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Recommendations for Cleaning Garments and Textiles

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To clean a garment, the first step is to look at its care label, which is required by the Federal Trade Commission's Care Labeling Act (Villa, 1996). However, these labels may be difficult to understand. A care label, for example, may say *Machine wash, tumble dry*, but the type of detergent and the drying temperature are not stated. By understanding the preferred methods of cleaning different fiber types, consumers can understand how to follow the care label instructions and prolong the life of their garments.

Numerous types of fabrics are used in Hawai'i, and the focus in this paper is on the general categories of cotton, wool, silk, rayon, polyester, and acrylic. To care for these fabrics, the consumer may use wet-cleaning (a washing machine) or dry-cleaning. On Woolite®'s website about the product Dry Cleaner's Secret®, a comparison of the costs of home laundering and dry-cleaning the garment indicated that home laundering would cost "less than $0.50" per cleaning, and that dry-cleaning would cost "an average of $5.75" per cleaning. The cost advantage of wet-cleaning is great, and therefore, the consumer may not follow the care label, even if it states *Dry Clean Only.*

Wet-Cleaning

The two forms of home laundering found in homes are "hand washing" and machine washing. Washing machines generally come in three forms: top-loading agitator machines, high-efficiency front-loading machines, and high-efficiency top-loading machines, with the most popular being the top-loading agitator machines (Collier, Bide, & Tortora, 2009).

A care label should recommend the use of detergents and bleaches to assist in the removal of soil and stains. Detergents come in liquid or powder forms, with the liquid form being the most popular because it can be formulated more readily without phosphates than can powder detergents (Collier et al, 2009). Attempting to get white garments to their original shade of white, consumers might assume that bleaches make the garment white by cleaning it. However, bleach whitens fabrics by means of oxidation using chlorine or sodium perborate, not by cleaning them.

Dry-Cleaning

Dry-cleaning uses a solvent that dries quickly when heated and does not use water. According to HowStuffWorks (2007), after the solvents are used, they are filtered to remove any unwanted particles.

Cotton

Cotton comes from the fibers of the cotton plant, genus Gossypium. As seed hair fibers, cotton fibers originate/grow from the seed pod. Cotton is widely used because it is a very versatile product that accepts dyes and blends with other fibers well. Cotton can be cleaned using detergents because it is usually not damaged by their alkalinity. Dry-cleaning does not harm cotton fabrics, but only needs to be used when the garment's embellishments could be at risk of damage by wet-cleaning, or to prevent possible shrinkage of the garment.

Linen

Flax fibers are used to produce linen yarns and fabrics. Linen can be dry-cleaned or wet-cleaned at home. Excessive chlorine bleaching will damage linen, but linen fabrics can be whitened by light/moderate use of chlorine or other bleaches. To reduced shrinkage caused by laundry wrinkles, dry-cleaning can be used.

Wool

"Wool" is a general term that applies to all hair fibers, because wool can come from goats, camels, or rabbits as well as from sheep. Wool is often used in winter clothing because it provides warmth. It can also be used for suits because it can be easily creased using various pressing methods. Wool can be wet- or dry-cleaned, but dry-cleaning would be the preferred method because it will minimize the probability of shrinking. Shrinkage of wool usually occurs as a result of wet-laundering and tumble-drying.

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Silk

Silk is produced by the silkworm, which creates a filament fiber while spinning a cocoon. Silk can be used for decorative purposes and in casual garments. The preferred method of cleaning silk is by dry-cleaning. Silk filaments are more susceptible to breakage when the fabric becomes wet. They may be degraded by sun and break from even the gentlest agitation of the washing machine. To prolong the life of silk, dry-cleaning is necessary.

Rayon

Rayon is a regenerated fiber manufactured from cellulose pulp sheets that are treated with chemicals at specific stages. Rayon drapes very well and is aesthetically pleasing, which is why the textile is widely used in garments. However, rayon is not particularly durable, so it must be laundered gently. Dry-cleaning is recommended to prevent the fibers from breaking. Putting rayon in a dryer causes the fibers and garment to shrink.

Polyester

Polyester is a petroleum-based fiber that can be extruded into any form. Polyester is very easy to care for because it is durable and "wrinkle-resistant." However, polyester is often blended with other fibers, so caring for the garment requires that the other fibers in the blend be taken into account.

Acrylic

Acrylic is a synthetic fiber which is very easy to care for. It can be cared for similarly to polyester. Acrylic has characteristics comparable to wool, with a slightly lower absorbency rate. However, acrylic will not shrink when wet-cleaned like wool often will.

References

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Table 1. Cleaning of Textiles

Type	Use of Detergent	Use of Bleach	Use of Dryer	Iron	Dry-Cleaning	Notes
Cotton	Yes	Yes	Yes	Yes	Yes	
Linen	Yes	Yes	Yes	Yes	Yes	Dry-cleaning is preferred to reduce shrinking, wrinkling, and fading.
Wool	Yes, if the detergent is safe for wool and the garment can be washed by hand or machine	No, though hydrogen peroxide can be used	No	Yes, low heat and steam	Yes	Dry-cleaning is preferred to minimize shrinkage.
Silk	Yes, if the detergent is mild with no alkali, such as Woolite®. Hand-washing is preferred over machine-washing	No	No	Yes, low heat and steam	Yes	Dry-cleaning avoids water spots and wrinkles.
Rayon	Yes, although hand-washing is recommended	Yes; oxygen bleaches are preferred	No, shrinking will occur	Yes	Yes	
Polyester	Yes	Yes	Yes; garments should be removed right after drying	Yes, medium heat	Yes	
Acrylic	Yes	Yes	Yes, low setting; sensitive to heat	Yes	Yes	Varies for each fiber; consult the care label instructions.