

November 10, 2006

Comments to U.S. Food and Drug Administration Docket: FDA Regulated Products Containing Nanotechnology Materials Docket number: 2006N-0107

RE: Supplement to Comments, submitted on Oct. 17, 2006

Please find enclosed Environmental Working Group's original comments (assigned Temporary Comment Number #93740) plus supplemental signatures obtained in support of our comments, attached as Appendix A.



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A Survey of Ingredients in 25,000 Personal Care Products Reveals Widespread Use of Nano-Scale Materials, Not Assessed for Safety, in Everyday Products

Environmental Working Group Washington, D.C.

The Environmental Working Group is a non-profit public health and environmental research and advocacy organization based in Washington, DC. We have conducted research on the safety of ingredients in personal care products for the past six years. Among our projects in this area is an online consumer tool that we update annually called *Skin Deep*, an interactive safety assessment that currently contains nearly 15,000 personal care products and their 7,000 constituent ingredients (www.ewg.org/skindeep/).

We have completed an in-depth survey of the use of nano-scale materials in personal care products, with findings derived from a systematic evaluation of ingredient labels, directions, and package details from the more than 25,000 products being uploaded for our next annual *Skin Deep* update. These products represent about one-quarter of the approximately 100,000 personal care products FDA estimates to be on the market (FR 2006). Our search encompassed common nano-scale ingredient terms such as micronized, fullerenes, the prefix "nano," quantum dots, and liposomes. We also searched product ingredient listings against a comprehensive database of chemicals now commercially available in nano sizes (Nanowerk 2006).

Our research reveals the widespread use of nano-scale ingredients in everyday personal care products. Our results represent the most comprehensive list of such products compiled to date.

We identified nearly 9,800 products containing nano-scale ingredients or ingredients that may contain a nano-scale fraction¹. These include 256 products containing one or more of 57 different types of nano-scale or micronized ingredients, and 9,509 additional products containing ingredients that are commercially available in nano sizes, but nearly all of which

¹ The upperbound limit of particle size for nano-scale materials has been variously defined as ranging from between 100 and 200 nanometers. FDA has not developed its own formal definition of nano-scale. The agency participated in the National Nanotechnology Institute's development of a definition setting an upperbound particle size of 100 nanometers (FDA 2006a). Other sources reference an upperbound size of 200 nanometers for nano-scale materials, including the National Cancer Institute (NCI 2006) and various pharmaceutical companies (e.g., Elan 2006, Ames Laboratory 2006). For the purposes of this document, when particle size distribution information is available, we define materials as containing a nano-scale fraction if at least some portion of the material includes particles 200 nanometers or less in diameter.

have no label information on particle size whatsoever. These products include those regulated as cosmetics and as drugs, such as sunscreen, as detailed below:

• **256** products with one or more of **57** different types of small-scale ingredients listed on the label or package (Tables 1 and 2), including products with "nanodelivery systems," 23 forms of "micronized" ingredients, and 3 products containing carbonbased, nano-scale "wire cages" known as fullerenes, among other types of nano-scale materials.

These products include 27 sunscreens that specifically note the use of micronized or nano-scale zinc oxide or titanium dioxide (Table 2). Neither of these two sunscreen ingredients have been comprehensively reviewed for safety in their micronized or nano-scale form by FDA. The European Union's Scientific Committee on cosmetics denied approval for micronized zinc oxide as a sunscreen in 2003, citing a lack of data on skin absorption and inhalation, and studies showing the ingredient to be potentially toxic in the presence of light (SCCNFP 2003, SCCP 2005).

• **9,509 products** (over one-third of all personal care products assessed by EWG) contain ingredients that are commercially available in nano-scale forms (Table 3). This includes 250 sunscreens containing titanium dioxide or zinc oxide (Table 4), and products containing gold, silver, iron oxide, zeolite, and liposomes, miniscule fatty balls used to deliver ingredients deeper into the skin (Table 3). Nearly all of these products fail to note whether the listed ingredient is conventional or nano-scale.

<u>Widespread use, unknown risks.</u> Our research indicates that the cosmetics industry uses nano-scale ingredients routinely, even though exposures and potential risks are poorly understood. We understand that FDA is still conducting basic safety studies on these personal care product ingredients, necessitated by the unique properties FDA highlights in the announcement for their October 10, 2006 public meeting on nanotechnology: "due to their small size and extremely high ratio of surface area to volume, nanotechnology materials often have chemical or physical properties that are different from those of their larger counterparts," including "increased chemical and biological activity." FDA recently presented a summary of ongoing research the agency is conducting to evaluate the penetration and toxicity in vitro and in mice and pigs of quantum dots and zinc oxide and titanium dioxide nanoparticles, with tests to define pharmacokinetics, toxicogenomics, photocytotoxicity, and photocarcinogenicity (FDA 2006b).

But while FDA conducts basic research to substantiate the safety of nano-scale ingredients, the use of these chemicals in products continues. FDA cannot require the cosmetics industry to test ingredients or products. FDA regulations do, however, require manufacturers to post a warning label on products containing ingredients that haven't been adequately substantiated for safety. The implementing regulations for the Federal Food, Drug, and Cosmetic Act (FD&CA) at 21 C.F.R. 740.10(a) read: "Each ingredient used in a cosmetic product and each finished cosmetic product shall be adequately substantiated for safety prior to marketing. Any such ingredient or product whose safety is not adequately substantiated prior to marketing is misbranded unless it contains the following conspicuous statement on the principal display panel: Warning – The safety of this product has not been determined."

None of the products we assessed bears this warning label. This omission can mean one of two things: either manufacturers believe they *do* have the data needed to substantiate safety of nano-scale ingredients, or they are using ingredients with unknown risks and failing to post the required warning label. Either way, we recommend that FDA take the logical actions that follow – requesting safety studies of the industry, and enforcing requirements for a warning label if such studies aren't produced.

New initiative will reveal available safety data. Through the industry's trade association, the Cosmetic, Toiletry, and Fragrance Association (CTFA), the cosmetics industry is initiating a new program called the Consumer Commitment Code that will shed light on what the industry itself knows about the safety of nano-scale materials (CTFA 2006). The Code includes a dossier program to make safety information more easily accessible to FDA through what CTFA is calling a "Safety Information Summary." Companies would provide this summary to FDA upon request. According to one media report, the Safety Information Summary would include raw material specifications, which presumably would include information on particle size distribution (Laas 2006). A Safety Information Summary would also presumably include a summary of safety information, including available penetration and toxicity studies for nano-scale materials, which would also, presumably, be available to FDA upon request.

Most importantly, according to media reports, the Safety Information Summary would include a statement that the product's safety has been substantiated. CTFA's chief scientist notes that such a statement would require that a product's ingredients had been assessed by the industry's expert panel (the Cosmetic Ingredient Review, or CIR), by FDA, or by the regulatory body of another country. According to the industry report *The Rose Sheet*, "key elements of the code include companies' commitment to using ingredients that have been substantiated for safety either by FDA or the Cosmetic Ingredient Review Expert Panel" (Laas 2006).

None of the nano-scale materials currently used in cosmetics has been substantiated for safety in cosmetics by the FDA or the Cosmetic Ingredient Review Expert Panel. By restricting their 600 member companies to the use of assessed ingredients only, CTFA seems to be endorsing a moratorium on nano-scale materials in cosmetics.

And if not, CTFA would instead be saying that it believes all nano-scale materials to be identical to conventional materials with respect to exposure potential and toxicity. Although this finding would be contrary to existing, publicly available studies, if companies have supporting safety data, it would finally be available to FDA through the industry's new Safety Information Summaries.

The bottom line is that through CTFA's new Consumer Commitment Code, FDA can either look forward to nano-scale materials being removed from cosmetics altogether, or to the public release of industry safety studies that justify the continued, safe use of these ingredients in personal care products.

<u>Recommendations.</u> Our recommendations to FDA include the following:

• FDA should establish, through a public process, a definition for adequate substantiation of safety for cosmetic ingredients, including nano-scale materials. We have proposed the following definition that would require specific consideration of the effect of particle size on exposure and toxicity:

The safety of personal care and cosmetic products must be substantiated through peer-reviewed scientific publications or publicly available industry studies, to a reasonable certainty of no harm from aggregate exposures to the product and its component ingredients including impurities, taking into account factors that may increase toxicity or penetration of the product or its component chemicals through the skin, including the presence of penetration enhancers and the effects of particle size including nanoparticles, and including all anticipated cosmetic exposures and all other exposures for which there is reliable information, taking into consideration vulnerable populations such as infants and pregnant women. Safety cannot be substantiated in the absence of data.

Safety substantiation for a cosmetic product must explicitly account for risks posed by impurities, ingredient degradates, and reaction products of ingredients, and must be based on an assessment of risk that incorporates: 1) information about product use patterns including among vulnerable populations such as infants and pregnant women; and 2) analysis of the cumulative effects of ingredients, impurities, ingredient degradates, and reaction products of ingredients with common health effects or target organs. In the case of threshold effects, an additional ten-fold margin of safety shall be applied in assessments of risk for pre- and post-natal toxicity for infants and pregnant women. A different margin of safety may be used only if, on the basis of reliable data, such a margin will be safe for infants and pregnant women.

- FDA should request from the cosmetics industry all available studies on nano-scale and micronized materials used to adequately substantiate ingredient and product safety, including detailed information on particle size distribution and including but not limited to all studies in the industry's new Safety Information Summaries in addition to the information recently submitted to FDA by CTFA on nano-scale sunscreen ingredients. FDA should review these studies and make determinations on the safety of nano-scale ingredients in personal care products, and should require warning labels on products which cannot be substantiated for safety.
- FDA should identify the presence of nano-scale materials in all personal care products. As a first step, FDA should require companies to submit information on particle size for ingredients entered into the Agency's Voluntary Cosmetic Registration Program product database. Under the CTFA's Consumer Commitment Code, CTFA member companies will be bound to give FDA their product formulations through this database; particle size should be required data. Because both absorption and toxicity are a function of particle size, collection of such information should be a key element of FDA's product safety evaluations. With these data, the Administration can monitor when and if commercial ingredients are introduced that fall outside the range of particle sizes for existing studies used to substantiate ingredient safety.
- And finally, FDA should act on the petition requesting amendment of its regulations for products composed of engineered nanoparticles generally and sunscreen drug products composed of engineered nanoparticles specifically, submitted earlier this year by the International Center for Technology Assessment.

References

Ames Laboratory. 2006. Cellular drug delivery from the inside out. Mesoporous nanospheres focus of Ames Laboratory research. 29 Mar 2006. Available online at: http://www.ameslab.gov/final/News/2006rel/nanoparticles.htm. Accessed: 17 Oct 2006.

CTFA (Cosmetic, Toiletry, and Fragrance Association). 2006. *CTFA Launches Package of Consumer-Oriented Industry Initiatives at 2006 Annual Meeting*. Press release 06-07. 2 Mar 2006. Available online at:

http://www.ctfa.org/Template.cfm?template=/ContentManagement/ContentDisplay.cfm&ContentID=3753.

Elan. 2006. NanoCrystal[®] Technology. Available online at: http://www.elan.com/EDT/nanocrystal_technology/default.asp. Accessed: 17 Oct 2006.

FDA (U.S. Food and Drug Administration). 2006a. FDA and Nanotechnology Products. Frequently Asked Questions (FAQs). Available online at: http://www.fda.gov/nanotechnology/faqs.html. Accessed: 17 Oct 2006.

FDA (U.S. Food and Drug Administration). 2006b. *FDA Considerations for Regulation of Nanomaterial Containing Products*. Presentation by Nakissa Sadrieh, Ph.D., Office of Pharmaceutical Science, CDER, FDA. Available online at: http://www.fda.gov/nanotechnology/.

FR (Federal Register). 2006. Department of Health and Human Services. Food and Drug Administration. Notice - Agency Information Collection Activities; Proposed Collection; Comment Request; Cosmetic Labeling Regulations. Vol 71, No 11, p 2947. 18 Jan 2006.

Laas, Molly. 2006. "CTFA Moves Forward With Implementation Of Consumer Commitment Code". *The Rose Sheet*. Vol 27, No 039, p6. 25 Sept 2006.

Nanowerk. 2006. Nanomaterial Database of 1,352 nanoparticles from 93 suppliers. Availableonline at http://www.nanowerk.com/phpscripts/n_dbsearch.php.

NCI (National Cancer Institute). 2006. Nanoscale "Cell Within A Cell" Delivers Multiple Therapies that Kill Tumors. NCI Alliance for Nanotechnology in Cancer. Available online at: http://nano.cancer.gov/news_center/nanotech_news_2005-08-01a.asp. Accessed: 17 Oct 2006.

SCCNP (The Scientific Committee on Cosmetic Products and Non-Food Products Intended for Consumers). 2003. Opinion concerning zinc oxide. OLIPCA n S 76. Adopted by the SCCNFP during the 24th plenary meeting of 24-25 June 2003.

SCCP (The Scientific Committee on Consumer Products). 2005. Statement on zinc oxide used in sunscreen. Adopted by the SCCP during the 5th plenary meeting of 20 September 2005.

Table 1. Nano-scale and micronized ingredients in personal care products.

256 products containing one or more nano-scale or micronized ingredients, from EWG survey of ingredients in 25,000 products

Ingredient	Number of Products	Types of Products
ARNICA NANOSOMES	1	acne treatment
BARLEY-GERM NANOSOMES	1	acne treatment
FULLERENES	3	anti-aging; facial moisturizer/treatment; around-eye cream
LYPHAZOME NANOSPHERES	5	around-eye cream; anti-aging; moisturizer; nail treatment; acne treatment
MICRONIZED BENZOYL PEROXIDE	3	acne treatment
MICRONIZED CORNFLOUR	1	facial moisturizer/treatment
MICRONIZED FORMULA	2	sunscreen/tanning oil; powder
MICRONIZED GLUCONOLACTATE	3	camouflage makeup; powder; anti-aging
MICRONIZED INGREDIENTS	5	blush; anti-aging; styling gel/lotion; sunscreen/tanning oil; powder
MICRONIZED ITALIAN TALC	1	bronzer/highlighter
MICRONIZED LIPOSOMES	3	facial moisturizer/treatment; anti-aging; around-eye cream
MICRONIZED MINERALS	1	foundation; powder
MICRONIZED PARTICLES	1	sunscreen/tanning oil; foundation; concealer
MICRONIZED PEARL	1	exfoliant/scrub
MICRONIZED PEARLIZERS	1	facial moisturizer/treatment
MICRONIZED PIGMENTS	3	sunscreen/tanning oil; powder
MICRONIZED POLYCARBONATED RESIN	1	nail treatment
MICRONIZED POWDER	5	concealer; glitter; powder; blush
MICRONIZED PROGESTERONE	2	hormonal cream
MICRONIZED QUARTZ SILICA	1	mask
MICRONIZED ROSE QUARTZ POWDER	22	blush; bronzer/highlighter; concealer; eye shadow; facial moistur- izer/treatment; foundation; lip gloss; lipstick; skin fading/lightener; sunscreen/tanning oil
MICRONIZED SPHERICAL DIAMOND DUST	1	facial cleanser
MICRONIZED TITANIUM DIOXIDE	97	anti-aging; blush; bronzer/highlighter; concealer; conditioner; eye liner; eye shadow; facial cleanser; facial moisturizer/treatment; foun- dation; glitter; lip liner; lipstick; powder; redness/rosacea treatment; skin fading/lightener; sunscreen/tanning oil
MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)	15	blush; foundation; powder; eye shadow
MICRONIZED TITANIUM DIOXIDE (SAFETY COATED)	1	sunscreen/tanning oil
MICRONIZED TOPAZ POWDER	22	blush; bronzer/highlighter; concealer; eye shadow; facial moistur- izer/treatment; foundation; lip gloss; lipstick; skin fading/lightener; sunscreen/tanning oil

Ingredient	Number of Products	Types of Products
MICRONIZED ZINC OXIDE	77	anti-aging; anti-itch/rash cream; blush; bronzer/highlighter; concealer; diaper cream; eye shadow; facial moisturizer/treatment; foundation; glitter; lipstick; powder; redness/rosacea treatment; sunscreen/tanning oil
MICROSOME	1	around-eye cream
NANO LOTION	1	skin fading/lightener
NANO ZINC OXIDE	5	<pre>sunscreen/tanning oil; lip balm/treatment; lipstick</pre>
NANODELIVERY SYSTEM	4	around-eye cream; anti-aging; body firming lotion
NANOENCAPSULATED INGREDIENTS	2	anti-itch/rash cream; redness/rosacea treatment
NANOENCAPSULATED RETINOL	1	anti-aging; skin fading/lightener
NANOLIPOSOME DELIVERY SYSTEM	1	anti-aging; facial moisturizer/treatment
NANOPARTICLE DELIVERY SYSTEM	2	facial moisturizer/treatment; anti-aging
NANOPARTICLES	2	sunscreen/tanning oil
NANO-RETINYL	1	skin fading/lightener; anti-aging
NANOSOMES	1	hair-loss treatment
NANOSOMES OF ALPHA-BISABOLOL AND GERMAL II	1	anti-aging
NANOSOMES OF CALENDULA	1	anti-aging
NANOSOMES OF CENTELLA ASIATICA	2	body firming lotion
NANOSOMES OF GINSENG	1	anti-aging
NANOSOMES OF PRO-VITAMIN B5	1	anti-aging
NANOSOMES OF SODIUM LACTATE	1	anti-aging
NANOSOMES OF UREA	1	anti-aging
NANOSOMES OF VITAMIN A	3	anti-aging; body wash/cleanser
NANOSOMES OF VITAMIN A AND E	1	anti-aging
NANOSOMES OF WITCH HAZEL	1	anti-aging
NANOSPHERE TECHNOLOGY	1	pain/wound treatment
NANOSPHERES OF HYALURONIC ACID AND FULVIC ACID	1	concealer
NANOTECHNOLOGY DELIVERY SYSTEM	1	body firming lotion
NANOTECHNOLOGY INGREDIENTS	2	sunscreen/tanning oil; facial cleanser
NANOTECHNOLOGY POWDER	1	powder
NANO-VITAMINS	26	bronzer/highlighter; eye shadow; glitter
VITAMIN E (NANOPARTICLE)	1	acne treatment; facial cleanser; facial moisturizer/treatment; sun- screen/tanning oil
VITAMIN NANOCAPSULES	3	anti-aging; sunscreen/tanning oil; after sun product
WHEAT-GERM NANOSOMES	1	acne treatment

Source: Environmental Working Group (EWG) analysis of ingredients, directions, and package details from 25,000 products, with information obtained from online retailers, manufacturers, or purchased products. Note: Some products contain multiple ingredients listed above.

Table 2. 256 personal care products with nano-scale or micronized ingredients.

Company	Brand	Product	Potentially nano-sized ingredien or relevant label term
Acne treatment			
Celazome New Zealand Limited	Celazome	Celazome O-Plex Target Acne Spot Treatment	LYPHAZOME NANOSPHERES
Jan Marini Skin Research, Inc.	Jan Marini	Jan Marini Benzoyl Peroxide 5%	MICRONIZED BENZOYL PEROXIDE
Jan Marini Skin Research, Inc.	Jan Marini	Jan Marini Benzoyl Peroxide 10%	MICRONIZED BENZOYL PEROXIDE
Johnson & Johnson	Clean & Clear	Clean & Clear Maximum Strength Persa-Gel 10	MICRONIZED BENZOYL PEROXIDE
Wilma Schumann	Wilma Schumann	Wilma Schumann Acne Kit	VITAMIN E (NANOPARTICLE)
DS Laboratories, Inc.	DS Laboratories	DS Laboratories Trioxil Anti-Acne Gel	WHEAT-GERM NANOSOMES, BAR- LEY-GERM NANOSOMES, ARNICA NANOSOMES
After sun product		· · · · · · · · · · · · · · · · · · ·	
L'Oreal	Lancome	Lancome Soleil Instant Cooling Sun Spritz	VITAMIN NANOCAPSULES
Anti-aging		· · · · · · · · · · · · · · · · · · ·	
Sircuit Skin Cosmeceuticals Inc.	Sircuit Skin	Sircuit Skin addict Firming Anti-Oxidant Se- rum	FULLERENES
Sircuit Skin Cosmeceuticals Inc.	Sircuit Skin	Sircuit Skin o.m.g. Anti-Aging Skin Resusci- tating Serum	FULLERENES
Neostrata	Exuviance	Exuviance Anti Aging Finishing Powder	MICRONIZED GLUCONOLACTATE
OFRA	OFRA	OFRA Vitamin A and C Serum	MICRONIZED INGREDIENTS
Jan Marini Skin Research, Inc.	Jan Marini	Jan Marini Transformation Serum	MICRONIZED LIPOSOMES
Cellex-C International Inc.	Cellex-C	Cellex-C Anti-Aging Kit	MICRONIZED ZINC OXIDE, MI- CRONIZED TITANIUM DIOXIDE
Can Do Spirit, Inc.	ТҮК	TYK Revelation	NANODELIVERY SYSTEM
Cosmetic Dermatology, Inc.	Dr. Brandt	Dr. Brandt Laser Tight	NANOENCAPSULATED INGREDI- ENTS
ProCyte Corporation	Neova	Neova Therapy Dual Action Lotion	NANOENCAPSULATED RETINOL
emerginC	emerginC	emerginC Hyper-Vitalizer	NANOLIPOSOME DELIVERY SYS- TEM
DS Laboratories, Inc.	DS Laboratories	Viterol.A (viatrozene gel) 29% for Eyes and Corners of the Mouth	NANOSOMES OF SODIUM LACTATE NANOSOMES OF CALENDULA, NANOSOMES OF WITCH HAZEL, NANOSOMES OF GINSENG, NANO- SOMES OF UREA, NANOSOMES OF VITAMIN A AND E, NANOSOMES OF PRO-VITAMIN B5, NANOSOME OF ALPHA-BISABOLOL AND GER- MAL II
DS Laboratories, Inc.	DS Laboratories	DS Laboratories Viterol.A (viatrozene gel) 16% Cream for Wrinkles & Expression Lines	NANOSOMES OF VITAMIN A
DS Laboratories, Inc.	DS Laboratories	Viterol.A (viatrozene gel) 16%	NANOSOMES OF VITAMIN A
L'Oreal	Lancome	Lancome Soleil Soft-Touch Anti-Wrinkle Sun Cream SPF 15	VITAMIN NANOCAPSULES

Company	Brand	Product	Potentially nano-sized ingredien or relevant label term
Anti-itch/rash cream			
Hanson Medical, Inc.	Hanson Medical	Hanson Medical Laserfade Post Laser Gel	MICRONIZED ZINC OXIDE
Cosmetic Dermatology, Inc.	Dr. Brandt	Dr. Brandt Laser Relief	NANOENCAPSULATED INGREDI- ENTS
Around-eye cream			
Sircuit Skin Cosmeceuticals Inc.	Sircuit Skin	Sircuit Skin white out Daily Under Eye Care	FULLERENES
Celazome New Zealand Limited	Celazome	Celazome Eye Treat with Lyphazome Technol- ogy	LYPHAZOME NANOSPHERES
Ciba Vision Corporation	Eye	Eye Treat with Lyphazome Technology	LYPHAZOME NANOSPHERES
CBI Laboratories, Inc.	Credentials	Credentials Microsome Eye Gel	MICROSOME
PerfectRx	PerfectRx	PerfectRx Eye Perfect Serum	NANODELIVERY SYSTEM
Ciba Vision Corporation	Eye	Eye Perfect Serum	NANODELIVERY SYSTEM
Jan Marini Skin Research, Inc.	Jan Marini	Jan Marini Transformation Eye Cream	MICRONIZED LIPOSOMES
Blush		·	
RAMY Beauty Therapy	Ramy	Ramy Pure Color Blush For Cheeks, Alive!	MICRONIZED INGREDIENTS
Victoria Jackson Cosmetics	Lola Cosmetics	Lola Cosmetics Blush	MICRONIZED POWDER BRUSHES
Iredale Mineral Cosmetics, Ltd.	Jane Iredale	Jane Iredale PurePressed Blush - Sheer Honey	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim Angels blush (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
ColoreScience	ColoreScience	ColoreScience Suncanny Face Colore Retract- able Brush , SPF 20	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (Cheek A Boo)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Gilty Conscience Finger Face Paint (Betrayal)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (Coming Up Roses)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (Blushing Bride)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (Apple of My Eye)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (Bowl of Cherries)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (The Color Purple)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (Just Barely)	MICRONIZED TITANIUM DIOXIDE MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Blusher (The Rising Sun)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Blusher (My Lil Pumpkin)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
ColoreScience	ColoreScience	Colorescience Blusher (Gingerly Speaking)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Gilty Conscience Finger Face Paint (Deception)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Gilty Conscience Finger Face Paint (Scandal)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Gilty Conscience Finger Face Paint (Seduction)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	ColoreScience Suncanny Face Colore Retract- able Brush SPF 20 String of Pearls	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	ColoreScience Suncanny Face Colore Retract- able Brush SPF 20 The Painted Desert	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	ColoreScience Suncanny Face Colore Retract- able Brush SPF 20 Kiss the Sky	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
Body firming lotion			
Nutra Luxé M.D.	Nutra Luxé M.D.	Nutra Luxé M.D. Lipo Reduction Anti- Cellulite Crème	NANODELIVERY SYSTEM
DS Laboratories, Inc.	DS Laboratories	DS Laboratories Oligo.DX Cellulite Reducing Gel	NANOSOMES OF CENTELLA ASI- ATICA
DS Laboratories, Inc.	DS Laboratories	Oligo DX Cellulite Treatment	NANOSOMES OF CENTELLA ASI- ATICA
Osmotics Corporation	Osmotics	Osmotics Lipoduction Body Perfecting Com- plex	NANO-TECHNOLOGY DELIVERY SYSTEM
Body wash/cleanser			
DS Laboratories, Inc.	DS Laboratories	DS Laboratories Hydroviton.CR Liquid Normal- izing Soap 80g	NANOSOMES OF VITAMIN A
Bronzer/highlighter			
Physicians Formula Cosmetics	Physicians For- mula	Physicians Formula Jungle Fever Bronzing & Shimmery Face Powder (Tiger, Leopard)	MICRONIZED ITALIAN TALC
Revlon	Revlon	Revlon SkinLights Face Illuminator Powder Brightener, Bare Light	MICRONIZED ROSE QUARTZ POW- DER, MICRONIZED TOPAZ POWDER
Revlon	Revlon	Revlon SkinLights Face Illuminator Powder Bronzer, Warm Light	MICRONIZED ROSE QUARTZ POW- DER, MICRONIZED TOPAZ POWDER
ColoreScience	ColoreScience	Colorescience Bronzer , SPF 20; One For All)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Afterglow (String of Pearls)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Bronzer , SPF 20	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Bronzer , SPF 20; In The Wild)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Bronzer , SPF 20; It's Only Natu- ral)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Bronzer , SPF 20; Kissed By The Sun)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
ColoreScience	ColoreScience	Colorescience Afterglow (Kiss The Sky)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Afterglow (The Painted Desert)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
Revlon	Revlon	Revlon SkinLights Diffusing Tint SPF 15, Ivory	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Diffusing Tint SPF 15, Buff	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Diffusing Tint SPF 15, Nude	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Diffusing Tint SPF 15, Beige	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Diffusing Tint SPF 15, Honey	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Color Lighting for eyes & cheeks, Mocha	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Color Lighting for eyes & cheeks, Rosy	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Color Lighting for eyes & cheeks, Sunny	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Color Lighting for eyes & cheeks, Berry	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Illusion Wand SPF 12 (Medi- um Touch flaw-diffusing concealer, Luminous Touch flaw-diffusing concealer, Light Touch flaw-diffusing concealer)	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Color Lighting for eyes & cheeks, Terra	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (In My Pink Cadillac)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Flower Power)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Red Hot Mama)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Scandal)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Seduc- tion)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Betrayal)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Decep- tion)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Heart Of Gold)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Glisten To Me)	NANO-VITAMINS

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
ColoreScience	Colorescience	Colorescience Genie Sparkle Bottles (Bold As Brass)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Like A Rolling Stone)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Cup O Joe)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Simply Mauvelous)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Plum Crazy)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Ma- rooned In Space)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Wait Un- til Dark)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Moon- lighting)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Out In The Cold)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Cold As Ice)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Sea of Love)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Walking In The Rain)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Rainy Day Blues)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Fog's Rolling In)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Grapes Of Wrath)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Splendor In The Grass)	NANO-VITAMINS
ColoreScience	ColoreScience	Colorescience Genie Sparkle Bottles (Lime In The Coconut)	NANO-VITAMINS
Camouflage makeup			
Neostrata	CoverBlend	CoverBlend Anti-Aging Finishing Powder	MICRONIZED GLUCONOLACTATE
Concealer		·	
Too Faced Cosmetics	Too Faced	Too Faced Absolutely Flawless	MICRONIZED POWDER
ColoreScience	ColoreScience	Colorescience Corrector , SPF 20; Yellow Rose of Texas)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Concealer (Remedy That Red)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Concealer (Bye Bye Blues)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Concealer (Into The Light)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
ColoreScience	ColoreScience	Colorescience Corrector , SPF 20; Mint Condi- tion)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
DERMAdoctor	DERMAdoctor	DERMAdoctor Faux Fillment	NANOSPHERES OF HYALURONIC ACID AND FULVIC ACID
Conditioner			
California Baby	California Baby	California Baby Swimmer's Defense Hair Con- ditioner	MICRONIZED TITANIUM DIOXIDE
Diaper cream			
MADIBRANDS	Dyprotex	Dyprotex Ultra Medicated Diaper Rash Oint- ment Pads	MICRONIZED ZINC OXIDE
Exfoliant/scrubz			
StarMaker Products	Micro	Micro Pearl Abrasion Resurfacing Treatment, with Micronized Pearl	MICRONIZED PEARL
Eye liner			
ColoreScience	ColoreScience	Colorescience Eye Pencil (Blondes Have More Fun)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Eye Pencil (A Cup O' Joe)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Eye Pencil (Pitch Black)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Eye Pencil (Baby Blue Eyes)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Eye Pencil (Shades of Gray)	MICRONIZED TITANIUM DIOXIDE
Eye shadow			
Larenim Mineral Makeup	Larenim	Larenim 24 Karat Angel Eye Colour (Recent re- formulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Don't Eat The Daisies)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Softer Shade of Pale)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Purple Haze)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Kissed By The Sun)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Dust In The Wind)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Plum Crazy)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (That Tough of Mink)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (After Midnight)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Smudge It Eye Shadow (Black As Night)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
Facial cleanser		·	
BORBA LLC.	BORBA	BORBA Fiber-Knit Facial Cleanser	MICRONIZED SPHERICAL DIA- MOND DUST

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
Fancl International, Inc.	Boscia	Boscia MakeUp BreakUp Cool Cleansing Oil	NANOTECHNOLOGY INGREDIENTS
Facial moisturizer/treatment			
Hain Celestial Group, Inc.	Jason Natural Cosmetics	Jason Natural Cosmetics Aqua Moist Balancing Spf 15 Lotion	MICRONIZED CORNFLOUR
Jan Marini Skin Research, Inc.	Jan Marini	Jan Marini Transformation Cream	MICRONIZED LIPOSOMES
L'Oreal	Biotherm	Biotherm Source Therapie Superactiv	MICRONIZED PEARLIZERS
Sircuit Skin Cosmeceuticals Inc.	Sircuit Skin	Sircuit Skin day care Protective Day Moistur- izer	MICRONIZED TITANIUM DIOXIDE
Jan Marini Skin Research, Inc.	Jan Marini	Jan Marini Bioglycolic Facial Lotion SPF 15	MICRONIZED TITANIUM DIOXIDE
Pevonia Botanica	Pevonia	Pevonia Radiance Renewing Glycocides Cream	MICRONIZED TITANIUM DIOXIDE
Pevonia Botanica	Pevonia	Pevonia Speciale Reactive Skin Care Cream	MICRONIZED TITANIUM DIOXIDE
Revlon	Revlon	Revlon Skinlights Instant Skin Brightner Lo- tion Brightener SPF 15, Bare Light	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon Skinlights Instant Skin Brightner Lo- tion Bronzer, Warm Light	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Ferndale Laboratories, Inc.	Ferndale Nouriva	Nouriva Repair Moisturizing Cream	NANOPARTICLE DELIVERY SYSTEM
Ferndale Laboratories, Inc.	Ferndale Nouriva	Ferndale Nouriva - Nouriva Repair Moisturizing Cream	NANO-PARTICLE DELIVERY SYS- TEM
Foundation			
Iredale Mineral Cosmetics, Ltd.	Jane Iredale	Jane Iredale Amazing Base Loose Minerals SPF 20	MICRONIZED MINERALS
Amazing Cosmetics, Inc.	Amazing Cosmet- ics	Amazing Cosmetics Velvet Mineral Powder Foundation (Ultra Light)	MICRONIZED TITANIUM DIOXIDE
Amazing Cosmetics, Inc.	Amazing Cosmet- ics	Amazing Cosmetics Velvet Mineral Powder Foundation (Golden Light)	MICRONIZED TITANIUM DIOXIDE
Amazing Cosmetics, Inc.	Amazing Cosmet- ics	Amazing Cosmetics Velvet Mineral Powder Foundation (Light)	MICRONIZED TITANIUM DIOXIDE
Amazing Cosmetics, Inc.	Amazing Cosmet- ics	Amazing Cosmetics Velvet Mineral Powder Foundation (Medium)	MICRONIZED TITANIUM DIOXIDE
Amazing Cosmetics, Inc.	Amazing Cosmet- ics	Amazing Cosmetics Velvet Mineral Powder Foundation (Dark)	MICRONIZED TITANIUM DIOXIDE
Larenim Mineral Makeup	Larenim	Larenim 2n Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 3n Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 11n Foundation (Recent reformula- tion of this product no longer contains mi- cronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 1c Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 3c Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
Larenim Mineral Makeup	Larenim	Larenim 4c Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 5c Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 12c Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 2w Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 3w Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 4W Foundation (Recent reformulation of this product no longer contains micronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
Larenim Mineral Makeup	Larenim	Larenim 12W Foundation (Recent reformula- tion of this product no longer contains mi- cronized ingredients) ²	MICRONIZED TITANIUM DIOXIDE (COATED WITH DIMETHICONE)
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; My Fair Lady)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; Light As A Feather)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; Pass The Butter)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; All Even)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; Second Skin)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; California Girl)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; Per.Fekt')	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; Not Too Deep)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; In The Dark)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; Toast Of The Town)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Foundation , SPF 20; That Touch Of Mink)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Makeup Take out Box	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
Alison Raffaele Cosmetics	Skin Alison Raf- faele	Skin Alison Raffaele Mineral Powder Founda- tion	MICRONIZED ZINC OXIDE, MI- CRONIZED TITANIUM DIOXIDE

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
Glitter			
Pinkie Swear LLC	Pinkie Swear	Pinkie Swear Diva Dust	MICRONIZED POWDER
Hair-loss treatment	· · · ·		
DS Laboratories, Inc.	DS Laboratories	DS Laboratories SPECTRAL DNC Hair Loss Treatment	NANOSOMES
Hormonal cream			
Trimedica	Trimedica	Trimedica Progesta	MICRONIZED PROGESTERONE
Pure Essence Labs	Pure Essence Labs	Pure Essence Labs Femcreme	MICRONIZED PROGESTERONE
Lip balm/treatment	1		
DERMAdoctor	DERMAdoctor	DERMAdoctor POUTlandish Hyper Moisturizing Lip Paint & Treatment SPF 15 With Nanotech- nology, 2 mL, Clear	NANO ZINC OXIDE
DERMAdoctor	DERMAdoctor	DERMAdoctor POUTlandish Hyper Moisturizing Lip Paint & Treatment SPF 15 With Nanotech- nology, 2 mL, Pink Plazative	NANO ZINC OXIDE
DERMAdoctor	DERMAdoctor	DERMAdoctor POUTlandish Hyper Moisturizing Lip Paint & Treatment SPF 15 With Nanotech- nology, 2 mL KC Blush	NANO ZINC OXIDE
Vortex Health & Beauty Ltd.	Luscious Lips	Luscious Lips Rejuvenation Duo	NANO ZINC OXIDE
Lip gloss	· · · · ·		
Revlon	Revlon	Revlon SkinLights Glosslights for Lips Translu- cent Gloss, Opal	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Glosslights for Lips Translu- cent Gloss, Rose Quartz	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Glosslights for Lips Translu- cent Gloss, Amethyst	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon SkinLights Glosslights for Lips Translu- cent Gloss, Topaz	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Lip liner	1		
ColoreScience	ColoreScience	Colorescience Lip Pencil (A Softer Shade of Pale)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (Life's a Peach)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (Tickled Pink)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (Bed of Roses)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (Simply Marvelous)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (Berry Sweet)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (Red Brick Road)	MICRONIZED TITANIUM DIOXIDE
ColoreScience	ColoreScience	Colorescience Lip Pencil (A Little Rusty)	MICRONIZED TITANIUM DIOXIDE
Lipstick			
Revlon	Revlon	Revlon Skinlights Custom LipColors, Topaz	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
Revlon	Revlon	Revlon Skinlights Custom LipColors, Rose Quartz	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Revlon	Revlon	Revlon Skinlights Custom LipColors, Mother of Pearl	MICRONIZED TOPAZ POWDER, MI- CRONIZED ROSE QUARTZ POWDER
Mask	·	· · · ·	
Cellex-C International Inc.	Cellex-C	Cellex-C Advanced C Skin Toning Mask	MICRONIZED QUARTZ SILICA
Moisturizer		· · · · · · · · · · · · · · · · · · ·	
Celazome New Zealand Limited	Celazome	Celazome Spoil Me Body Lotion	LYPHAZOME NANOSPHERES
Nail treatment	·	· · · · · · · · · · · · · · · · · · ·	
Celazome New Zealand Limited	Celazome	Celazome Tip Treat Cuticle Exfoliator	LYPHAZOME NANOSPHERES
Del Laboratories, Inc.	Sally Hansen	Sally Hansen Thicken Up!	MICRONIZED POLYCARBONATED RESIN
Pain/wound treatment	· ·	· · · · · · · · · · · · · · · · · · ·	
Marlyn Nutraceuticals, Inc.	Naturally Vita- mins	Naturally Vitamins Wobenzyme N Pain Reliev- ing Creme	NANOSPHERE TECHNOLOGY
Powder		· · · ·	
Physicians Formula Cosmetics	Physicians For- mula	Physicians Formula Star Perfection Marilyn Monroe Face Powder (Translucent, Bronzer, Beige)	MICRONIZED FORMULA
Neostrata	CoverBlend	CoverBlend Anti-Aging Finishing Powder Beige	MICRONIZED GLUCONOLACTATE
RAMY Beauty Therapy	Ramy	Ramy Pure Radiance Pressed Powder	MICRONIZED INGREDIENTS
Gurwitch Products, L.L.C.	Laura Mercier	Laura Mercier Secret Brightening Powder	MICRONIZED PIGMENTS
Physicians Formula Cosmetics	Physicians For- mula	Physicians Formula Skinsitive Ultra-Gentle Face Powder (Sensible Nude)	MICRONIZED POWDER
Falic Group	Urban Decay	Urban Decay Micronized Loose Powder	MICRONIZED POWDER
ColoreScience	ColoreScience	Colorescience Finishing Powder (Sheerly Ir- resistable)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Finishing Powder (Invisibly Matte)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Face Colore	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Finishing Powder (Snow Leop- ard)	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	ColoreScience Sunforgettable Retractable Dis- pensing Brush SPF 30	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	ColoreScience Sunforgettable SPF 30	MICRONIZED TITANIUM DIOXIDE, MICRONIZED ZINC OXIDE
ColoreScience	ColoreScience	Colorescience Almost Clear (Sunforgettable; SPF 30	NANOTECHNOLOGY POWDER
Skin fading/lightener			
Professional Solutions	Professional Solu- tions	Professional Solutions Pigment Correction Kit	MICRONIZED TITANIUM DIOXIDE

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
Awake International	Awake	Awake Nano Lotion Whitener	NANO LOTION
Can Do Spirit, Inc.	ТҮК	TYK White Glow Retinol, Kojic (MagC Absolute Skin Brightener)	NANO-RETINYL
Styling gel/lotion			
Revision Skincare	Revision	Revision 8% Skin Lightening Gel	MICRONIZED INGREDIENTS
Sunscreen/tanning oil	,	· · · · · · · · · · · · · · · · · · ·	
Peter Thomas Roth Labs	Peter Thomas Roth	Peter Thomas Roth Ultra Lite Titanium Dioxide Sunblock SPF 30	MICRONIZED FORMULA
June Jacobs Laboratories LLC	June Jacobs	June Jacobs Micronized Sheer , SPF 30	MICRONIZED INGREDIENTS
Fallene, Ltd.	Fallene	Fallene Total Block Cover-Up / Make-Up SPF 60	MICRONIZED PARTICLES
BABOR	BABOR	BABOR High Protection Lotion , SPF 30	MICRONIZED PIGMENTS
BABOR	BABOR	BABOR Moderate Protection Sun Cream , SPF 20	MICRONIZED PIGMENTS
Korres Natural Products Ltd.	Korres Natural Products	Korres Natural Products Red Vine Year Round Hair Sun Protection	NANOPARTICLES
Korres Natural Products Ltd.	Korres Natural Products	Korres Natural Products Red Vine Year Round Hair Sun Protection Spray	NANOPARTICLES
DERMAdoctor	DERMAdoctor	DERMAdoctor Fun in the Sun Kit	NANOTECHNOLOGY INGREDIENTS
L'Oreal	Lancome	Lancome Soleil Soft-Touch Moisturising Sun Lotion SPF 15	VITAMIN NANOCAPSULES
BENEV Inc.	BENEV	BENEV Titanium Dioxide	MICRONIZED TITANIUM DIOXIDE
Birch Trees	Birch Trees	Birch Trees Daily Guard Sun Screen , SPF 15	MICRONIZED ZINC OXIDE
Brave Soldier	Brave Soldier	Brave Soldier Solar Shield SPF 28 Moisturizing Sunblock	MICRONIZED ZINC OXIDE
California Baby	California Baby	California Baby Water Resistant, Hypo-Aller- genic Sunscreen , SPF 30	MICRONIZED TITANIUM DIOXIDE
California Baby	California Baby	California Baby SPF 30& Fragrance Free Sun- screen , SPF 30	MICRONIZED TITANIUM DIOXIDE
California Baby	California Baby	California Baby SPF 30& Everyday/Year-Round Sunscreen Lotion , SPF 30	MICRONIZED TITANIUM DIOXIDE
California Baby	California Baby	California Baby SPF 30& Everyday/Year Round Sunblock Stick , SPF 30	MICRONIZED TITANIUM DIOXIDE
California Baby	California Baby	California Baby SPF 30& No Fragrance Sun- block Stick , SPF 30	MICRONIZED TITANIUM DIOXIDE
Topix Pharmaceuticals	Glycolix Elite	Glycolix Elite Sunscreen SPF 30	MICRONIZED ZINC OXIDE
Cellex-C	Cellex-C	Cellex-C Sun Sports Cream , SPF 30	MICRONIZED ZINC OXIDE
Cellex-C	Cellex-C	Cellex-C Sun Care , SPF 30	MICRONIZED ZINC OXIDE, MI- CRONIZED TITANIUM DIOXIDE
Cellex-C	Cellex-C	Cellex-C Sun Care Broad Spectrum UV-A, UV-B Sunblock & Moisturizer, SPF 15	MICRONIZED ZINC OXIDE, MI- CRONIZED TITANIUM DIOXIDE

Company	Brand	Product	Potentially nano-sized ingredient or relevant label term
Dermalogica	Dermalogica	Dermalogica Ultra Sensitive FaceBlock SPF 25	MICRONIZED TITANIUM DIOXIDE
La Roche-Posay	BioMedic	BioMedic Pigment Shield , SPF 18)	MICRONIZED ZINC OXIDE
Md formulations	Md formulations	Md formulations Total Protector 15 Face	MICRONIZED ZINC OXIDE
Md formulations	Md formulations	Md formulations Total Protector SPF 15	MICRONIZED ZINC OXIDE
OBAGI Medical Products	OBAGI	Obagi Healthy Skin Protector SPF 35	MICRONIZED ZINC OXIDE
Orion Learning Intl, Inc.	Keys Soap	Keys Soap Solar RX Sunblock	NANO ZINC OXIDE
Pevonia Botanica	Pevonia	Pevonia Soleil Sun Block SPF 15	MICRONIZED TITANIUM DIOXIDE
ProCyte Corporation	Procyte	Procyte Ti-Silc Sheer SPF 45 (tinted)	MICRONIZED TITANIUM DIOXIDE
ProCyte Corporation	Procyte	Procyte Ti-Silc Sheer SPF 45	MICRONIZED TITANIUM DIOXIDE (SAFETY COATED)
Swiss-American Products	Elta	Elta Gold UV Facial SPF 30	MICRONIZED ZINC OXIDE
Swiss-American Products	Elta	Elta UV Shield SPF 45 Daily Protection Oil Free	MICRONIZED ZINC OXIDE
Swiss-American Products	Elta	Elta Gold UV Sport SPF 50 Waterproof	MICRONIZED ZINC OXIDE
Topix Pharmaceuticals	Citrix	Citrix Antioxidant Sunscreen , SPF 30	MICRONIZED ZINC OXIDE
Total Skin Care LLC	pH Advantage	pH Advantage Basics (Sun Blocker SPF 15	MICRONIZED TITANIUM DIOXIDE
Wilma Schumann	Wilma Schumann	Wilma Schumann Sunscreen SPF 20	MICRONIZED TITANIUM DIOXIDE

Source: Environmental Working Group (EWG) analysis of ingredients, directions, and package details from 25,000 products, with information obtained from online retailers, manufacturers, or purchased products; and a listing of commercially available nano-scale materials from www.nanowerks.com.

1. Note: Some products contain multiple ingredients listed above.

2. Michael Corcoran (2006). Personal communications and technical data on particle size distribution, Larenim Corporation. October 2006.

Table 3. Ingredients in personal care products that are commercially available at a nano scale.ingredients.

9,509 products containing one or more ingredients available in nano sizes, nearly all with no label information to indicate if ingredients are conventional or nano-scale.

Ingredient	Number of Products	Types of Products	
ALUMINA	314	acne treatment; all moisturizers; all sunscreen; all sunscreens; all toothpastes; anti-aging; anti-aging facial treatments; around-eye cream; baby sunscreen; blanc perfect (whitening); bleaches & lighteners; blush; body line thermal; body lotions, creams; body moisturizers, body oils; bronzer/highlighter; canker & cold sore relief; cleansers; concealer; dark under eye circles; eau thermale spa; exfoliant/scrub; eye gels; eye moisturizers; eye shadow; eye treatments; face creams, face lotions; facial cleanser; facial moisturizer/treatment; facial moisturizing lotions; foundation; glitter; leg makeup; lip balm; lip balm/treatment; lip moisturizers; lipstick; makeup - base; makeup - blush; makeup - powder; makeup palettes; mask; mens body treatments; mi- crodermabrasion; microdermabrasion kits; moisturizer; moisturizers with spf; nail polish; nail treatment; natural sun care; oil controller; perfume; powder; resurfacing scrub; rilastil; skin care kits; skin fading/lightener; skin treatment; sun care; sun protection; sunless tanning; sun- screen; sunscreen spf 30; sunscreen/tanning oil; the eyes; tooth whitening; toothpaste; tooth- paste, tooth powder; whitening kits	
BARIUM SULFATE	174	age defiance; all sunscreens; anti-aging; around-eye cream; baby sunscreen; blush; body pow- der; bronzer/highlighter; childrens suncare; concealer; dental floss, flossers; eye liner; eye pencils; eye shadow; facial cleanser; facial moisturizer/treatment; foundation; insect repellant; lip balm/treatment; lip gloss; lip liner; lip pencils; lipstick; makeup - base; makeup - blush; makeup - powder; oil controller; perfume; powder; sunblocks and sunscreens - spf 30; sunblocks and sunscreens - spf 45 +; sunscreen; sunscreen/tanning oil	
BISMUTH	9	concealer; eye shadow; lip gloss; lip liner; lip pencils; nail polish	
BORON NITRIDE	361	acne treatment; active contour (eye care); anti-aging; around-eye cream; barevitamins & makeup remover; blush; bronzer/highlighter; cheek cocktail cream blush; concealer; dark under eye circles; eye care; eye liner; eye pencils; eye shadow; eyeshadow; facial care; facial cleanser; facial moisturizer/treatment; facial powder; foundation; highlighter/shimmer; highlighters; lip balm/treatment; lip gloss; lip liner; lip pencils; lipstick; makeup - base; makeup - blush; make-up - concealer; makeup - powder; makeup correctors & primers; mascara; oil controller; powder; skin lightening treatments; spot treatments; sun care; sunscreen; sunscreen/tanning oil	
CALCIUM CARBONATE	345	all shaving creams; all toothpastes; allergy vsm formulas; anti-aging; anti-fungal treatment; bath oil/salts/soak; body powder; bronzer/highlighter; concealer; conditioner; creatine combi- nations; dental (oral) care; exfoliant/scrub; eye liner; eye pencils; eye shadow; facial cleanser; facial moisturizer/treatment; facial powder; foot odor and foot wetness; foundation; hair removal waxes; hand and body; highlighter/shimmer; kids toothbrush, oral care; lip gloss; lip- stick; liquid eyeliners; makeup - base; makeup - concealer; makeup - powder; makeup palettes; makeup remover; mask; mens shaving treatments; menstrual pain relief; moisturizer; moistur- izing day creams; mouthwash, gargle; nail polish; nail treatment; natural toothpaste; powder; shaving cream (men's); shaving soaps, shaving brush; smile care; styling gel/lotion; sunscreen; sunscreen/tanning oil; therapeutic body lotions; tooth whitening; toothpaste; toothpaste & tooth powder; toothpaste, tooth powder; waxing; women's fragrance; women's fragrances	
CALCIUM OXIDE	47	acne; acne treatment; anti-aging; antiperspirant/deodorant; bath oil/salts/soak; body wash/ cleanser; children's vitamins & herbs > baby care; cleansers/washes/scrubs; conditioner; exfoli- ant/scrub; exfoliators & scrubs; facial cleanser; facial moisturizer/treatment; mask; moisturizer; natural body scrubs; natural children's skin care; natural exfoliators & scrubs; natural lotions; natural shaving products; oil controller; relaxer; shampoo; shaving; shaving cream (men's); styl- ing gel/lotion; tooth whitening; toothpaste	
CERIUM OXIDE	10	concealer; foundation; makeup - base; powder; sunscreen; sunscreen/tanning oil	

Ingredient	Number of Products	Types of Products	
COPPER	26	age defiance; anti-aging; around-eye cream; body; facial cleanser; facial moisturizer/treatment; men's facial treatments; men's skin care moisturizers; moisturizer	
GOLD	6	mask; facial moisturizer/treatment; facial cleanser; around-eye cream	
IRON	31	anti-aging; around-eye cream; body; exfoliant/scrub; facial moisturizer/treatment; foundation; hot cold therapy; nail polish; oil controller; pain-relief patches; powder; treatments	
IRON OXIDE	985	acne moisturizers; acne spot treatments; acne treatment; age defiance; all moisturizers; all shaving creams; all sunscreen; all sunscreens; anti-aging; around-eye cream; baby shampoo; bar soap; bath & shower gels; bath & spa gift sets; bath oil/salts/soak; bath salts & soaks; bleaching creams, fade creams; blush; body care; body firming lotion; body lotions, creams; body powder; body wash/cleanser; botox alternative; bronzer/highlighter; brow liner; brow makeup; camouflage makeup; children's vitamins & herbs > baby care; cleansing bars; concealer; conditioner; correctors & primers; cosmetics - eyes; dark under eye circles; depilatories; depilatory; depilatory (men's); exfoliant/scrub; eye liner; eye moisturizers; eye pencils; eye shadow; eye treatments; face; face wash, facial cleanser; facial cleanser; facial creams - anti-aging/wrinkle; facial moisturizer/treatment; facial powder; foot treatment; foundation; foundation & blush; glitter; hair color and bleaching; highlighter/ shimmer; highlighters; itch & rash; lip balm; lip balm/treatment; lip gloss; lip liner; lip pencils; lip treatments; lips; lipstick; loreal hair color; lotions; makeup - base; makeup - concealer; makeup correctors & primers; makeup kits; makeup kits & starter kits; mascara; mask; microdermabrasion; moisturizer; moisturizing day creams; nail polish; nails; natural blush; natural children's skin care; natural concealer; natural eye pencil; natural eye shadow; natural facial moisturizer; moisturizing day creams; nail polish; nails; natural powder; oil controller; other eye makeup; powder; pregnancy; sensitive skin; skin fading/lightener; soaps; spot treatments; styling gel/lotion; sun protection; sunless tan- ning; sunless tanning & bronzers; sunscreen; sunscreen/tanning oil; tanner; the eyes; washable mascara	
LIPOSOMES	72	age defiance; all sunscreens; anti-aging; around-eye cream; body care; body wash/cleanser; conditioner; eye creams & gels; facial cleanser; facial moisturizer/treatment; mask; moisturizer; nail treatment; shampoo	
MAGNESIUM OXIDE	20	anti-aging; antioxidant; exfoliant/scrub; foot odor control; resurfacing scrub; stress / anxiety support; toothpaste	
SILICON OXIDE	1	stress / anxiety support	
SILVER	7	nail polish; mask; facial moisturizer/treatment; facial cleanser; around-eye cream	
TIN OXIDE	116	anti aging treatments; anti-aging; around-eye cream; blush; body lotions, creams; body powder; bronzer/highlighter; concealer; eye liner; eye shadow; eyeliners; facial moisturizer/treatment; facial moisturizers with spf; foundation; glitter; highlighters; lip balm/treatment; lip gloss; lipstick; moisturizer; nail polish; perfume; powder; shampoo; skin fading/lightener; styling gel/lotion; sunscreen; sunscreen/tanning oil	

Ingredient	Number of Products	Types of Products
TITANIUM DIOXIDE	7,545	acne; acne cleansers; acne masks & scrubs; acne moisturizers; acne pore treatments; acne spot treatments; acne treatment; after shave; after sun product; age defiance; all moisturizers; all permanent color; all permanent hair color; all shaving creams; all styling products; all sunscreen; all sunscreens; all toothpastes; alpha hydroxy acid; alpha hydroxy and glycolic acid; anti aging treatments; anti-aging; anti-aging cleansers; anti-aging facial treatments; anti-fungal treatment; anti-itch/rash cream; antiperspirant/deodorant (men's); around-eye cream; arthritis; asthma, cold rubs; athlete's foot & antifungals; athletes foot & anti-fungal products; aveda; baby bath & cleansers; baby bath accessories; baby care; baby lotion; baby shampoo; baby soap; baby soaps, baby cleansing lotions; baby sunscreen; bar soap; bar soap cleansers; base basics; bath & shower gels; bath & spa gift sets; bath oil/salts/soak; bath salts & soaks; bath sponge & body wash; best of spring beauty; blanc perfect (whitening); bleaches & lighteners; bleaching creams, fade creams; blush; body care; body cleanser; body creams; body exfoliators & scrubs; body firming lotion; body glisten; body line thermal; body lotions; body lotions, creams;
		body moisturizers; body moisturizers, body oils; body powder; body shimmer; body spray; body wash/cleanser; breast care; bronzer for men; bronzer/highlighter; brow color; brow liner; brow makeup; brows; bubble bath; burn care, sun burns; camouflage makeup; canker & cold sore relief; cheek cocktail cream blush; children's vitamins & herbs > baby care; childrens suncare; clairol hair color; cleanser; cleansers; cleansers/washes/scrubs; cleansing bars; clinical exfolia- tors & masks; clinical skin regimens; combination makeup kits; concealer; conditioner; contact lens accessories; contact lens cleaners; correctors & primers; cosmetics - eyes; cream cleansers; curly hair; dandruff/scalp treatment; dark under eye circles; dental (oral) care; den- ture care; dentures care; deodorant aerosol and non-aerosol sprays; deodorant creams and oth- ers; deodorant sticks and solids; depilatories; depilatory; diaper rash creams & ointments; eau thermale spa; exfoliant/scrub; exfoliants; exfoliators & body scrubs; exfoliators & scrubs; eye care; eye colors; eye creams & gels; eye gels; eye gels & serums; eye liner; eye moisturizers; eye pencils; eye shadow; eye treatment products; eye treatments; eyeliners; eyes; eyes makeup kits; eyeshadow;
		face; face creams, face lotions; face lotions; face makeup kits; face products; face wash, facial cleanser; facial care; facial cleanser; facial creams; facial creams - anti-aging/wrinkle; facial masks; facial moisturizer/treatment; facial moisturizers; facial moisturizers with spf; facial powder; facial scrubs, toners & masques; facial therapy / firming; foaming cleansers; foot care treatments; foot treatment; foundation; foundation & blush; foundation & concealer; fragrance gift sets; glimmer; glitter; hair color and bleaching; hair hglights; hair pomades, hair strightening balm; hair relaxers; hair removal; hair removal waxes; hair spray; hair styling; hand & body lotions/oils; hand and body; hand and body lotion; hard & gas permeable contacts; highlighter/shimmer; highlighters; hyperpigmentation; insect repellant; intimate accessories; kids toothbrush, oral care; kids' bath; lactic acid; lip balm; lip balm/treatment; lip care; lip gloss; lip glossary; lip liner; lip moisturizers; lip; lips makeup kits; lipstick; liquid hand soap; liquid soaps; long-wearing lipcolor; loreal hair color; lotion; lotions; makeup - base; makeup - blush; makeup - concealer; makeup - powder; makeup correctors & primers; makeup kits; makeup kits; masques; medicated body lotions; medicated speciality soaps; men's facial treatments; men's products; mens body treatments; mens face treatments; nestrual pain relief; microdermabrasion; microdermabrasion kits; misc targeted herbal form; moisturizer; moisturizers / hydrators; moisturizers with spf; moisturizers; natural anti-aging treatments; natural ley shadow; natural lip gloss; natural lipstick; natural concealer; natural powder; natural shampoos; natural skin care; natural lotohpaste; nighttime skin care; oil controller; oil-control; oil-free moisturizers; oily skin with blemish problems; other eye makeup; pain relief rubs & patches; pain-relief patches; pain/wound treatment; perfume; permanent hair color; personal care clearance; plump your pucker tinted gloss; pm oristurizer; polish

Ingredient	Number of Products	Types of Products
		relaxer; resurfacing scrub; rilastil; sensitive skin; serums; serums, toners; shadylady cream eyeshadow; shampoo; shampoo & conditioners; shaving; shaving care; shaving cream; shav- ing cream (men's); shaving cream, shaving foam; shaving gel; shaving sets; shaving soaps, shaving brush; skin bath bars, soaps; skin care clearance; skin care kits; skin cleanser; skin fading/lightener; skin firming; smile care; smooth & shine; soaks; soaps; soaps & detergents; soaps and bodywash; spf 15; spf 18-25; spot treatments; starter sets; stress & anxiety support; stress / anxiety support; styling gel/lotion; sun care; sun protection; sunblocks and sunscreens - spf 15; sunblocks and sunscreens - spf 20; sunblocks and sunscreens - spf 30; sunblocks and sunscreens - spf 45 +; sunless tanning; sunless tanning & bronzers; sunscreen; sunscreen spf 30; sunscreen/tanning oil; surgical recovery; tanner; tanning lotions, oils & gels; tanning oils; tea tree; the eyes; tinted moisturizers; tooth whitening; toothpaste; toothpaste, tooth powder; under eye brighteners; under eyes; washable mascara; waterproof mascara; waxing; whitening kits; whitening toothpaste; women's fragrance; women's fragrances; wrinkle prevention; yeast infection medications, itch relief
ZEOLITE	26	all sunscreens; anti-aging; around-eye cream; blush; body powder; bronzer/highlighter; con- cealer; exfoliators & scrubs; facial cleanser; facial hair bleach; foundation; lip balm/treatment; mascara; mask; microdermabrasion; moisturizer; powder; resurfacing scrub; sunscreen; sun- screen/tanning oil
ZINC	84	acne; acne treatment; age defiance; all sunscreens; anti-aging; anti-itch/rash cream; antioxi- dant; around-eye cream; body; body wash/cleanser; bronzer/highlighter; dry skin type; exfoli- ant/scrub; eye care; eye shadow; eyes; facial cleanser; facial moisturizer/treatment; foaming cleansers; foundation; hormonal cream (men's); mask; men's facial treatments; men's skin care moisturizers; moisturizer; mouthwash; oily skin with blemish problems; pain/wound treatment; redness/rosacea treatment; shampoo; shampoo & conditioners; sunscreen spf 30; sunscreen/ tanning oil; treatments
ZINC OXIDE	1,088	acne; acne cleansers; acne kits; acne treatment; age defiance; all moisturizers; all sunscreen; all sunscreens; all toothpastes; alpha hydroxy and glycolic acid; anti-aging; anti-aging cleans- ers; anti-itch; anti-itch/rash cream; antiperspirant/deodorant; around-eye cream; athletes foot & anti-fungal products; baby care; baby diaper changing pads; baby diaper rash treatments; baby powder; baby powders & talcs; baby sunscreen; base basics; blush; body lotions, creams; body powder; bronzer for men; bronzer/highlighter; brow liner; brows; burn care; burn care, sun burns; camouflage makeup; canker & cold sore relief; children's vitamins & herbs > baby care; childrens suncare; cleansers/washes/scrubs; concealer; cosmetics - blushes; cosmetics - eyes; cosmetics - facial; dark under eye circles; dental floss, flossers; deodorant creams and others; deodorizers, moisturisers & perineal cleansers; diaper cream; diaper rash creams & oint- ments; dry skin care; exfoliant/scrub; exfoliants; eye care; eye colors; eye liner; eye pencils; eye shadow; eye treatment products; eye treatments; face; face creams, face lotions; face products; facial care; facial cleanser; facial powder; facial scrubs, toners & masques; facial therapy / firming; feminine cleansing, personal cleansing, personal wash; foot odor and foot wetness; foot odor control; foot treatment; foundation; foundation & concealer; hemorrhoidal prepara- tions; hemorrhoids; insect repellant; itch & rash; lip balm/treatment; lip care; lip gloss; lip liner; lip moisturizers / hydrators; moisturizers with spf; moisturizing day creams; mouth- wash, gargle; nail care; nail treatment; natural children's skin care; natural lotions; natural powder; natural sun care; oil controller; pain/wound treatment; pmoisturizers; polyhydroxy acids; post laser; powder antiperspirants & deodorant; pregnancy; pressed eyeshadow palletes; protect & sunscreen; redness / irritation; retinol; rilasti; scar & wound; sensitive skin; skin fading/lightener; spot treatments; sun care; sun protection;

Table 4. 200 sunscreen products containing zinc oxide and titanium dioxide, with no indication on product lables if ingredients are nano-scale, micronized, or conventional

Brand	Product	Ingredients
Abella	Abella Solar Shade SPF 45	TITANIUM DIOXIDE
Actifirm	Actifirm Sun Stop Sunscreen SPF 30+	ZINC OXIDE
GlyMed Plus	GlyMed Plus Elite Physicians Elite Photo-Age Sunscreen 30+	TITANIUM DIOXIDE
Physicians Elite	Physicians Elite Photo-Age Sunscreen 30+	TITANIUM DIOXIDE
Minus-Sol	Minus-Sol Minus-Sol Facial Sun Protection SPF 30+, White	ZINC OXIDE; TITANIUM DIOXIDE
Minus-Sol	Minus-Sol Minus-Sol Facial Sun Protection SPF 30+, Ivory	ZINC OXIDE; TITANIUM DIOXIDE
Minus-Sol	Minus-Sol Facial Sun Protection SPF 30+, White	ZINC OXIDE; TITANIUM DIOXIDE
Minus-Sol	Minus-Sol Facial Sun Protection SPF 30+, Ivory	ZINC OXIDE; TITANIUM DIOXIDE
All Terrain	All Terrain Terra Sport SPF 30+	ZINC OXIDE; TITANIUM DIOXIDE
All Terrain	All Terrain Herbal Armor Outdoor SPF 15	ZINC OXIDE
All Terrain	All Terrain Aqua Sport SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
MD Forte	MD Forte Total Daily Protector SPF 15	ZINC OXIDE
MD Forte	MD Forte Aftercare Environmental Protection Cream SPF 30	ZINC OXIDE
Andrea	Andrea FaceQ's Skin Brightener Luminizer SPF 15	ZINC OXIDE
Aubrey Organics	Aubrey Organics Sunshade Ultra 15 W/White Birch Extract	TITANIUM DIOXIDE
Aubrey Organics	Aubrey Organics Green Tea Sunblock For Children (SPF 25)	TITANIUM DIOXIDE
Alba Botanica	Alba Botanica Chemical Free Sunscreen SPF 18	TITANIUM DIOXIDE
Alba Botanica	Alba Botanica Rosa Mosqueta Sun Protection Butter	TITANIUM DIOXIDE
Alba Botanica	Alba Sun Care Sunscreen 18 SPF, Chemical Free for Sensitive Skin	TITANIUM DIOXIDE
Nivea	Nivea Visage Q10 Plus Wrinkle Control Lotion SPF 15	TITANIUM DIOXIDE
Eucerin	Eucerin Redness Relief Daily Perfecting Lotion, SPF 15	TITANIUM DIOXIDE
Belli	Belli Anti-Cholasma Facial Sunscreen SPF 25	ZINC OXIDE; TITANIUM DIOXIDE
Belli Cosmetics	Anti-Chloasma Facial Sunscreen SPF 25	ZINC OXIDE; TITANIUM DIOXIDE
BioElements	BioElements Sun Diffusing Protector SPF 15	ZINC OXIDE; TITANIUM DIOXIDE
Bliss	Bliss Oil-free Sunban Lotion for the Face SPF 30	TITANIUM DIOXIDE
Annemarie Borlind	Annemarie Borlind Sunsun Sun Cream SPF 24	ZINC OXIDE
Annemarie Borlind	Annemarie Borlind Sunsun Sun Lotion SPF 24	TITANIUM DIOXIDE
Annemarie Borlind	Annemarie Borlind Sunsun Sun Balm SPF 30	ZINC OXIDE
PreSun	PreSun Sensitive Block Cream SPF 28	TITANIUM DIOXIDE
PreSun	PreSun Cream Sensitive, SPF 28	TITANIUM DIOXIDE
California North	California North Titanium SPF 15 Sunscreen	TITANIUM DIOXIDE
California North	California North Titanium SPF 30 Sunscreen	TITANIUM DIOXIDE

Brand	Product	Ingredients
ТҮК	TYK Soleil Tiempo Absolute Solar Moisture Defense SPF 25 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Alyria	Alyria Corrective Protection Sunscreen SPF 30 Oil-Free Lotion	ZINC OXIDE
Caudalie	Caudalie Vinosun Anti-Aging Suncare SPF 25	TITANIUM DIOXIDE
Cellex-C	Cellex-C Sun Care SPF 15, Sunscreen and Moisturizer	ZINC OXIDE; TITANIUM DIOXIDE
Cellex-C	Cellex-C Water Resistant Sunscreen, SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Cellex-C	Cellex-C Sun Care SPF 15	ZINC OXIDE; TITANIUM DIOXIDE
Bull Frog	Bull Frog SuperBlock Lotion, SPF 45	TITANIUM DIOXIDE
Bull Frog	Bull Frog SuperBlock Lotion Spray SPF 40	TITANIUM DIOXIDE
Baby Blanket	Baby Blanket Sunblock Lotion for Babies, SPF 50+, Titanium Dioxide Formula	TITANIUM DIOXIDE
Baby Blanket	Baby Blanket Sunblock Spray Lotion for Babies SPF 45+ (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Dior	Dior DiorSnow Pure UV Ultra-Whitening UV Base SPF 30	TITANIUM DIOXIDE
Clarins	Clarins Super Restorative Day Cream SPF 20	TITANIUM DIOXIDE
Clarins	Clarins UV Plus SPF 40	TITANIUM DIOXIDE
Clarins	Clarins Tinted Self Tanning Face Cream, High Protection	TITANIUM DIOXIDE
Clarins	Clarins Sun Care Cream, SPF 30, For Children	TITANIUM DIOXIDE
ColoreScience	ColoreScience Sunforgettable Rock and Roller Ball SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
ColoreScience	ColoreScience Sunforgettable Shake It Up SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
ColoreScience	Colorescience Sunforgettable SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
ColoreScience	Colorescience Sunforgettable Refill SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
ColoreScience	Colorescience Sunforgettable Almost Clear SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
ColoreScience	Colorescience Sunforgettable SPF 30 Retractable Dispensing Brush	ZINC OXIDE; TITANIUM DIOXIDE
Cosmesis	Cosmesis Dermatologist Sunblock SPF 30	TITANIUM DIOXIDE
Cosmesis	Dermatologist Sunblock SPF 30	TITANIUM DIOXIDE
Dr. Brandt Skincare	Dr. Brandt SPF 30 Body Barrier Gel	ZINC OXIDE
Dr. Brandt Skincare	Dr. Brandt Skincare Tinted Daily UV Protection SPF 30 Face	TITANIUM DIOXIDE
Blue Lizard	Blue Lizard Australian Suncream Lotion For Baby, SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Blue Lizard	Blue Lizard Australian Suncream Lotion for Sensitive Skin, SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Blue Lizard	Blue Lizard Australian Sport Suncream Lotion, SPF 30	ZINC OXIDE
Blue Lizard	Blue Lizard Australian Suncream Lotion for Face, SPF 30 (Formula 1)	ZINC OXIDE
Blue Lizard	Blue Lizard Australian Suncream Lotion, SPF 30	ZINC OXIDE
Blue Lizard	Blue Lizard Australian Sport Suncream Lotion, SPF 30, Sport	ZINC OXIDE
Blue Lizard	Blue Lizard Australian Suncream Lotion for Face, SPF 30 (Formula 2)	ZINC OXIDE
Blue Lizard	Blue Lizard Australian Suncream Lotion, SPF 30, Sport	ZINC OXIDE
DermaSpa	DermaSpa Sun Protection Oil-Free SPF 30+	ZINC OXIDE

Brand	Product	Ingredients
DCL	DCL UVA/UVB Chemfree Superblock SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Dr. Michelle Copeland Skin Care	Dr. Michelle Copeland SPF 40 Lotion Mist Sun Block	ZINC OXIDE
Dermatone	Dermatone Zinc Oxide Transparent SPF 15	ZINC OXIDE; TITANIUM DIOXIDE
South Beach Sun	South Beach Sun Extreme Sunblock Sport Zinc SPF 50+	ZINC OXIDE
Panama Jack	Panama Jack Surf ' N Sport Sunblock Lotion, SPF 75	TITANIUM DIOXIDE
Panama Jack	Panama Jack Surf ' N Sport Sunblock Lotion, SPF 50	TITANIUM DIOXIDE
Rodan and Fields	Rodan and Fields Reverse Protect SPF 15	ZINC OXIDE
Prescriptives	Prescriptives Insulation Anti-Oxidant Vitamin Cream SPF 15	TITANIUM DIOXIDE
Clinique	Clinique Repairwear SPF 15 Cream	ZINC OXIDE
Aveda	Aveda Tourmaline Charged Protecting Lotion SPF 15 / Oil-Free	TITANIUM DIOXIDE
Estion	Estion Sunscreen with Zinc SPF 38	ZINC OXIDE
Fallene	Fallene Cotz Water Resistant Sunscreen for Sensitive Skin, SPF 58	ZINC OXIDE; TITANIUM DIOXIDE
Fallene	Fallene Total Block Clear SPF 65	ZINC OXIDE; TITANIUM DIOXIDE
Fallene	Fallene Cotz Water Resistant Sunscreen SPF 58	ZINC OXIDE; TITANIUM DIOXIDE
Fenix	Fenix Ultra Protection Sunscreen SPF 30+	ZINC OXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Kid's Block SPF 46 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Active Block SPF 40 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Family Block SPF 36 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Daily Block SPF 30 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Daily Block SPF 30 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Family Block SPF 36 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Active Block, SPF 40 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Kid's Block SPF 46 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Goodbye Bugs Block SPF 30 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Total Block SPF 26 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Goodbye Bugs Block Spray SPF 26	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Facial Block SPF 16	ZINC OXIDE; TITANIUM DIOXIDE
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Total Block SPF 26 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE

Brand	Product	Ingredients
Jason Natural Cosmetics	Jason Natural Cosmetics Sunbrellas Sun Care Goodbye Bugs Block SPF 30 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Hawaiian Tropic	Hawaiian Tropic Ozone Sunblock SPF 70 (Formula 1)	TITANIUM DIOXIDE
DDF	DDF Organic Sun Protection SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
DDF	DDF EPF Moisturizer C3 SPF 15	TITANIUM DIOXIDE
DDF	DDF Daily Matte, SPF 15	TITANIUM DIOXIDE
DDF	DDF Daily Organic SPF 15	ZINC OXIDE; TITANIUM DIOXIDE
DDF	EPF Moisturizer C3 with SPF 15	TITANIUM DIOXIDE
Gly Derm	Gly Derm Super Sunblock, SPF 25	TITANIUM DIOXIDE
	Quintessence Q-Sunshade Leave In Hair Conditioner and Scalp Protectant SPF 30	TITANIUM DIOXIDE
Aveeno	AVEENO Baby Continuous Protection Sunblock Lotion SPF 45	ZINC OXIDE; TITANIUM DIOXIDE
Neutrogena	Neutrogena Healthy Defense Daily Moisturizer SPF 30 Untinted	ZINC OXIDE
Neutrogena	Neutrogena Healthy Defense Daily Moisturizer SPF 30 Medium Tinted	ZINC OXIDE
Neutrogena	Neutrogena Visibly Firm Face Lotion with Active Copper SPF 20	ZINC OXIDE
Purpose	Purpose Dual Treatment Moisture Lotion with SPF 15	TITANIUM DIOXIDE
Neutrogena	Neutrogena Sensitive Skin Sunblock SPF 30	TITANIUM DIOXIDE
Juice Beauty	Juice Beauty SPF 30 Tinted Moisturizer	TITANIUM DIOXIDE
Juice Beauty	Juice Beauty SPF 30 Sheer Moisturizer	TITANIUM DIOXIDE
B. Kamins	B. Kamins Chemist Bio-Maple sunbar sunscreen SPF 30	TITANIUM DIOXIDE
B. Kamins	B. Kamins Sunbar Sunscreen SPF 30 Oil-Free	TITANIUM DIOXIDE
B. Kamins	B. Kamins Sunbar Sunscreen SPF 30	TITANIUM DIOXIDE
B. Kamins	B. Kamins Sunbar Sunscreen SPF 30 Fragrance-Free	TITANIUM DIOXIDE
B. Kamins	B. Kamins Chemist Sunbar Sunscreen SPF 30	TITANIUM DIOXIDE
B. Kamins	B. Kamins Chemist Sunbar Sunscreen SPF 30, Fragrance-Free	TITANIUM DIOXIDE
B. Kamins	B. Kamins Chemist Bio-Maple sunbar sunscreen SPF 30, Fragrance Free	TITANIUM DIOXIDE
Keyano Aromatics	Keyano Sun Defense Creme Solaire Anti-Age SPF 30	TITANIUM DIOXIDE
Kinesys	Kinesys Sun Protection Stick SPF 30	TITANIUM DIOXIDE
Kiss My Face	Kiss My Face Non-Chemical Sunblock Lotion SPF 18	TITANIUM DIOXIDE
Kiss My Face	Kiss My Face Sunblock Lotion SPF 30	TITANIUM DIOXIDE
Korres Natural Products	Korres Natural Products Watermelon Sunscreen Face Cream SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Korres Natural Products	Korres Natural Products Sweet Orange Sunscreen Face and Body Milk SPF 15	ZINC OXIDE; TITANIUM DIOXIDE
Mustela	Mustela Bebe High Protection Sun Lotion, SPF 50	ZINC OXIDE; TITANIUM DIOXIDE
Mustela	Mustela Bebe Moderate Sun Protection Lotion, SPF 25	ZINC OXIDE; TITANIUM DIOXIDE
Sun Spray	Sun Spray SPF 30 Neutral, Fragrance free	TITANIUM DIOXIDE

Brand	Product	Ingredients
Nature's Gate	Nature's Gate Sportblock Dry Lotion SPF 15	TITANIUM DIOXIDE
Nature's Gate	Nature's Gate Kids' Sunblock SPF 30	TITANIUM DIOXIDE
Nature's Gate	Nature's Gate Sportblock Dry Lotion SPF 30	TITANIUM DIOXIDE
ĽOréal	L'Oréal Dermo-Expertise Visible Results Skin Renewing Moisture Treatment SPF 15	TITANIUM DIOXIDE
ĽOréal	L'Oréal Dermo-Expertise Visible Results Skin Renewing Moisture Treatment SPF 15, Fragrance Free	TITANIUM DIOXIDE
SkinCeuticals	SkinCeuticals Sport UV Defense SPF 45	ZINC OXIDE
BioMedic	La Roche-Posay BioMedic Gentle Moisturizing Lotion SPF 15	TITANIUM DIOXIDE
SkinCeuticals	SkinCeuticals Physical UV Defense SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
SkinCeuticals	SkinCeuticals Ultimate UV Defense SPF 30	ZINC OXIDE
SkinCeuticals	SkinCeuticals Daily Sun Defense SPF 20	ZINC OXIDE
MediCalia	MediCalia Sunblock SPF 30 UVA/UVB Protection (tinted slightly)	TITANIUM DIOXIDE
MenScience	Menscience TiO2 Sunblock SPF 30	TITANIUM DIOXIDE
Murad	Murad Oil-Free Sunblock Sheer Tint SPF 15 (Formula 1)	TITANIUM DIOXIDE
Murad	Murad Oil-Free Sunblock Sheer Tint SPF 15 (Formula 2)	TITANIUM DIOXIDE
Exuviance	Exuviance Fundamental Multi-Protective Day Fluid SPF 15 (Formula 1)	TITANIUM DIOXIDE
Exuviance	Exuviance Fundamental Multi-Protective Day Cream SPF 15	TITANIUM DIOXIDE
Neostrata	NeoStrata Oil Free Lotion SPF 15	TITANIUM DIOXIDE
Neostrata	NeoStrata Daytime Protection Cream SPF 15 (Formula 1)	TITANIUM DIOXIDE
Exuviance	Exuviance Fundamental Multi-Protective Day Fluid SPF 15 (Formula 2)	TITANIUM DIOXIDE
Exuviance	Exuviance Fundamental Multi-Protective Day Creme SPF 15	TITANIUM DIOXIDE
Neostrata	Neostrata Daytime Protection Cream SPF 15 (Formula 2)	TITANIUM DIOXIDE
NIA24	Niadyne NIA 24/7 Day Therapy w/ SPF 15	ZINC OXIDE
NuCelle	NuCelle SunSense SPF 30 with Z-Cote	ZINC OXIDE
OBAGI	Obagi NU-DERM Healthy Skin Protection SPF 35	ZINC OXIDE
OBAGI	Obagi Nu-Derm Physical UV Sun Block SPF 32	ZINC OXIDE
OBAGI	Obagi-C Rx System C SunGuard SPF 30	ZINC OXIDE
OBAGI	OBAGI Nu-Derm Physical UV Block SPF 32, Step Six	ZINC OXIDE
OBAGI	OBAGI Nu-Derm Healthy Skin Protection SPF 35, Step Six	ZINC OXIDE
OBAGI	Obagi NU-DERM Sunblock 6 SPF 24, AM	ZINC OXIDE; TITANIUM DIOXIDE
Osmotics	Osmotics Protection Extreme, Total Body SPF 15	ZINC OXIDE
Person Covey Solbar	Person Covey Solbar Solbar Zinc SPF 38	ZINC OXIDE
Solbar	Solbar Zinc SPF 38	ZINC OXIDE
Peter Thomas Roth	Peter Thomas Roth Oil-Free Sunblock SPF 30 (Formula 1)	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Water Resistant Sunblock SPF 20 (Formula 1)	TITANIUM DIOXIDE

Brand	Product	Ingredients
Peter Thomas Roth	Peter Thomas Roth Titanium Dioxide Sunblock SPF 15	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Titanium Dioxide Sunblock SPF 30 (Formula 1)	ZINC OXIDE; TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Water Resistant Sunblock SPF 20 (Formula 2)	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Oil Free Sunblock SPF 30 (Formula 2)	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth All Day Moisture Defense Cream SPF 20 (Formula 1)	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Water Resistant Sunblock SPF 30 (Formula 2)	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Max All Day Moisture Defense Cream SPF 30	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Max Tinted Protective Day Cream, SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Titanium Dioxide Sunblock SPF 30 (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
Peter Thomas Roth	Water Resistant Sunblock SPF 20	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Ultra Lite Titanium Dioxide Sunblock SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth All Day Moisture Defense Cream SPF 20 (Formula 2)	TITANIUM DIOXIDE
Peter Thomas Roth	Peter Thomas Roth Oil-Free Sunblock SPF 20	TITANIUM DIOXIDE
Pevonia Botanica	Pevonia Hydrating Sunscreen SPF 30	TITANIUM DIOXIDE
Vanicream	Vanicream Sunscreen SPF 15	ZINC OXIDE; TITANIUM DIOXIDE
Vanicream	Vanicream Sunscreen SPF 35 Sport	ZINC OXIDE
Vanicream	Vanicream Sunscreen for Sensitive Skin SPF 30	ZINC OXIDE; TITANIUM DIOXIDE
Vanicream	Vanicream Sunscreen for Sensitive Skin SPF 60	ZINC OXIDE; TITANIUM DIOXIDE
Physicians Complex	Physicians Complex SPF 30 Total Sun Protection Lotion	ZINC OXIDE
Physicians Formula	Physicians Formula Sun Shield Extra Sensitive Skin Sunblock SPF 25	TITANIUM DIOXIDE
Durascreen	Durascreen UVA/UVB Sunscreen Lotion, SPF 15	TITANIUM DIOXIDE
Durascreen	Durascreen UVA/UVB Sunscreen Lotion, SPF 30	TITANIUM DIOXIDE
Durascreen	Durascreen Lotion, SPF 15	TITANIUM DIOXIDE
Durascreen	Durascreen Lotion SPF 30	TITANIUM DIOXIDE
Banana Boat	Banana Boat Kids Sunblock Lotion, SPF 30	TITANIUM DIOXIDE
Banana Boat	Banana Boat Baby Magic Sunblock Lotion, SPF 50	TITANIUM DIOXIDE
Banana Boat	Banana Boat Ultra Sunblock Lotion SPF 30	TITANIUM DIOXIDE
Banana Boat	Banana Boat, Surf Sunblock Lotion SPF 30 with AquaShield H20 Protection	TITANIUM DIOXIDE
Banana Boat	Banana Boat Sport Sunblock Lotion, SPF 50 (Formula 1)	TITANIUM DIOXIDE
Banana Boat	Banana Boat Kids Sunblock Lotion, Tear Free, SPF 30	TITANIUM DIOXIDE
Banana Boat	Banana Boat Sport Sunblock Lotion, SPF 30	TITANIUM DIOXIDE
Banana Boat	Banana Boat Ultra Sunblock UVA & UVB Lotion	TITANIUM DIOXIDE
Banana Boat	Banana Boat Baby Magic Sunblock Spray SPF 48	TITANIUM DIOXIDE
Olay	Olay Complete UV Defense Moisture Lotion SPF 15, Combination/Oily	ZINC OXIDE
Olay	Olay Complete All Day Moisture Cream Combination/Oil SPF 15	ZINC OXIDE
Olay	Olay Complete All Day UV Defense Moisture Lotion Combination/Oily Skin SPF 15	ZINC OXIDE
Olay	Olay Complete UV Defense Moisture Cream with Vitamins E and C SPF 15	ZINC OXIDE

Brand	Product	Ingredients
Olay	Olay ProVital Protective Moisture Day Lotion for Mature Skin with SPF 15	ZINC OXIDE
Olay	Olay Complete UV Protective Moisture Lotion SPF 15	ZINC OXIDE
Olay	Olay Complete UV Protective Moisture Lotion SPF 15 with Fragrance	ZINC OXIDE
Olay	Olay Complete All Day Moisture Cream SPF 15, Sensitive Skin	ZINC OXIDE
Olay	Olay Complete Defense Daily UV Moisturizer SPF 30, Sensitive Skin	ZINC OXIDE
ProCyte	Procyte Ti-Silc Untinted SPF 45 (Formula 1)	TITANIUM DIOXIDE
ProCyte	Procyte Z-Silc Plus SPF 30+ (Formula 1)	ZINC OXIDE
Neova	Neova Day Therapy SPF 20 (Formula 1)	ZINC OXIDE
Neova	Neova Day Therapy SPF 20 (Formula 2)	TITANIUM DIOXIDE
Neova	Neova Day Therapy SPF 20 with GHK Copper Peptide Complex	ZINC OXIDE
ProCyte	Procyte Ti-Silc Sheer Waterproof UVA/UVB Sunblock SPF 45	TITANIUM DIOXIDE
ProCyte	Procyte Ti-Silc Untinted SPF 45 (Formula 2)	TITANIUM DIOXIDE
ProCyte	Procyte Z-Silc Plus SPF 30+ (Formula 2)	ZINC OXIDE; TITANIUM DIOXIDE
ProCyte	Procyte Ti-Silc GT Sunblock SPF 60+, tinted	TITANIUM DIOXIDE
Sea & Ski	Sea & Ski Platinum Sunscreen Lotion SPF 50	ZINC OXIDE
Sea & Ski	Sea & Ski Faces Sunscreen Lotion For Sensitive Skin SPF 50	ZINC OXIDE
Sea & Ski	Sea & Ski Sport Sunscreen Lotion SPF 50	ZINC OXIDE
Coppertone	Coppertone Spectra3 Waterbabies Sunblock Lotion, SPF 50	ZINC OXIDE
Coppertone	Coppertone Spectra 3 Sunblock Lotion, SPF 50 (Formula 1)	ZINC OXIDE
Coppertone	Coppertone Oil Free Sunblock Lotion, Sensitive Skin, SPF 30	ZINC OXIDE
Coppertone	Coppertone Spectra3 Sunblock Lotion, SPF 30	ZINC OXIDE
Coppertone	Coppertone Spectra 3 Water Babies SPF 50	ZINC OXIDE
Coppertone	Coppertone Spectra 3 Kids Sunblock Lotion SPF 50	ZINC OXIDE
Coppertone	Coppertone Spectra3 Sunblock Lotion SPF 50 (Formula 2)	ZINC OXIDE
Coppertone	Coppertone UVA/UVB Sunscreen Lotion SPF 30	ZINC OXIDE
Coppertone	Coppertone Ultrasheer Sunscreen Stick SPF 30	ZINC OXIDE
SkinMedica	SkinMedica Daily Sun Protection for Faces SPF 20	ZINC OXIDE
No-Ad	NO-AD Face Block With Clear Zinc Oxide SPF 45	ZINC OXIDE
No-Ad	NO-AD Babies Sunblock Lotion, SPF 45	ZINC OXIDE
No-Ad	NO-AD Kids Sun Block SPF 30 (Formula 2)	ZINC OXIDE
No-Ad	NO-AD Babies Sun Block SPF 45 (Formula 1)	ZINC OXIDE
No-Ad	NO-AD Clear Zinc Oxide Face Block SPF 45	ZINC OXIDE
Studio Gear	Studio Gear Protective Tinted Moisturizer SPF 15, Fair; Medium; Natural	TITANIUM DIOXIDE
ELTA Swiss American	ELTA Swiss American Elta Block SPF 32	ZINC OXIDE

Brand	Product	Ingredients
ELTA Swiss American	ELTA Swiss American Elta Gold UV Lotion Sunblock and Moisturizer SPF 30+	ZINC OXIDE
ELTA Swiss American	Elta Gold UV Facial SPF 30	ZINC OXIDE
ELTA Swiss American	Elta UV Shield SPF 45 Daily Protection Oil Free	ZINC OXIDE
ELTA Swiss American	Elta Block SPF 32	ZINC OXIDE
ELTA Swiss American	Elta Gold UV Lotion Sunblock and Moisturizer SPF 30+	ZINC OXIDE
ELTA Swiss American	Elta Gold UV Sport SPF 50 Waterproof	ZINC OXIDE
Dermalogica	Dermalogica Solar Ultra Sensitive Face Block SPF 25	TITANIUM DIOXIDE
Торіх	Topix Oil Free Moisturizing Sunblock SPF 15	TITANIUM DIOXIDE
Торіх	Topix Oil Free Moisturizing Sunblock SPF 30	TITANIUM DIOXIDE
PH Advantage	PH Advantage Basics Daily Antioxidant Moisturizer SPF 15	ZINC OXIDE
UV Natural	UV Natural SPORT SPF 30+ Very Water Resistant	ZINC OXIDE
UV Natural	UV Natural ADULT Sunscreen SPF 30+ Enhanced Formula	ZINC OXIDE
UV Natural	UV Natural GOLF SPF 30+ Broad Spectrum	ZINC OXIDE
UV Natural	UV Natural BABY SPF 30+ Water Resistant	ZINC OXIDE
Kinetin Plus	Kinetin Plus Sun Protection Lotion SPF 15 Sunscreen	TITANIUM DIOXIDE
Kinerase	Kinerase Lotion with SPF 30	TITANIUM DIOXIDE
Kinerase	Kinerase Cream with SPF 30	TITANIUM DIOXIDE
Wilma Schumann	Wilma Schumann Sunscreen SPF 20	TITANIUM DIOXIDE

Source: Environmental Working Group (EWG) analysis of ingredients, directions, and package details from 700 sunscreens, with information obtained from online retailers, manufacturers, or purchased products.