



Consumers are increasingly looking to incorporate green products into their daily lives, but many find the performance of eco-friendly laundry detergents lacking.

Image Source: Flickr user Bruce Guenter

Over the past decade, popular awareness about the environmental impact of everyday consumer products has exploded. While eco-friendly products were once a niche market reserved for those with a passion for environmental protection, today it has become increasingly common for a routine shopping trip to take the environment into account and eco-friendly options are now the default choice for even mainstream consumers. In response to growing demand, green laundry detergent manufacturers such as Ecover, Seventh Generation, Simple Green, and Method have emerged to compete with traditional players and are capturing a healthy portion of the marketshare. This push towards eco-friendly alternatives to traditional products has been so strong that detergent giant Procter & Gamble recently committed to eliminating phosphates from all of its laundry detergents globally within two years.¹

However, phosphates aren't the only ingredient that eco-conscious consumers are seeking to avoid. In fact, the list of objectionable ingredients is lengthy and includes many of the very things that make traditional laundry detergents both effective and appealing, such as optical brighteners, sodium lauryl sulfate, chlorine, ammonia, and petroleum solvents. Unfortunately, taking these components out of laundry detergents often compromises performance and consumers looking to incorporate eco-friendly products in their everyday routines are left unsatisfied with the results. According to *Consumer Reports*, "Green detergents may lack the enzymes and other chemicals that give many standard detergents their stain-fighting oomph."² For many consumers, this means having to choose between clean laundry and environmental ethics; as one review of green laundry detergent performance noted, "If you can look past the stain-fighting abilities of this one, it does have an impressive list of eco-claims."³

The questionable performance of eco-friendly detergents as a group could threaten the economic viability of some brands. In order to bolster appeal and commercial success, it is critical that manufacturers of green laundry detergents carefully evaluate the performance of their products to ensure that they have the cleaning power necessary to satisfy consumers. Spectrophotometric

instrumentation offers the best way to obtain objective, reliable performance data and analyze the efficacy of detergents.



Green laundry detergent should be formulated to help fabrics maintain their color and effectively remove staining.

Image Source: Unsplash user Kelly Sikkema

Measuring the Performance of Green Laundry Detergents

The performance of green laundry detergents is inherently a question of color. Cleaning products should remove unwanted color changes in the form of stains while preserving the original color of the garment and preventing unnecessary color leeching. As such, laundry detergent performance analysis is [a color measurement process](#) that seeks to quantify the degree of color change.

Spectrophotometers are designed to easily capture color information and translate it into hard data to allow for the highest level of insight into color behavior. The versatility, accuracy, and flexibility of spectrophotometric instrumentation makes it ideally suited for analyzing textile color regardless of sample type; with [proper sample preparation](#), the same instrument can be used to analyze everything from [dyed denim](#) to textured wool and smooth, shiny silks. By providing an objective, repeatable basis for color comparison, spectrophotometric analysis allows you to [precisely capture the degree of stain removal](#) provided by a particular laundry detergent. Simultaneously, color fastness and detergent residue can be rapidly analyzed for a comprehensive picture of product performance.

However, the benefits of spectrophotometric analysis don't just lie in the raw data; modern color measurement software packages such as [HunterLab's EasyMatch QC](#) can correlate product performance with specific ingredients and other process variables to help you gain valuable insight into your formulation. With an unprecedented flexibility to collect, display, and analyze color data, you can easily compare different formulations and isolate variables to refine your chemistry and enhance performance. The information gained through this analytical process allows you to not only develop the best products possible, but also make accurate performance claims for use in advertising and marketing materials.



Spectrophotometers are designed to accurately capture color information of all sample types, including heavily textured fabrics.

Image Source: Pexels user Dom J

HunterLab Color Measurement

HunterLab has been at the forefront of color measurement technologies for over 60 years. Today, we offer a comprehensive range of sophisticated spectrophotometers designed to meet the needs of our customers across industries. Our impressive [benchtop instruments](#) are designed to combine the highest degree of accuracy with user-friendly features and compact footprints to facilitate easy integration within both laboratory and factory environments. For those seeking portable instrumentation, [our lineup of hand-held instruments](#) offer light-weight, ergonomic design along with dual-beam technology, ensuring you don't have to sacrifice performance for convenience. Whatever tool you choose, you can be assured of unsurpassed accuracy, allowing you to evaluate your products with ease. To learn more about our spectrophotometers, customizable software packages, and world-class customer support services or for assistance selecting the right instrument for your purposes, we invite you to [contact us](#).

1. "Procter & Gamble Touts 'Win-Win' of Cutting Phosphates In All Laundry Soaps," January 27, 2014, <http://www.theguardian.com/sustainable-business/proctor-gamble-remove-phosphates-laundry-soap>
2. "Are Green Laundry Detergents As Good At Cleaning?" August 6, 2015, <http://www.consumerreports.org/cro/news/2015/08/best-green-laundry-detergents/index.htm>
3. "A Review of Six Green Laundry Detergents," February 27, 2008, <http://grist.org/article/its-a-wash/>