - manufacturer of cosmetics 379
 - microorganisms 381
 - production manager and operator aware 380
- European Inventory of Existing Commercial Chemical Substances (EINECS) 12, 418
- European List of Notified Chemical Substances (ELINCS) 12, 418
- European market
 - economic importance 31–35
 - shopping on internet 31–35
- European Scientific Committee on Consumer Safety (SCCS) 15, 161, 261, 400, 401, 424, 425, 430–431, 433, 434, 444, 451
- European Union Intellectual Property Office (EUIPO) 9
- evening primrose oil 79, 138–139, 141, 194, 205, 210–211, 238, 282, 422, 437, 443
- excipients 63, 121, 131–135, 138, 140–167, 170, 182, 187, 275, 293, 332, 420
- extracted substances from plants (liquid and dried) 221
- extraction 122, 131, 178, 205, 206, 219, 221, 223, 225, 227, 311, 315–319, 332
- Extrait de Parfum 314
- Extruder 169, 205
- eye area with sun protection cream 304
- f**
- Fast Optical In Vivo Topometry of Human Skin (FOITS) 408
- fatty acids (FA) 107, 109, 113, 117, 122, 125, 131, 139, 141–142, 155, 162, 168–170, 188, 189, 201, 203–205, 206–207, 209–211, 212, 216, 224, 237, 255
- FD&C Act 2, 19, 20
- Federal Association of German Industry and Trade (BDIH) 179
- filaggrin 107
- filling line 65, 68, 71, 73–75, 77, 336, 358, 361–366, 384, 392
- film-forming polymers 191
- Firmenich 312, 332
- fixed production costs 75
- Flavors & Fragrances (F & F) 312
- FOITS 408
- folic acid 199
- Food & Drug Administration (FDA) 2, 13, 15–16, 17, 161, 166, 182, 261–262, 264, 449
- foot cream 244
 - formulations 300
- formulations 275
 - acne creams 287–288
 - after sun creams/lotions 288–289, 459
 - anti-acne tonic 459
 - anti-aging creams 284, 457
 - baby creams 289, 292–293
 - bedsore cream 295
 - body lotion 301, 303
 - callus removal cream 300–301
 - cellulite creams 295
 - depilatory cream 463

- formulations (*contd.*)
 - eye area with sun protection cream 304, 306
 - foot cream 300
 - hand creams 300
 - moisturizers 276–277, 455
 - sunscreen cream 307
 - vitalizing creams 277, 282, 456
- fragrances 27, 33–34, 37, 44, 53, 127, 135, 167, 176, 178–179, 182, 217–218, 245, 275–276, 277, 293, 309–321, 325, 327–332, 435
- free-radical-inhibiting antioxidants 164
- Frictometer 405, 407
- fungi 104, 208, 242–244, 300

- g**
- γ -linolenic acid (GLA) 205, 242, 243, 282
- γ -tocopherol 201
- gels 30, 108, 155, 157, 169, 194, 196, 214, 248, 268, 277, 288, 313, 329, 429
- generally recognized as safe (GRAS) 161, 166
- German Cosmetics Ordinance 4
- German Industry Association for Personal Care and Detergents 377
- German Medicines Act 21
- German Patent and Trademark Office 9
- German Pharmacopoeia (DAB and DAC) 187
- Germany
 - economic importance
 - market and distribution channels 27–30
 - shopping on internet 30–31
- geranium 218, 240, 245, 301, 327, 438, 442–444, 449, 451
- ginkgo leaves 215
- Givaudan 312, 332
- global company
 - profit and loss accounts 86
- global company cost
 - direct cost 81–82
 - Henkel 79
 - internal cost accounting 80
 - L'Oréal 79
 - overhead and performance
 - accounting 82–84
 - principle 79
 - published annual reports 84
- global cosmetics market Size 39–45
- glossy layer 107
- glycerol 125, 131, 134, 139, 141, 155, 161, 168, 178, 192, 203, 205, 219, 221, 238, 276, 293, 300, 424–425
- glycine 167, 170, 191, 215
- Good Manufacturing Practice (GMP)
 - regulations 4–6, 9, 16, 17, 73, 343, 349, 371–379, 400, 417, 426, 433, 438, 450
- grapes 215
- green tea 215
- Griffin 141 170

- h**
- hand creams 244
 - formulations 300
- heat collapse 253
- hemp oil 3, 138, 139, 153, 167, 205, 210, 287, 318
- Henkel Fragrance Center 313
- herpes 231, 245–246
- high-density polyethylene (HD-PE) 362–363
- high-pressure homogenizer 149, 152, 343, 349, 356–361
- homogenizer 149, 152, 336–345, 347–349, 351–361, 366
- horny cells, layer 106, 122, 198
- humectants 191, 192, 276, 292, 423, 441
- hyaluronic acid 77, 123–125, 134, 139, 170, 190–191, 194, 199, 214, 240, 271, 276–277, 284, 335
- hydrolysates 191, 194, 271
- hydrophilic/lipophilic balance (HLB)-values 123, 124, 140, 141, 170, 171, 352
- hygienic productions
 - cleaning-in-place 392–396
 - EHEDG-Guidelines 379–383

- equipment materials
 - choice of materials 384–385
 - metal surfaces smoothing 387–392
 - problem 383–384
 - stainless steel 385–387
- good manufacturing practice rules
 - change control 375
 - complaint and recall 375
 - deviations 375
 - documentation 375–376
 - equipment 373–374
 - finished products 374
 - internal audit 375
 - premises 373
 - production 374
 - quality control laboratory 374–375
 - scope 372
 - staff 373
 - starting and packaging materials 374
 - subcontracting 375
 - unspecified products treatment 375
 - waste 375
- hyperkeratosis 233, 238, 246, 250
- i**
 - itchy shins cream 248
 - Indentometer 405, 408
 - India, Middle East and Africa (IMEA) 39, 53
 - indirect overhead costs 82
 - influence of brand 97
 - Information Network of Departments of Dermatology 135
 - Ingredients from the Sea 223–225
 - intercellular lipids 107–108, 111
 - internal cost accounting 80
 - International Flavors & Fragrances 312
 - International Nomenclature Cosmetic Ingredient (INCI) 7, 9, 11, 13, 134, 149, 167, 182, 216, 240, 255, 293, 295, 331–332, 418, 420, 422, 425–426, 438, 451
- International Organic and Natural Cosmetics Corporation (IONC GmbH) 180
- Italian barber Giovanni Paolo Feminis 311
- j**
 - Japan
 - economic importance 35
 - Japanese Government 17
 - jars 65, 362
 - jasmine 3, 167, 218, 288, 293, 318, 327, 328
 - Johnson & Johnson 46, 90
 - jojoba oil 207–208, 241, 293, 295
- k**
 - K.K. Shiseidō / Japan 53–54
 - Karité butter 207
 - keratin 107, 122, 189, 196, 199–200, 241, 248
 - keratinocyte 107, 109, 112, 251
 - kinetin 215
- l**
 - L'Oréal 48
 - global share 48
 - manufacturing cost 79
 - market share 48, 49
 - operational divisions 48, 49
 - product portfolio and global sales regions 48
 - label 3, 7–10, 13, 16, 20, 21, 73, 167, 176, 177, 179, 181, 182, 241, 261–265, 271, 307, 330, 365, 366, 374, 413, 417–419, 422, 425, 429, 437, 438, 444, 450
 - labor costs 65–71, 73, 75, 81, 89
 - lactic acid 166, 192, 225
 - lanolin 179, 239, 293
 - large production plants 345
 - largest cosmetics manufacturers worldwide 45–47
 - laser diffraction 148, 152, 154, 155, 359
 - lavender 135, 167, 216–218, 240, 244, 300, 310, 311, 315, 327, 329, 435
 - lauric acid 203
 - lecithin 167–170, 179, 194, 206

- lethal dose of 50% rats (LD₅₀) 420
 - light callosity 250, 252
 - linoleic acid 109, 110, 204, 211, 243, 295
 - linolenic acid 169, 194, 203, 205, 210, 242–243, 282, 287
 - lipid matrix 107, 110
 - chemical structure 113
 - lipids 107, 110–111, 117, 120–126, 131, 132, 135, 139, 145, 147, 157, 167–170, 176, 182, 189–190, 194, 201, 203–205, 207, 209, 233, 242–243, 244, 245, 247, 253, 260, 277, 293, 300, 301
 - lipophilic substances 109, 110, 114–120, 124, 127, 424, 426, 432
 - liposomes 126
 - effects 168
 - lecithin 168
 - preparation 169
 - small vesicles production 169
 - L'Oréal 48
 - global share 48
 - manufacturing cost 79
 - market share 48, 49
 - operational divisions 48, 49
 - product portfolio and global sales regions 48
 - profit and loss account 59, 60
 - sales and earnings 48, 49
- m**
- macro emulsion
 - boundary conditions 146
 - C-chain compounds 142
 - chemical structures 143
 - HLB 141
 - nonionic surfactants 147–148
 - oil droplets 140–141
 - sorbitan and glycerides esters 146
 - stability 141
 - surfactants 142
 - water droplets 140
 - water-repellent and protective properties 148
 - magnesium ascorbyl phosphate 277, 443, 451
 - Mallorca Acne 253
 - mangosteen 240, 295
 - manufacturing costs
 - development products 61
 - dependency 73, 75–76
 - energy costs 71–72
 - installation and building 65
 - labor 65–66, 68, 71
 - market price determination 61–62
 - production 62
 - raw material 76–77, 79
 - rough calculation 59
 - margin of safety (MoS) 293, 419, 420, 432, 447, 451
 - market price 47, 61–62, 82, 85, 89, 91–93, 97, 313
 - Marleen Body Lotion 437, 443, 450, 452
 - material safety data sheet (MSDS) 420, 424, 432, 433, 438, 449, 465–473
 - materials for equipment 383–392
 - Mazeration 318
 - Medical Device Directive (MDD) 18
 - medical devices 18–19, 371
 - Medicinal product 19–21, 162
 - Medicinal Product Act 184
 - medicines 21–22, 180, 182, 184, 187–188, 193, 199, 211, 312
 - melanin 20, 200, 233, 248, 250–252, 267, 409
 - Mercosur Common Market 264
 - metal surfaces smoothing 387
 - methylparaben 160
 - Mexameter[®] 407, 409
 - Mexoplex[®] 269, 271, 306
 - Mexoryl[®] 269
 - microbiological quality 377, 418, 444
 - microbiological tests 118
 - micro emulsions 149
 - microorganisms 103, 108, 131, 153, 159, 163, 171, 178, 183, 188, 189, 192, 243, 244, 282, 293, 358, 363, 379, 381–384, 392, 400–402
 - mineral oil 177, 180, 194, 205, 241, 242, 253, 293
 - mini-emulsion 149, 343, 355–360

- minimal erythema dose (MED) 266, 267
- MoistureMap device 409
- moisturizers formulations 276
- moisturizing substances 139
- monoterpene hydrocarbons 321
- multiple emulsions 140, 149, 154
- myristic acid 203
- myrrh 218, 316
- n**
- nano-emulsion 342, 355
- nanoparticles 9, 168, 170, 254, 255, 260, 268, 269, 425
- national brand register 9
- National Industrial Chemicals Notification & Assessment Scheme (NICNAS) 264
- natural cosmetics 176
- natural fragrances
chemical composition 319, 321, 327
extraction 315–319
- natural moisturizing factor (NMF) 77, 78, 188, 189–190, 191–192, 194, 216, 245, 293
- Nestlé Group 48
- neurodermatitis 175, 205, 248, 411
- New Drug Application (NDA) process 261
- niacinamide safety data sheet 465
- nicotinamide 170, 199, 301, 420
- Nivea 55–56, 96
- No-Longer-Polymers-List (NLP-List) 12
- no observed adverse effect level (NOAEL) 431, 432
- Novartis 86
- nuclear magnetic resonance (NMR) 114–115, 117
- o**
- occlusion 117, 122, 123, 155, 190, 191, 194, 205, 275, 403
- odor neutralizer 133
- ointment 1, 21–22, 94, 187, 188, 193, 246, 271, 310–311, 376
- oleic acid 169, 203, 210–211
- “one-pot” method 337, 342
- operating income 51, 54, 59
- operating profit 49, 84
- overhead costs 59, 62, 63, 79, 81–83, 93
- over-the-counter (OTC) 19–22, 27, 94, 176, 184, 235, 247, 261, 271
- oxidations 135, 149, 152, 153, 159, 162, 163, 170, 193, 198, 200, 201, 203, 210, 212, 235, 251–253, 255, 260, 269, 304, 307, 329, 335, 350, 361, 438
- p**
- P.I.F, *see* product information file (P.I.F.)
- package, packaging 3, 7–9, 11, 15, 16, 21, 31, 62, 64, 65, 73, 75, 91, 135, 149, 152, 154, 159, 167, 180–182, 231, 261, 309, 329, 331, 361, 365, 366, 372, 374, 375, 377, 378, 382, 417, 418, 426, 427, 444, 450
- palmitic acid 203, 207
- papules, pustules 232–235 253
- parabens 159–161, 177, 180, 455
- Paracelsus 146
- patch test 119, 135, 329, 330, 399, 414, 451
- peeling 193, 216, 235, 247, 249, 271
- penetration
lipophilic substances 114, 124
essential oils 124
polar substances 125
skin tolerance test 119
solid products 125
standardized measurement methods 120
vegetable oils 124
skin creams effects 120
- stratum corneum
brick-mortar-model 109
corneocytes 122
enhancer 121
extraordinary mechanical stability 109
horny layer 121
imaginable way 111
lipid matrix 113

- penetration (*contd.*)
 - modern concept 111
 - non-polar organic substances 108
 - occlusion 122–123
 - parameters 121
 - permeability 121
 - possible pathways 110
 - skin appendages 111
 - skin barrier function 108
 - sufficient water soluble 123
 - transepidermal water loss 109
 - peptides 123, 168, 170, 180, 183, 184, 213, 225, 227, 284
 - perfumes 167
 - composition and markets 312–315
 - history 310–312
 - importance 309–310
 - natural fragrances
 - chemical composition 319, 321, 327
 - extraction 315–319
 - of products 314–315
 - personal care 329
 - product design possibility 327–329
 - safety 330–332
 - permeability 121–123, 125, 170, 362, 363
 - persistent pigment darkening (PPD)
 - value 261, 267, 307
 - Persian Ibn Sina 311
 - pharmaceutical products 91, 393, 425
 - phase inversion temperature (PIT)
 - emulsion 140
 - phenoxyethanol 159–160
 - phosphatidylcholine 126, 168, 169, 199
 - phospholipids 106, 126, 168–170, 194, 203–204, 206, 211, 216
 - photoaging 201, 252
 - pH regulators 134
 - phytohormones 214–215
 - phytosterols 203, 207, 211, 240, 269, 293
 - pickering emulsion 154
 - pickling 384, 388–391
 - plant extracts 177, 220, 223, 227, 238, 240
 - polyacrylic acid 158
 - polyethylene glycols (PEGs) 122, 142, 308, 448, 449
 - polyethylene terephthalate (PET) 361
 - polymers 125, 134, 149, 157, 158, 170, 171, 190, 191, 194, 214, 268, 384, 402, 408, 427, 443
 - polymorphic light eruption (PALE) 253
 - polyphenols 215–216, 223–224
 - pre-acne 231–232
 - preservatives 5, 16, 17, 23, 131, 132, 134, 135, 140, 153, 154, 159–163, 177, 179, 181, 182, 187, 238, 242, 247, 276, 287, 293, 306, 363, 364, 400, 402, 421, 428, 429, 441, 444, 451
 - pressing 182, 205, 225, 317, 318
 - pressure ulcers 239, 295
 - price-quantity strategy 47, 92, 97
 - pricing depending on customer 91
 - pricing methods
 - competition-oriented pricing 95–97
 - cost-oriented 92–93
 - demand-oriented pricing 93–95
 - depending on customer 91–92
 - influence of brand 97–98
 - pre-set profit targets 91
 - site-specific prime costs 91
 - Procter & Gamble Company 31, 45, 47, 51–52, 54–55, 90
 - product information file (P.I.F.)
 - babies and children safety
 - consideration 434–435
 - cream analysis report 426–429
 - cream composition 422, 424
 - cream exposure to skin 429–434
 - CSPR
 - assessment 419
 - information 417–419
 - EU Cosmetics Regulation 417
 - identification and description 422
 - instruction 426
 - safety data sheet 420–421
 - structure 422–436
 - toxicologic profile 424–425
- product safety data sheet (PSDS) 420
- Product safety report 417–419

- production
- batch 345, 347–349
 - bottles and filling lines 361–366
 - continuous 350
 - laboratory equipment and pilot plant 342–345
 - methods 335–337
 - mini-emulsion 355–360
 - scale-up 350–354
 - stirring and homogenizing tools 337–339, 341–342
- production costs 62, 64–65, 73–75, 79, 81, 85
- prophylaxis creams 239, 253, 295, 297, 460
- propioni bacteria 235
- propionibacterium acnes 233
- prostaglandin 243
- protection for the whole day 261
- protection grades (PA+) 268
- provitamin B₅ 199, 200
- pyridoxine 199, 287
- pyrrolidone carboxylic acid (PCA) 191
- q**
- quality
- emulsion stability 399
 - microbial checks 400–402
 - physical measurements
 - advertising claims support 409–410
 - firmness and elasticity 406–408
 - gloss and color 409
 - moisture and sebum 403, 405–406
 - probes and devices 403
 - safety analysis 399
 - tests by customers 410–411, 413–414
- quality evaluation 399–400
- quasi drugs 17, 21, 184
- r**
- raspberries 215, 332
- raw material cost 73, 76–79, 84, 89, 245
- raw materials 62–64, 73, 75–81, 84, 89, 98, 163, 177, 179, 180, 205, 223, 225, 245, 311, 319, 335, 342, 348–350, 367, 372–375, 379, 382, 384, 392, 419, 420, 424–427, 430–433, 438, 443, 444, 446, 450, 453
- relative operating margin 51
- Remedies Advertising Act 8
- retinol 196–199, 213, 271
- rose 135, 216, 218, 240, 245, 318, 327, 444
- rotor/rotor homogenizer 342
- rotor/stator homogenizer 340, 366
- S**
- safety assessment 5, 6, 9, 17, 23, 61, 119, 399, 417, 419, 420, 422, 430, 433, 438, 449–452
- safety data sheet (SDS) 15, 420, 424
- safflower oil 211, 300
- salicylic acid 161, 179, 188, 196, 247
- sandalwood 1, 217, 218, 316, 327, 425
- scale-up 343, 350–354, 366
- scenting of rooms 314
- Scientific Committee of the Consumer Safety's (SCCS)
 - recommendations 15, 161, 261, 400–401, 424–425, 430–431, 433, 434, 444, 449, 451
- Scientific Committee on Cosmetic Products Intended for Consumers (SCCNFP) 331
- Sebuffix[®] 406
- sebaceous glands/ducts 104, 111, 126, 204, 233–235, 244, 248, 406
- sebum 103, 114, 126, 183, 199, 203, 204, 207, 208, 233–235, 237, 243, 271, 287, 289, 403, 406
- Sebumeter[®] 406, 407
- sheabutter 207, 443
- Shiseido 87, 89, 90
- shunt pathway 112
- Single Customs Union 264
- skin
 - dermis 104–105
 - epidermis 105–107

- skin (*contd.*)
 - gender differences 126
 - horny layer 107–108
 - stratum basale 106
 - stratum corneum 107
 - stratum granulosum 107
 - stratum lucidum 107
 - structure 103–108
 - subcutis 104
- skin barrier 108, 109, 120, 121, 125, 146, 189, 193, 212, 238, 242, 243, 406, 414, 437, 441
- skin care cream
 - active ingredients
 - from sea 223–225
 - origin 225
 - additives for color and fragrance 167
 - anti-aging cream
 - aloe vera 216
 - α -Lipoic acid 213
 - amino acid 213
 - Coenzyme Q10 214
 - 2-dimethylaminoethanol 214
 - enzymes 216
 - grapes and raspberries 215
 - green tea 215
 - hyaluronic acid 214
 - ingredients 212
 - kinetin 215
 - oxidative process 212
 - phytohormones 214–215
 - polyphenols 215–216
 - retinol 213
 - vitamin C 213
 - cosmeceuticals 182–184
 - cosmetic cream 176–182
 - emulsifiers 140
 - antioxidants, complexing agents
 - and buffer substances 163–167
 - consistency 155, 157–158
 - macro emulsions 140–142, 146–149
 - mini (nano) emulsions 149
 - preservation 158–163
 - stability 149, 152–154
 - essential oil 216–218
 - extracts from plants 219, 221, 223
 - liposomes 167–170
 - medicines 184, 187–188
 - modules 132, 134–135, 138–140
 - moisture 188
 - moisturizing substances 191–194, 196
 - natural moisturizing factor 188–191
 - natural and actual condition 175
 - natural cosmetics 176–182
 - structure 131–132
 - tasks 175
 - vegetable oil 201
 - in fats 205–208, 210–212
 - natural fatty acids 203–205
 - vitalizing substances 196, 198–201
- skin care products 29–30, 35, 43–44, 54, 118–119, 131, 142, 148, 149, 153, 182, 208, 241, 359, 407
- skin cleansing and care 3, 43
- skin eczema 242
- Skin Glossymeter 409
- Skin-Visiometer[®] 408
- SkinCeutical products 49
- skinstratum spinosum 106, 107
- smoothing cream 282, 283, 288
- sodium citrate 167, 424, 438
- sodium fluoride 11
 - CosIng database 12
 - US-database 13
- sodium lactate 166, 192, 194
- sodium phosphates 166
- SoFiTix broad-spectrum powder 255
- solar radiation 249–250, 265
- sorbic acid 162
- sorbitol 132, 135, 159, 161–163, 179, 192, 244, 246, 282, 293, 300, 401, 433, 448
- sorbic acid (check) 132, 135, 159, 161–163, 171, 179, 244, 246, 282, 293, 300, 401, 433, 448
- soybean 168, 194
- special cosmetic creams 231
- special cosmetics 17, 21, 271
- specific energy input 341, 354, 356, 360
- spinalioma 253
- spiny cell layer 107

- sprays 2, 44, 196, 248, 255, 268–269, 313, 314, 328, 329, 392, 418
- squalene 117, 193–194, 203, 225, 269
- squamous cell carcinoma 253
- squeezing 225, 311, 361
- stainless steel 337–338, 342–343, 348, 377, 379–380, 382, 383–392, 394
- State Food and Drug Administration (SFDA) 264
- steam distillation 216, 219, 311, 315–318, 332
- sterilize-in-place (SIP) systems 374, 392–394
- stirrer 338, 339, 342–344, 347–349, 352, 366
- stratum basale 106–107
- stratum corneum 106–114, 117, 121–123, 126, 188–189, 191, 201, 204–205, 210, 214, 255, 403, 405–406
- stratum granulosum 107, 108
- stratum lucidum 106, 107
- stratum spinosum 107
- subcutis 104–105, 114, 253
- sun allergy 253
- sun blocker 261
- sun creams
for reddened skin 236
- sun erythema 252
- sunburn 196, 236, 237, 250, 252, 265
- sun protection factor (SPF) 6, 238, 261, 307
- sunscreens
formulation 307
- sunscreens
application and warning notices 261–262, 264–265
classification and labeling 265
radiation-induced damage
black skin cancer 253
elastosis 252
heat collapse 253
polymorphic light eruption 253
spinalioma 253
sunburn 252
solar radiation 249
substances 254–255, 259–260
- sun protection measurement 265–268
- UV rays character 250
- sunscreens labeling 263, 265
- surface area of application 444
- surplus 59
- sweet almond, oil 139, 207, 208, 293, 443
- sweat glands 104, 111, 189, 237, 238
- Symrise 312, 313, 332
- Systemic Exposure Dose (SED) 420, 430–431, 434–436, 444, 448, 451
- t**
- tanning cream 248–249
- terpenes 109, 121, 124, 319, 321
- tetrahydrocannabinol, (THC) 317
- Tewameter[®] 405, 409
- TEWL 109
- thickeners 117, 122, 131, 132, 134, 135, 139, 140, 152, 155, 156, 158, 161, 163, 170, 171, 275, 293, 336
- thick horny layers cream 246
- thioglycolic acid 14
- thioglycol salts 241
- tibia 248
- tinea pedis 243
- Tinosorb[®] 260, 269
- titanium dioxide 179, 238, 254, 255, 259, 261, 264, 267, 361
- tocopherol 163, 225, 438
- Tocopherolacetat 187
- toxicological profile 419, 420, 424–426, 438, 449–450
- trademark 9
- transepidermal water loss (TEWL) 108–110, 188–190, 192–194, 199, 203, 205, 208, 215, 248, 405–406
- transfersomes[®] 126, 170
- triglycerides 115, 117, 125, 131, 141, 201, 203–205, 219, 269, 317
- typical cosmetic products 3
- u**
- ubihydroquinone 214
- ubiquinol 214, 284
- ultrasound 169, 355, 360, 389

- ultraviolet (UV) 5, 134, 189, 231, 250
 - Unilever 45–47, 50–51, 54–55
 - unit operations 131, 225
 - United States
 - economic importance 35
 - unwanted hair removal 241
 - urea 109, 123, 180, 188–193, 242–243, 247, 277, 282, 300, 301, 335, 429, 432–433
 - US Federal Food, Drug, and Cosmetic Act 15
 - UVA/UVB-filter 254, 259
 - UV rays character 250–252
- V**
- vaseline 123, 187, 194, 293
 - vegetable oil 201
 - almond oil 208, 210
 - borage oil 211
 - evening primrose oil 210
 - hemp oil 210
 - jojoba oil 207–208
 - natural fatty acids 203
 - safflower oil 211
 - sheabutter 207
 - wheat germ oil 211
 - vesicles 126, 169, 194
 - Visioline® 408
 - Visioscan® 406, 408
 - Viscosity 79, 118, 124, 125, 134, 142, 148, 155, 157, 159, 203, 240, 293, 306, 335, 338, 339, 349, 351, 352, 375, 392, 399, 402, 414, 432, 441
 - vitalizing 196–201, 247, 274, 277–281, 284, 456
 - vitalizing creams
 - formulations 277, 456
 - vitalizing substances
 - biotin 200
 - composition 199
 - dexpanthenol 199
 - folic acid 199
 - nicotinamide 199
 - pyridoxine 199
 - retinol 196, 198
 - vitamin C 200–201
 - vitamin E 201
 - vitamin A 153, 183, 196, 212, 224, 284
 - vitamin C 153, 163, 170, 198–200, 212, 213, 277
 - vitamins 125, 132, 139, 152, 163, 168, 176, 182–184, 196–201, 206, 210–211, 212–213, 216, 223, 239, 244, 247, 252, 269, 271, 277, 284, 288, 295, 300, 301, 335, 361, 420
- W**
- warnings 7, 9, 11, 12, 15, 241, 261, 262, 264, 330, 413, 418, 419, 425, 438, 448, 450
 - water-soluble polymers 157–158, 163
 - waxes 118, 134, 155, 157, 179, 180, 182, 194, 239, 241, 245, 306, 318, 389
 - wheat germ oil 211
 - wheat hydrolyzate 194
 - whitehead 234
 - w/o-emulsions 138–139, 140–142, 146, 149, 152, 153, 187, 269, 275, 292, 307, 402, 407, 455
 - Wrinkles 1, 127, 183, 193, 198–201, 208, 212–214, 236, 252, 271, 408–409
- X**
- xanthan 134, 158, 191, 194, 335
- Z**
- zinc oxide 238, 239, 254, 255, 259, 261, 262, 264, 267, 269