

# A Guide to Informed Skincare: The Meaning of Clean, Natural, Organic, Vegan, and Cruelty-Free

Katelyn Urban DO,<sup>a</sup> Rachel L. Giesey DO,<sup>b</sup> Gregory R. Delost DO<sup>c</sup>

<sup>a</sup>University Hospitals Regionals, Richmond Heights, OH

<sup>b</sup>Ohio University Heritage College of Osteopathic Medicine, Athens, OH

<sup>c</sup>Apex Dermatology and Skin Surgery Center, Mayfield Heights, OH; Lake Erie College of Osteopathic Medicine, Erie, PA

## ABSTRACT

The number of cosmetic and personal care products marketed as clean, natural, organic, vegan, and cruelty-free continues to expand, raising questions from patients about the meaning of these product labels. Dermatology providers should be aware of the validity of the marketing terms and educate patients on the safety of personal care product ingredients. Herein, we explore the meaning of clean, natural, organic, vegan, and cruelty-free and address the safety of commonly banned ingredients in the informed skincare market.

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## INTRODUCTION

The global market for “clean” cosmetic and personal care products are projected to increase from 34.5 billion dollars in 2018 to 54.5 billion dollars in 2027.<sup>1</sup> But what exactly does clean, vegan, natural, or organic mean when it comes to skincare? With the dramatic rise in popularity of these terms, this is one of many valid questions patients are raising. The difficulty lies in the continued lack of regulation from the US Food and Drug Administration (FDA) to substantiate any of these label terminologies. In this commentary, we summarize the meaning of clean, natural, organic, vegan, and cruelty-free (Table 1) as they apply to personal care products, briefly discuss commonly marketed ingredients of concern, and provide recommendations to give patients in pursuit of informed beauty.

The FDA does not define or regulate “organic” as it applies to skincare. The US Department of Agriculture (USDA) oversees the National Organic Program and certifies agricultural products as organic. Cosmetics may only obtain and display the certified

USDA seal if comprised of 95 to 100 percent certified organic agricultural ingredients (ie, grown on soil with no prohibited substances including synthetic fertilizers and pesticides applied for three years prior to harvest, and no genetically modified organisms). Adding to consumer confusion, skincare products may be certified by other private certifying bodies which are not regulated by the USDA.<sup>2</sup> The National Sanitation Foundation (NSF) International and the American National Standards Institute formed a joint committee and created a personal care product standard requiring products to contain at least 70 percent organic ingredients in order to display their certified organic seal.<sup>3</sup> A number of international certifying bodies follow the Cosmetic Organic and Natural Standard (COSMOS), which has less stringent standards with a requirement of at least 20% of organic ingredients in a product for certification.<sup>4</sup> Without broad regulation, “organic” can be placed on any product without further clearance.

The accepted definition of a vegan product does not contain animal products or by products. Commonly cited excluded

**TABLE 1.**  
**Definitions of Clean, Natural, Organic, Vegan, and Cruelty-Free Personal Care Products**

|                |                                                                                                                                                                                                                                                                                                               |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clean/Natural* | Free of ingredients deemed unacceptable by a company. Excluded ingredients differ between companies.                                                                                                                                                                                                          |
| Vegan*         | A product free of animal products or by products. Certification can be obtained through private organizations such as People for the Ethical Treatment of Animals (PETA). These certifications are dependent upon the transparency and accuracy of the brand’s disclosure upon application for certification. |
| Organic*       | Certified by USDA and other private certifying bodies. Standard percentage of organic ingredients comprised within the product differs between each certifying body.                                                                                                                                          |
| Cruelty-free*  | Products that do not participate in animal testing. Amount of animal testing allowed throughout production may differ between certifying bodies. The Leaping Bunny Program certifies products that are free from animal testing in all stages of product development.                                         |

\*Unregulated term, therefore, brands are free to label products without supporting evidence or certification. This document contains proprietary information, images and marks of Journal of Drugs in Dermatology (JDD). No reproduction or use of any portion of the contents of these materials may be made without the express written consent of JDD. If you feel you have obtained this copy illegally, please contact JDD immediately at support@jddonline.com

ingredients in vegan products are lanolin, honey, beeswax, collagen, albumen, carmine, cholesterol, and gelatin. Recognizable certified vegan labels may include endorsements by certifying bodies such as People for the Ethical Treatment of Animals (PETA), Vegan Society, or Vegan Action. These certifications are dependent upon the transparency and accuracy of the brand's disclosure upon application for certification.

Cruelty-free products are those that do not participate in animal testing. This definition can be open to interpretation by manufacturing companies. For instance, a final product may not be tested on an animal but ingredients contained within the product may have been animal-tested. It is important for consumers to investigate what the cruelty-free label entails. The Leaping Bunny Program is widely recognized for certifying companies based in the United States and Canada are free of animal testing from all stages of product development.<sup>5</sup>

Clean and natural are unregulated marketing terms described as products free of ingredients deemed unacceptable by a company. For example, the Clean at Sephora Program features brands that comply with a list of over 40 banned ingredients such as parabens, formaldehyde releasers, and mineral oil.<sup>6</sup> The "Made Without List" at Ulta prohibits parabens, phthalates, and formaldehyde releasers, amongst others.<sup>7</sup> Whole Foods has a list of over 100 ingredients banned in their clean beauty line, including a favorite amongst many dermatologists, petrolatum jelly.<sup>8</sup> Public interest groups, including the Environmental Working Group, contribute to the clean beauty trends followed by cosmetic companies by retaining an unacceptable ingredient list and assigning cosmetic ingredients a hazard score.

Parabens are often excluded from clean beauty products for fear of endocrine disruption or allergenicity. The most potent xenoestrogen, butylparaben, has activity at least 10,000 times less than estradiol at a concentration 25,000 times greater than used in cosmetics.<sup>9</sup> The low potency combined with rapid metabolism and excretion of parabens suggests little systemic effect. Parabens were named nonallergen of the year by the American Contact Dermatitis Society in 2019 to highlight the relatively low incidence of allergic contact dermatitis despite public scrutiny.<sup>10</sup> Phthalates are commonly banned due to a study in rodents linking high levels to hormone disruption, although, absorption through human skin is minimal.<sup>11</sup> The amount of total phthalate exposure through cosmetics is unknown and the greatest exposure is thought to be through food sources.<sup>9</sup> Formaldehyde releasers are one of the most commonly banned ingredients in the clean beauty movement. The leading cause of formaldehyde exposure is from inhalation rather than skin absorption. The Cosmetic Ingredient Review expert panel concluded that formaldehyde is safe for use as a preservative in cosmetics at the minimal effective concentration, but no greater than 0.2%.<sup>12</sup>

We emphasize the misconception of clean, natural, organic, and vegan to equal safe. The clean beauty movement has led to replacement of safe ingredients with alternatives causing contact dermatitis.<sup>13</sup> Many naturally derived ingredients are the cause of dermatitis, with the most common cosmetic-related natural ingredients causing facial dermatitis being propolis and hydroperoxides of limonene and linalool.<sup>14</sup> Our role is to educate about misinformation and marketing strategies to direct patients towards safe, effective, and affordable skincare. Patients should be encouraged to investigate how the terms clean, natural, organic, vegan, and cruelty-free are defined by the producers of their personal care products. A reasonable approach to sort through countless certifying bodies and broad definitions of clean beauty is to direct patients towards reliable sources of information such as the Cosmetic Ingredient Review<sup>13</sup> or Contact Dermatitis Institute Allergen Database for those with known sensitization. With the dramatic rise in popularity of these terms, this is one of many valid questions patients are raising, and something dermatology providers should be prepared to answer.

## DISCLOSURES

The authors have no conflict of interest to declare.

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## AUTHOR CORRESPONDENCE

**Katelyn Urban DO**

E-mail:..... KUrban19071@med.lecom.edu