ARRAY OF PAPER TOWEL PRODUCTS

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ABSTRACT

An array of paper towel products, especially paper towel products, associated with non-indicia textual indicia that are psychologically matched to intensive properties of the paper towel products; processes for making such an array of paper towel products are provided, and marketing articles associated with displaying and/or advertising an array of paper towel products.
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FIELD OF THE INVENTION

[0001] The present invention relates to an array of paper towel products associated with non-textual indicia that are psychologically matched to intensive properties of the paper towel products; processes for making such an array of paper towel products, and marketing articles associated with displaying and/or advertising an array of paper towel products.

BACKGROUND OF THE INVENTION

[0002] In the past, consumers of paper towel products have had the opportunity to purchase paper towel products that exhibit similar common intensive property values but have differed in physical form and/or additives contained within such paper towel products. For example, paper towel products are currently offered in physical forms that vary by number of plies, most often one-ply or two-ply. For example, Bounty® brand paper towel products currently are marketed in two-ply and one-ply physical forms. The two-ply physical form is marketed under the name Bounty®. The Bounty® paper towel product is housed within a package comprising the color green. The one-ply physical form is marketed under the name Bounty® Basic. The Bounty® Basic paper towel product is housed within a package comprising the color orange.

[0003] It is believed that different consumers, especially consumers of paper towel products, desire different common intensive property values in the paper towel products that they may select from for purchase and subsequent use. However, conventional product and marketing strategies utilized by producers of these products fail to satisfy the consumers’ desires.

[0004] Furthermore, it is believed that the longer it takes for a consumer to identify a product on the store shelf, the less likely they will be to select and evaluate their intended product for subsequent purchase while in the store. This delay time in identifying the appropriate product on the store shelf can affect both initial purchase or repurchase intent of a particular product, even if the consumer has used and liked the performance of the product in the past.

[0005] Accordingly, there is a need for an array of paper towel products associated with non-textual indicia that are psychologically matched to intensive properties of the paper towel products, which may simplify and/or expedite a paper towel product consumer’s identification and/or selection process of paper towel products on a store shelf and thus, reduce consumer confusion, shopping and/or overall dissatisfaction with the shopping process, processes for making such an array, and marketing articles associated with displaying or advertising such an array.

SUMMARY OF THE INVENTION

[0006] The present invention fulfills the need described above by providing an array of paper towel products associated with non-textual indicia that are psychologically matched to intensive properties of the paper towel products; and processes for making such an array of paper towel products, and marketing articles associated with displaying and/or advertising such an array.

[0007] In one example of the present invention, an array of paper towel products comprising a first paper towel product housed within a first paper towel product package and a second paper towel product housed within a second paper towel product package, wherein the first and second paper towel products exhibit a different value for a common intensive property; wherein the relative value of the common intensive property of the first paper towel product compared to the second paper towel product is intuitively communicated to a consumer of paper towel products by psychologically matched non-textual indicia on the first and second packages, is provided.

[0008] In another example of the present invention, an array of paper towel products comprising a first paper towel product and a second paper towel product, wherein the first and second paper towel products exhibit a different value for a common intensive property, wherein the first paper towel product is housed within a first package comprising a first color and the second paper towel product is housed within a second package comprising a second color, wherein the relative value of the common intensive property of the first paper towel product compared to the second paper towel product is intuitively communicated to a consumer of paper towel products by psychologically matched colors on the first and second packages, and wherein the first color and the second color differ from each other by a Color Space Total Difference (ΔE) of greater than about 30, is provided.

[0009] In even another example of the present invention, a process for making an array of paper towel products, the process comprising the steps of:

- producing a first paper towel product exhibiting a first value of a common intensive property;
- producing a second paper towel product exhibiting a second value different from the first value of the common intensive property; and
- packaging the first and second paper towel products in packages comprising psychologically matched non-textual indicia that intuitively communicate to a consumer the relative value of the common intensive property of the first paper towel product compared to the second paper towel product.

[0010] In even another example of the present invention, a process for making an array of paper towel products, the process comprising the steps of:

- producing a first paper towel product exhibiting a first value of softness;
- producing a second paper towel product exhibiting a second value of softness different from the first value of softness; and
- packaging the first and second paper towel products in packages comprising psychologically matched non-textual indicia that intuitively communicate to a consumer the relative value of the first paper towel product compared to the second paper towel product.

[0011] In even another example of the present invention, a process for making an array of paper towel products, the process comprising the steps of:

- producing a first paper towel product;
- producing a second paper towel product different from the first paper towel product; and
- packaging the first and second paper towel products in packages, each package comprising a color that differs from a color on the other package by a Color Space Total Difference (ΔE) of greater than about 30, wherein the colors are psychologically matched to intuitively communicate to a consumer a relative value of an intensive property of the first paper towel product compared to the second paper towel product.
In still yet another example of the present invention, an array of paper towel products comprising:

a. a first paper towel product housed within a first package; and
b. a second paper towel product housed within a second package;

wherein the first paper towel product exhibits a dominant first common intensive property and the second paper towel product exhibits a dominant second common intensive property different from the first common intensive property;

wherein the first package comprises a first non-textual indicia psychologically matched to the first common intensive property and the second package comprises a second non-textual indicia different from the first non-textual indicia psychologically matched to the second common intensive property.

In yet another example of the present invention, a marketing article associated with an array of paper towel products, the marketing article comprises a non-textual indicia that is psychologically matched to an intensive property of one of the paper towel products within the array, is provided.

In yet another example of the present invention, a marketing article for use in marketing two or more paper towel products within an array of paper towel products, the marketing article comprising a first color and a second color different from the first color, is provided.

Accordingly, the present invention provides an array of paper towel products and processes for making such arrays of paper towel products.

**BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a schematic illustration of a paper towel product according to the present invention;
FIG. 2 is a schematic illustration of another paper towel product according to the present invention;
FIG. 3 is a schematic illustration of an array of paper towel products according to the present invention;
FIG. 4 is an illustration of the Commission Internationale de l’Eclairage L*a*b* color space (CIELab).

**DETAILED DESCRIPTION OF THE INVENTION**

**Definitions**

“Fiber” as used herein means an elongate particulate having an apparent length greatly exceeding its apparent diameter, i.e. a length to diameter ratio of at least about 10. Fibers having a non-circular cross-section are common; the “diameter” in this case may be considered to be the diameter of a circle having cross-sectional area equal to the cross-sectional area of the fiber. More specifically, as used herein, “fiber” refers to fibrous structure-making fibers. The present invention contemplates the use of a variety of fibrous structure-making fibers, such as, for example, natural fibers, including wood fibers, or synthetic fibers made from natural polymers and/or synthetic fibers, or any other suitable fibers, and any combination thereof.

“Fibrous structure” as used herein means a structure (web) that comprises one or more fibers. Nonlimiting examples of processes for making fibrous structures include known wet-laid fibrous structure making processes, air-laid fibrous structure making processes, meltblowing fibrous structure making processes, co-forming fibrous structure making processes, and spunbond fibrous structure making processes. Such processes typically include steps of preparing a fiber composition, oftentimes referred to as a fiber slurry in wet-laid processes, either wet or dry, and then depositing a plurality of fibers onto a forming wire or belt such that an embryonic fibrous structure is formed, drying and/or bonding the fibers together such that a fibrous structure is formed, and/or further processing the fibrous structure such that a finished fibrous structure is formed. The fibrous structure may be a through-air-dried fibrous structure and/or conventionally dried fibrous structure. The fibrous structure may be creped or uncreped. The fibrous structure may exhibit differential density regions or may be substantially uniform in density. The fibrous structure may be pattern densified, conventionally felt-presses and/or high-bulk, uncompacted. The fibrous structures may be homogenous or multilayered in construction.

After and/or concurrently with the forming of the fibrous structure, the fibrous structure may be subjected to physical transformation operations such as embossing, calendaring, selfing, printing, folding, softening, ring-rolling, applying additives, such as latex, lotion and softening agents, combining with one or more other plies of fibrous structures, and the like to produce a finished fibrous structure that forms and/or is incorporated into a sanitary tissue product, such as a paper towel product.

“Sanitary tissue product” as used herein means a wiping implement for post-urinary and/or post-bowel movement cleaning (toilet tissue), for otolaryngological discharges (facial tissue) and/or multi-functional absorbent and cleaning uses (absorbent towels such as paper towels and/or wipes).

The sanitary tissue products of the present invention may comprise one or more fibrous structures and/or finished fibrous structures.

The sanitary tissue products of the present invention may exhibit a basis weight between about 10 g/m² to about 120 g/m² and/or from about 15 g/m² to about 110 g/m² and/or from about 20 g/m² to about 100 g/m² and/or from about 30 to 90 g/m². In addition, the sanitary tissue product of the present invention may exhibit a basis weight between about 40 g/m² to about 120 g/m² and/or from about 50 g/m² to about 110 g/m² and/or from about 55 g/m² to about 105 g/m² and/or from about 60 to 100 g/m².

The sanitary tissue products of the present invention may exhibit a total dry tensile strength of greater than about 59 g/cm (150 g/in) and/or from about 78 g/cm (200 g/in) to about 394 g/cm (1000 g/in) and/or from about 98 g/cm (250 g/in) to about 325 g/cm (850 g/in). In addition, the sanitary tissue product of the present invention may exhibit a total dry tensile strength of greater than about 196 g/cm (500 g/in) and/or from about 196 g/cm (500 g/in) to about 394 g/cm (1000 g/in) and/or from about 216 g/cm (550 g/in) to about 335 g/cm (850 g/in) and/or from about 236 g/cm (600 g/in) to about 315 g/cm (800 g/in). In one example, the sanitary tissue product exhibits a total dry tensile strength of less than about 394 g/cm (1000 g/in) and/or less than about 335 g/cm (850 g/in).

In another example, the sanitary tissue products of the present invention may exhibit a total dry tensile strength of greater than about 196 g/cm (500 g/in) and/or greater than about 236 g/cm (600 g/in) and/or greater than about 276 g/cm (700 g/in) and/or greater than about 315 g/cm (800 g/in) and/or greater than about 354 g/cm (900 g/in) and/or greater than about 394 g/cm (1000 g/in) and/or from about 315 g/cm
(800 g/in) to about 1968 g/cm (5000 g/in) and/or from about 354 g/cm (900 g/in) to about 1181 g/cm (3000 g/in) and/or from about 354 g/cm (900 g/in) to about 984 g/cm (2500 g/in) and/or from about 394 g/cm (1000 g/in) to about 787 g/cm (2000 g/in).

[0041] The sanitary tissue products of the present invention may exhibit an initial total wet tensile strength of less than about 78 g/cm (200 g/in) and/or less than about 59 g/cm (150 g/in) and/or less than about 39 g/cm (100 g/in) and/or less than about 29 g/cm (75 g/in).

[0042] The sanitary tissue products of the present invention may exhibit an initial total wet tensile strength of greater than about 118 g/cm (300 g/in) and/or greater than about 157 g/cm (400 g/in) and/or greater than about 196 g/cm (500 g/in) and/or greater than about 236 g/cm (600 g/in) and/or greater than about 276 g/cm (700 g/in) and/or greater than about 315 g/cm (800 g/in) and/or greater than about 354 g/cm (900 g/in) and/or greater than about 394 g/cm (1000 g/in) and/or from about 118 g/cm (300 g/in) to about 196 g/cm (500 g/in) and/or from about 157 g/cm (400 g/in) to about 196 g/cm (500 g/in) and/or from about 236 g/cm (600 g/in) to about 196 g/cm (500 g/in) and/or from about 315 g/cm (800 g/in) to about 196 g/cm (500 g/in) and/or from about 394 g/cm (1000 g/in) to about 196 g/cm (500 g/in) and/or from about 354 g/cm (900 g/in) to about 196 g/cm (500 g/in) and/or from about 276 g/cm (700 g/in) to about 196 g/cm (500 g/in) and/or from about 236 g/cm (600 g/in) to about 196 g/cm (500 g/in) and/or from about 157 g/cm (400 g/in) to about 196 g/cm (500 g/in) and/or from about 118 g/cm (300 g/in) to about 196 g/cm (500 g/in) and/or from about 787 g/cm (2000 g/in) and/or from about 196 g/cm (500 g/in) to about 591 g/cm (1500 g/in).

[0043] The sanitary tissue products of the present invention may exhibit a density of less than about 0.60 g/cm\(^2\) and/or less than about 0.30 g/cm\(^2\) and/or less than about 0.20 g/cm\(^2\) and/or less than about 0.10 g/cm\(^2\) and/or less than about 0.07 g/cm\(^2\) and/or less than about 0.05 g/cm\(^2\) and/or from about 0.01 g/cm\(^2\) to about 0.20 g/cm\(^2\) and/or from about 0.02 g/cm\(^2\) to about 0.10 g/cm\(^2\).

[0044] The sanitary tissue products of the present invention may exhibit a horizontal full sheet ("HFS") absorbency as determined by the Absorbency Test Method described herein of greater than about 3 g/g and/or greater than about 4 g/g and/or greater than about 5 g/g and/or greater than about 6 g/g and/or greater than about 8 g/g and/or less than about 50 g/g and/or less than about 40 g/g and/or less than about 30 g/g.

[0045] The sanitary tissue products of the present invention may be in the form of sanitary tissue product rolls. Such sanitary tissue product rolls may comprise a plurality of connected, but perforated sheets of fibrous structure, that are separably dispensable from adjacent sheets. In one example, one or more ends of the roll of sanitary tissue product may comprise an adhesive and/or dry strength agent to mitigate the loss of fibers, especially wood pulp fibers from the ends of the roll of sanitary tissue product.

[0046] The sanitary tissue products of the present invention may comprises additives such as softening agents, temporary wet strength agents, permanent wet strength agents, bulk softening agents, lotions, silicones, wetting agents, latexes, especially surface-pattern-applied latexes, dry strength agents such as carboxymethylcellulose and starch, and other types of additives suitable for inclusion in and/or on sanitary tissue products.

[0047] In one example, the sanitary tissue products of the present invention comprise paper towels.

[0048] "Array of paper towel products" as used herein means a group of paper towel products. In one case, such a group of paper towel products includes those paper towel products that reside on the same shelf in a retail store and/or in the same aisle in a retail store.

[0049] "Ply" or "plies" as used herein means an individual finished fibrous structure optionally to be disposed in a substantially contiguous, face-to-face relationship with other plies, forming a multi-ply ("multi-ply") paper towel product. It is also contemplated that a single-ply paper towel product can effectively form two "plies" or multiple "plies", for example, by being folded on itself.

[0050] "Machine Direction" or "MD" as used herein means the direction parallel to the flow of the fibrous structure through the papermaking machine and/or product manufacturing equipment. In one example, once incorporated into a paper towel product, the MD of the fibrous structure may be the MD of the paper towel product.

[0051] "Cross Machine Direction" or "CD" as used herein means the direction perpendicular to the machine direction in the same plane of the fibrous structure. In one example, once incorporated into a paper towel product, the CD of the fibrous structure may be the CD of the paper towel product.

[0052] "Intensive property" as used herein means a property of a fibrous structure and/or paper towel product, wherein the property is selected from the group consisting of: lint, softness, basis weight, texture, tensile strength, especially total dry tensile strength, absorbency and mixtures thereof.

[0053] "Common intensive property" as used herein means an intensive property that is present in two or more fibrous structures and/or paper towel products.

[0054] "Value of a common intensive property" as used herein means a measured value of a common intensive property present in each of two or more fibrous structures and/or paper towel products.

[0055] "Dominant common intensive property" as used herein means the greatest of two or more values of a common intensive property. For example, if one paper towel product exhibits a softness of about 1 psu and another paper towel product exhibits a softness of about 2 psu, then the dominant common intensive property is the 2 psu and the paper towel product that exhibits a softness of about 2 psu exhibits the dominant common intensive property. In other words, one of the paper towel products exhibits greater softness than the other paper towel product. In one example, in order for softness of one paper towel product to be a dominant common intensive property compared to softness of another paper towel product, the difference in the psu values of the paper towel products has to be greater than about 0.5 psi and/or greater than about 0.4 psi and/or greater than about 0.5 psi and/or greater than about 0.75 psi and/or greater than about 1 psi.

[0056] In another example, if one paper towel product exhibits a softness of about 0 psi and another paper towel product exhibits a softness of +0.5 psi then the paper towel product that exhibits a softness of about +0.5 psi exhibits the dominant common intensive property; namely softness. In other words, one of the paper towel products is softer than the other paper towel product. Relative values between paper towel products, such as one paper towel product is softer than another paper towel product may be used to identify the dominant common intensive property in addition to the absolute values of common intensive properties.

[0057] "Relative value of a common intensive property" as used herein means the value of a common intensive property of one fibrous structure and/or paper towel product compared to the value of the common intensive property in another fibrous structure and/or paper towel product. For example, the value of a common intensive property of one fibrous structure and/or paper towel product may be greater or less than the
value of the common intensive property of another fibrous structure and/or paper towel product.

[0058] “Communicated” as used herein means a package, especially a package comprising a non-textual indicia, and/or a paper towel product, itself, conveys information to a consumer about a product housed within the package. In one example, the information about the product may be conveyed intuitively to a consumer by a non-textual indicia.

[0059] “Intuitively communicated” as used herein means a package and/or paper towel product, itself, comprising a non-textual indicia, conveys information by the non-textual indicia that a consumer interprets based on the consumer's previous life experiences and/or knowledge.

[0060] “Indicia” as used herein means a identifier and/or indicator and/or hint and/or suggestion, of the nature of a property of something, such as an intensive property of a paper towel product.

[0061] “Textual indicia” as used herein means a text indicia, such as a word and/or phrase that communicates to a consumer a property about the paper towel product it is associated with. In one example, a paper towel product is housed in a package comprising a textual indicia; namely, the word “Soft.”

[0062] “Brand name” as used herein means a single source identifier, in other words, a brand name identifies a product and/or service as exclusively coming from a single commercial source (i.e., company). An example of a brand name is Bounty®, which is also a trademark. Brand names are non-limiting examples of textual indicia. The paper towel products of the present invention may be marketed and/ or packaged under a common brand name (i.e., the same brand name, such as Bounty®). In addition to the brand name, a product descriptor may also be associated with the paper towel products, such as “Extra Soft” for example.

[0063] “Non-textual indicia” as used herein means a non-text indicia that communicates to a consumer through a consumer's senses. In one example, a non-textual indicia may communicate, even intuitively communicate, to a consumer through sight (visual indicia), through touch (texture indicia) and/or through smell (scent indicia).

[0064] Non-limiting examples of non-textual indicia include colors, textures, patterns, such as emboss patterns and/or emboss pattern images, character representations, action representations, and mixture thereof.

[0065] “Psychologically matched” as used herein means that a non-textual indicia on a package housing a paper towel product of the present invention and/or on the paper towel product, itself, denotes (i.e., serves as a symbol for; signifies; represents something) an intensive property of the paper towel product. For example, the color red denotes strength, the color pink denotes softness and the color green denotes absorbency. Therefore, a consumer of paper towel products can identify and/or select a package of paper towel product that exhibits a dominant common intensive property of softness, wherein the package comprises a non-textual indicia psychologically matched (such as the color pink) to communicate to the consumer that the paper towel products exhibits softness as its dominant common intensive property. In one example, about 94% of a group of consumers agreed that pink indicates softness. The psychologically matched non-textual indicia aids in mitigating any confusion that the consumer may have when trying to identify and/or select a desired paper towel product among an array of paper towel products. The consumer is able to interpret the intuitive communication from the non-textual indicia to be consistent with the actual dominant intensive property of the paper towel product.

[0066] “Psychologically different” as used herein means that two or more different non-textual indicia, such as the color pink and the color green, denote different intensive properties. For example, the color pink may denote softness whereas the color green may denote absorbency, durability and/or reusability. In one example, in order to be psychologically different, the non-textual indicia cannot denote the same intensive property. For example, the color purple, which may denote softness, and the color pink, which may denote softness, are not psychologically different for the purposes of the present invention.

[0067] As used herein, “basis weight” as used herein is the weight per unit area of a sample reported in lbs/3000 ft² or g/m². The basis weight is measured herein by the basis weight test method described in the Test Methods section herein.

[0068] “Dry Tensile Strength” (or simply “Tensile Strength” as used herein) of a fibrous structure of the present invention and/or a paper towel product comprising such fibrous structure is measured according to the Tensile Strength Test Method described herein.

[0069] “Softness” as used herein means the softness of a fibrous structure according to the present invention and/or a paper towel product comprising such fibrous structure, which is determined according to a human panel evaluation wherein the softness of a test product is measured versus the softness of a control or standard product. The resulting number is a relative measure of softness between the two fibrous structures and/or paper towel products. The softness is measured herein by the Softness Test Method described in the Test Methods section herein.

[0070] “Absorbency” as used herein means the characteristic of a fibrous structure according to the present invention and/or a paper towel product comprising such fibrous structure, which allows it to take up and retain fluids, particularly water and aqueous solutions and suspensions. In evaluating the absorbency of paper, not only is the absolute quantity of fluid a given amount of paper will hold significant, but the rate at which the paper will absorb the fluid is also. Absorbency is measured herein by the Horizontal Full Sheet (HFS) Test Method described in the Test Methods section herein.

[0071] “Lint” as used herein means any material that originated from a fibrous structure according to the present invention and/or paper towel product comprising such fibrous structure that remains on a surface after which the fibrous structure and/or paper towel product has come into contact. The lint value of a fibrous structure and/or paper towel product comprising such fibrous structure is determined according to the Lint Test Method described herein.

[0072] As used herein, “texture” as used herein means any pattern present in the fibrous structure. For example, a pattern may be imparted to the fibrous structure during the fibrous structure-making process, such as during a through-air-drying step. A pattern may also be imparted to the fibrous structure by embossing the finished fibrous structure during the converting process and/or by any other suitable process known in the art.

[0073] “Color” as used herein, means a visual effect resulting from a human eye's ability to distinguish the different wavelengths or frequencies of light. The apparent color of an object depends on the wavelength of the light that it reflects. While a wide palette of colors can be employed herein, it is preferred to use a member selected from the group consisting...
of orange, purple, lavender, red, green, blue, yellow, and violet. The method for measuring color is described in the Color Test Method described herein. In one example, two or more paper towel product packages within an array of paper towel products may comprise a common color.

Paper Towel Product and Package

[0074] A paper towel product according to the present invention may be housed within a package comprising a non-textual indicia.

[0075] As shown in FIG. 1, in one example, a package 10 for housing a paper towel product (not shown) comprises a non-textual indicia 12 that is psychologically matched to a paper towel product to be housed in the package 10. The non-textual indicia 12 may be on a surface 14 of the package 10.

[0076] The package 10 may be made from any suitable packaging material 16 known in the art. Nonlimiting examples include polywrap, polymer films, such as polyolefin films, polyolefin films, paper, cardboard, plastic, wood, metal and other suitable packaging materials. In one example, the package 10 comprises a polyolefin film. In another example, the package 10 comprises a polyester film. In still another example, the package 10 comprises cardboard.

[0077] In addition to the non-textual indicia 12, the package 10 may further comprise a single source identifier 18, such as a trademark, as represented by “BRAND" in FIG. 1. The single source identifier 18 may be positioned entirely or partially within the non-textual indicia 12. In another example, the single source identifier 18 may be discrete from the non-textual indicia 12.

[0078] As shown in FIG. 2, in another example, a package 10 for housing a paper towel product 20 may be made such that a surface 22 of the paper towel product 20 housed within the package 10 is visible to a consumer at the point of sale and/or in advertising. The paper towel product 20 may comprise a non-textual indicia 12, for example an emboss pattern, that is psychologically matched to an intensive property of the paper towel product 20.

Array of Paper Towel Products

[0079] An array of paper towel products according to the present invention may comprise two or more paper towel products.

[0080] As shown in FIG. 3, in one example, an array of paper towel products 24 (displayed on a store shelf 25 for example) housed within different packages 26, 28, 30. The first paper towel product housed within the first package 26 exhibits a value of a common intensive property that is different from the second paper towel product housed within the second package 28. In one example, the first paper towel product's value of the common intensive property is the dominant common intensive property. The relative value of the common intensive property of the first paper towel product compared to the second paper towel product is communicated to a consumer of paper towel products by non-textual indicia 32, 34. The non-textual indicia 32 may be psychologically matched to a dominant common intensive property present in the first paper towel product. The non-textual indicia 34 may be psychologically matched to a dominant common intensive property present in the second paper towel product. In one example, the non-textual indicia 32 is psychologically different from the non-textual indicia 34.
Two or more paper towel products within an array of paper towel products may differ in price, for example differ in retail price to a consumer.

In addition to the paper towel product packages comprising non-textual indicia, marketing articles such as in-store ads, in-store flyers, print ads, periodical ads, billboards, end-of-aisle displays, pallet wrappers, secondary packaging, corrugated boxes, floor ads, window stick-on ads, shelf talkers, internet sites, etc. associated with the paper towel products may also comprise non-textual indicia. The non-textual indicia on the marketing articles may be psychologically matched to intensive properties within the paper towel products that the marketing articles are associated with. Further, the non-textual indicia on the marketing articles may be psychologically different. In one example, a marketing article, such as a billboard, comprises two non-textual indicia that are psychologically different and are psychologically matched to two different common intensive properties within two different paper towel products.

In one example, two or more paper towel products within an array of paper towel products according to the present invention exhibit a difference of at least about 50 g/cm² and/or at least about 75 g/cm and/or at least about 100 g/cm² and/or at least about 150 g/cm² and/or at least about 200 g/cm².

Process for Displaying an Array of Paper Towel Products

The array of paper towel products in accordance with the present invention may be displayed by any suitable process and any suitable location, such as a retail store, for a consumer's viewing, identification, selection and/or purchasing.

Intuitive Communication

Nonlimiting examples of non-textual, intuitive communication methods include: hand gestures and movements; stick figures or other animated characters demonstrating action; traffic sign shapes, lights, and arrows, body postures, facial expressions, eye movement, use of patterns, lines, curves, colors, etc. The human brain interprets these modes of non-textual, intuitive communication based on prior experiences, instinct, emotions and/or feelings that are generated within the human brain when it is exposed to these forms of non-textual, intuitive communication. Psychologists have spent many years developing an understanding of how the human brain interprets these modes of communication and how they support, supplement and/or redefine interpretation of verbal and/or written communication. In the present invention, several modes of non-textual, intuitive communication may be used to speed up consumers' interpretation of written communication on a package, thereby reducing the time necessary for consumers to identify, evaluate, and select for purchase an intended paper towel product within an array of paper towel products.

Non-Textual, Intuitive Color Communication

One example of a non-textual, intuitive communication method for delineating intensive properties of a paper towel product includes associating the paper towel product and/or package within which the paper towel product is housed with a prominent color that consumers associate with a particular mood, feeling, or state of mind (i.e., a color that is psychologically matched to an intensive property). This color can be displayed behind and around any text communication on the package, such as text indicating the common intensive property, or can be separately displayed on a surface of the package as a banner, swoosh, stripes, quilted fabrics, clouds, squares, circles, or other nonlimiting two-dimensional geometric or graphic shapes, and combinations thereof.

Nonlimiting examples of packages suitable for use with the paper towel products of the present invention are commercially available from Cello-Foil Products, Inc. and Superpack. In one example, non-textual indicia, such as colors, are applied to and/or made a part of film that forms the package by any suitable application process known in the art.

Table 1 lists appropriate colors, moods, and nonlimiting intensive properties that can be intuitively communicated via the appropriate use of these colors and psychologically matched to those colors.

<table>
<thead>
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Color Evaluation

Referring to FIG. 4, a color's identification is determined according to the Commission Internationale de l'Éclairage L*a*b* color space (hereinafter “CIELab”). CIELab is a mathematical tristimulus color scale based on the CIE 1976 standard. CIELab allows colors to be described quantitatively and with precision. As presented in FIG. 4, CIELab allows a color to be plotted in a three-dimensional space analogous to the Cartesian xyz space. CIELab has the colors green to red on what is traditionally the x-axis in Cartesian xyz space. CIELab identifies this axis as the a-axis. A negative a* value represents green and a positive a* value represents red. CIELab has the colors blue to yellow on what is traditionally the y-axis in Cartesian xyz space. CIELab identifies this axis as the b-axis. Negative b* values represent blue and positive b* values represent yellow. CIELab has lightness on what is traditionally the z-axis in Cartesian xyz space. CIELab identifies this axis as the L*-axis. The L*-axis ranges in value from 100, which is white, to 0, which is black. An L* value of 50 represents a mid-tone gray (provided that a* and b* are 0). Any color may be plotted in CIELab according to the three values (L*, a*, b*).

The three dimensional CIELab allows the three color components of chroma, hue, and lightness to be calculated. Within the two-dimensional space formed from the a-axis and b-axis, the components of hue and chroma can be determined. Chroma is the relative saturation of the perceived color and is determined by the distance from the origin as measured in the a*b* plane. Chroma, for a particular (a*, b*) set is calculated according to Formula 1 as follows:

$$C^* = \sqrt{(a^*^2 + b^*^2)}$$
For example, a color with \( a^*b^* \) values of (10,0) would exhibit a lesser chroma than a color with \( a^*b^* \) values of (20,0). The latter color would be perceived qualitatively as being more red than the former. Hue is the relative red, yellow, green, and blue in a particular color. A ray can be created from the origin to any color within the two-dimensional \( a^*b^* \) space. Hue is the angle measured from 0° (the positive \( a^* \) axis) to the created ray. Hue can be any value of between 0° to 360°. Lightness is determined from the \( L^* \) value with higher values being more white and lower values being more black.

The testing and comparison of externally visible surfaces occurs between discrete elements of the package surface. A permissible comparison would be, for example, between the externally visible surface of the non-textual indicia intuitively communicating the intensive property and another element on the package surface, or if a significant portion of the package is transparent, of the product itself. Externally visible surfaces are tested for reflective color utilizing the method for measuring color as described in the Color Test Method described herein.

Color matching or comparisons of two or more elements comprising an externally visible surface, wherein each externally visible surface comprises a color, can be determined by color space volume, total color difference, and hue difference.

i. Color Space Volume

One embodiment of the present invention is color matching of two or more externally visible surfaces of differing elements such that the colors occupy defined CIELab color space volume. In other words, the color space volume represents how matchable one or more colors are to one another. The match is defined by the boundary surface and depends on the position of the color in the color space. Characterizing color matching within a volume is desirable such that the volume accounts for and considers all dimensions within CIELab. While not being limited to the theory, such a three-dimensional measurement is believed to more fully characterize the difference in two colors. The CIELab color space volume, \( V \), for a first color \((L^*_1, a^*_1, b^*_1)\) and a second color \((L^*_2, a^*_2, b^*_2)\), is calculated according to Formula 2 as follows:

\[
V = 4/3 \pi \left( L^* - L^*_{min} \right)^{2} \left( a^* - a^*_{min} \right) \left( b^* - b^*_{min} \right) / 2 = 4 \left( L^*_{min} - L^* \right) / 2 \left( a^* - a^*_{min} \right) \left( b^* - b^*_{min} \right) / 2
\]  

The CIELab color space volume results in a solid substantially ellipsoidal in shape; however, if \( \Delta L^* \) (essentially \( L^*_1 - L^*_{min} \)), \( \Delta a^* \) (essentially \( a^*_1 - a^*_{min} \)), and \( \Delta b^* \) (essentially \( b^*_1 - b^*_{min} \)) are equal, the solid will be spherical. As used herein, a “solid” refers to the mathematical concept of a three-dimensional figure having length, breadth, and height (or depth). An ellipsoidal volume is preferred to calculate volume because an ellipsoid generally requires the dimensional differences of \( \Delta L^*, \Delta a^*, \) and \( \Delta b^* \) to be relatively more uniform than other solids. Furthermore, it is believed that ellipsoidal volumes are more visually acceptable (i.e., less detectable color mismatch by human perception) than spherical volumes.

In one example, the non-textual indicia is a color pink described by an \( L^*a^*b^* \) color of 64.8, 54.9, and -4.4 and a Color Space Volume \( V \) of less than about 6,500 and or less than about 6,000 and or less than about 5,000 and or less than about 4,000 and or less than about 3,500 and or less than about 3,000 and or less than about 2,500 and or less than about 1,000.

In one example, the non-textual indicia is a color green described by an \( L^*a^*b^* \) color of 61.7, -38.3, and 34.2 and a Color Space Volume \( V \) of less than about 15,000 and or less than about 10,000 and or less than about 5,000 and or less than about 1,000.

In one example, the non-textual indicia is a color orange described by an \( L^*a^*b^* \) color of 79, 20, and 77 and a Color Space Volume \( V \) of less than about 10,000 and or less than about 5,000 and or less than about 2,500 and or less than about 2,000 and or less than about 1,500.

In one example, the non-textual indicia is a color yellow described by an \( L^*a^*b^* \) color of 80.5, 14.7, and 78.4 and a Color Space Volume \( V \) of less than about 21,000 and or less than about 18,000 and or less than about 15,000 and or less than about 10,000 and or less than about 5,000 and or less than about 2,500 and or less than about 2,000 and or less than about 1,500.

In one example, the non-textual indicia is a color purple described by an \( L^*a^*b^* \) color of 35, 29.3, and -28.8 and a Color Space Volume \( V \) of less than about 10,000 and or less than about 5,000 and or less than about 2,500 and or less than about 2,000 and or less than about 1,500.

In one example of an array of paper towel products, a first package comprises a color described by an \( L^*a^*b^* \) color of 64.8, 54.9, and -4.4 and a Color Space Volume \( V \) of less than about 6,500 and a second package comprises a color described by an \( L^*a^*b^* \) color of 61.7, -38.3, and 34.2 and a Color Space Volume \( V \) of less than about 15,000.

The non-textual indicia color is analyzed according to the Color Test Method described herein.

It should be recognized that the colors of more than two non-textual indicia may occupy the aforementioned CIELab color space volumes. In calculating the color space volume for more than two non-textual indicia colors, volume is calculated using the maximum and minimum \( L^*, a^*, \) and \( b^* \) from a set of non-textual indicia colors. A given set of non-textual indicia colors will yield a set of \( L^*, a^*, \) and \( b^* \) values. A maximum color value is selected by taking the maximum \( L^*\), the maximum \( a^*\), and the maximum \( b^*\) from the set of \( L^*, a^*, \) and \( b^* \) values. Likewise, a minimum color value is selected by taking the minimum \( L^*\), the minimum \( a^*\), and the minimum \( b^*\) from the set of \( L^*, a^*, \) and \( b^* \) values. The maximum color values and minimum color values are used to calculate \( V \) according to Formula 2 above.

In one example, the colors of more than two non-textual indicia colors occupy the volume. In another example, the colors of more than three non-textual indicia colors occupy the volume.

ii. Color Space Total Difference

In one example of the present invention, two or more different non-textual indicia colors exhibit a color space total difference. The color space total difference represents the distance between two points within CIELab color space. The CIELab color space total difference (\( \Delta E^* \)) between a first color \((L^*_1, a^*_1, b^*_1)\) and a second color \((L^*_2, a^*_2, b^*_2)\) is calculated according to Formula 3 as follows:

\[
\Delta E^* = \sqrt{(L^*_1 - L^*_2)^2 + (a^*_1 - a^*_2)^2 + (b^*_1 - b^*_2)^2}
\]

In one example, the color space total difference (\( \Delta E^* \)) between a first non-textual indicia color and a second non-textual indicia color is greater than about 30 and/or greater than about 60 and/or greater than about 80 and/or greater than about 100.

Test Methods

Unless otherwise indicated, all tests described herein including those described under the Definitions sec-
tion and the following test methods are conducted on samples, fibrous structure samples and/or paper towel product samples and/or handsets that have been conditioned in a conditioned room at a temperature of 73°F ± 4°F (about 23°C ± 2.2°C) and a relative humidity of 50% ± 10% for 2 hours prior to the test. Further, all tests are conducted in such conditioned room. Tested samples and felts should be subjected to 73°F ± 4°F (about 23°C ± 2.2°C) and a relative humidity of 50% ± 10% for 2 hours prior to testing.

Basis Weight Method:

[0117] Basis weight is measured by preparing one or more samples of a certain area (m²) and weighing the sample(s) of a fibrous structure according to the present invention and/or a sanitary paper towel product comprising such fibrous structure on a top loading balance with a minimum resolution of 0.01 g. The balance is protected from air drafts and other disturbances using a draft shield. Weights are recorded when the readings on the balance become constant. The average weight (g) is calculated and the average area of the samples (m²). The basis weight (g/m²) is calculated by dividing the average weight (g) by the average area of the samples (m²).

Dry Tensile Strength Test Method:

[0118] One (1) inch by five (5) inch (2.5 cm x 12.7 cm) strips of fibrous structure and/or sanitary paper towel product are provided. The strip is placed on an electronic tensile tester Model 1122 commercially available from Instron Corp., Canton, Massachusetts in a conditioned room at a temperature of 73°F ± 4°F (about 23°C ± 2.2°C) and a relative humidity of 50% ± 10%. The crosshead speed of the tensile tester is 2.0 inches per minute (about 5.1 cm/minute) and the gauge length is 4.0 inches (about 10.2 cm). The Dry Tensile Strength can be measured in any direction by this method. The “Total Dry Tensile Strength” or “TDT” is the special case determined by the arithmetic mean of MD and CD tensile strengths of the strips.

Wet Tensile Strength Test Method:

[0119] An electronic tensile tester (Thwing-Albert EJA Materials Tester, Thwing-Albert Instrument Co., 10960 Dutton Rd., Philadelphia, Pa., 19154) is used and operated at a crosshead speed of 4.0 inch (about 10.16 cm) per minute and a gauge length of 1.0 inch (about 2.54 cm), using a strip of a fibrous structure and/or paper towel product of 1 inch wide and a length greater than 3 inches long. The two ends of the strip are placed in the upper jaws of the machine, and the center of the strip is placed around a stainless steel peg (0.5 cm in diameter). After verifying that the strip is bent evenly around the steel peg, the strip is soaked in distilled water at about 20°C for a soak time of 5 seconds before initiating cross-head movement. The initial result of the test is an array of data in the form load (grams force) versus crosshead displacement (centimeters from starting point).

[0120] The sample is tested in two orientations, referred to here as MD (machine direction, i.e., in the same direction as the continuously wound reel and forming fabric) and CD (cross-machine direction, i.e., 90° from MD). The MD and CD wet tensile strengths are determined using the above equipment and the Total Wet Tensile is determined by taking the sum of these two values.

Softness Test Method:

[0121] Ideally, prior to softness testing, the samples to be tested should be conditioned according to Tappi Method #T402O-M-88. Here, samples are preconditioned for 24 hours at a relative humidity level of 10 to 35% and within a temperature range of 22°C to 40°C. After this preconditioning step, samples should be conditioned for 24 hours at a relative humidity of 48% to 52% and within a temperature range of 22°C to 24°C. Ideally, the softness panel testing should take place within the confines of a constant temperature and humidity room. If this is not feasible, all samples, including the controls, should experience identical environmental exposure conditions.

[0122] Softness testing is performed as a paired comparison in a form similar to that described in “Manual on Sensory Testing Methods”, ASTM Special Technical Publication 434, published by the American Society For Testing and Materials 1968 and is incorporated herein by reference. Softness is evaluated by subjective testing using what is referred to as a Paired Difference Test. The method employs a standard external to the test material itself. For tactile perceived softness two samples are presented such that the subject cannot see the samples, and the subject is required to choose one of them on the basis of tactile softness. The result of the test is reported in what is referred to as Panel Score Unit (PSU). With respect to softness testing to obtain the softness data reported herein in PSU, a number of softness panel tests are performed. In each test ten practiced softness judges are asked to rate the relative softness of three sets of paired samples. The pairs of samples are judged one pair at a time by each judge: one sample of each pair being designated X and the other Y. Briefly, each X sample is graded against its paired Y sample as follows:

[0123] 1. a grade of plus one is given if X is judged to be a little softer than Y, and a grade of minus one is given if Y is judged to be a little softer than X;

[0124] 2. a grade of plus two is given if X is judged to be a little softer than Y, and a grade of minus two is given if Y is judged to be a little softer than X;

[0125] 3. a grade of plus three is given to X if it is judged to be a lot softer than Y, and a grade of minus three is given if Y is judged to be a lot softer than X; and, lastly:

[0126] 4. a grade of plus four is given to X if it is judged to be a whole lot softer than Y, and a grade of minus 4 is given if Y is judged to be a whole lot softer than X.

[0127] The grades are averaged and the resultant value is in units of PSU. The resulting data are considered the results of one panel test. If more than one sample pair is evaluated then all sample pairs are rank ordered according to their grades by paired statistical analysis. Then, the rank is shifted up or down in value as required to give a zero PSU value to which every sample is chosen to be the zero-base standard. The other samples then have plus or minus values as determined by their relative grades with respect to the zero base standard. The number of panel tests performed and averaged is such that about 0.2 PSU represents a significant difference in subjectively perceived softness.

Color Test Method:

[0128] Color-containing surfaces are tested in a dry state and at an ambient humidity of approximately 50% ± 2%. Reflectance color is measured using the Hunter Lab LabScan XE reflectance spectrophotometer obtained from Hunter Associates Laboratory of Reston, Va. The spectrophotometer is set to the CIExLab color scale and with a D50 illumination. The Observer is set at 10° and the Mode is set at 45°. Area View is set to 0.125" and Port Size is set to 0.20" for films; Area View is set to 1.00" and Port Size is set to 1.20" other
The spectrophotometer is calibrated prior to sample analysis utilizing the black and white reference tiles supplied from the vendor with the instrument. Calibration is done according to the manufacturer’s instructions as set forth in LabScan XE User’s Manual, Manual Version 1.1, August 2001, A60-1010-862.

[0129] If cleaning is required of the reference tiles or samples, only tissues that do not contain embossing, lotion, or brighteners should be used (e.g., Puffs® tissue). Any sample point on the externally visible surface of the element containing the imparted color to be analyzed should be selected. Sample points are selected so as to be close in perceived color. A single ply of the element is placed over the spectrophotometer’s sample port. A single ply, as used within the test method, means that the externally visible surface of the element is not folded. Thus, a single ply of an externally visible surface may include the sampling of a laminate, which itself is comprised of more than one lamina. The sample point comprising the color to be analyzed must be larger than the sample port to ensure accurate measurements. A white tile, as supplied by the manufacturer, is placed behind the externally visible surface. The L*, a*, and b* values are read and recorded. The externally visible surface is removed and repositioned so that a minimum of six readings are obtained for the externally visible surface. If possible (e.g., the size of the imparted color on the element in question does not limit the ability to have six discretely different, non-overlapping sample points), each of the readings is to be performed at a substantially different region on the externally visible surface so that no two sample points overlap. If the size of the imparted color region requires overlapping of sample points, only six samples should be taken with the sample points selected to minimize overlap between any two sample points. The readings are averaged to yield the reported L*, a*, and b* values for a specified color on an externally visible surface of an element.

[0130] In calculating the color space volume, V, maximum and minimum L*, a*, and b* values are determined for a particular set of elements to be color matched. The maximum and minimum L*, a*, and b* values are used to calculate V according to Formula 2 presented above.

Absorbency Test Method (Horizontal Full Sheet (HFS)):

[0131] The Horizontal Full Sheet (HFS) test method determines the amount of distilled water absorbed and retained by a sanitary paper towel product of the present invention. This method is performed by first weighing a sample of the sanitary paper towel product to be tested (referred to herein as the “Dry Weight of the paper”), then thoroughly wetting the sanitary paper towel product, draining the wetted sanitary paper towel product in a horizontal position and then reweighing (referred to herein as “Wet Weight of the paper”). The absorptive capacity of the sanitary paper towel product is then computed as the amount of water retained in units of grams of water absorbed by the sanitary paper towel product. When evaluating different sanitary paper towel product samples, the same size of sanitary paper towel product is used for all samples tested.

[0132] The apparatus for determining the HFS capacity of sanitary paper towel product comprises the following: an electronic balance with a sensitivity of at least ±0.001 grams and a minimum capacity of 1200 grams. The balance should be positioned on a balance table and slab to minimize the vibration effects of floor/benchtop weighing. The balance should also have a special balance pan to be able to handle the size of the sanitary paper towel product tested (i.e., a paper sample of about 11 in. (27.9 cm) by 11 in. (27.9 cm)). The balance pan can be made out of a variety of materials. Plexiglass is a common material used.

[0133] A sample support rack and sample support cover is also required. Both the rack and cover are comprised of a lightweight metal frame, strung with 0.012 in. (0.305 cm) diameter monofilament so as to form a grid of 0.5 inch squares (1.27 cm²). The size of the support rack and cover is such that the sample size can be conveniently placed between the two.

[0134] The HFS test is performed in an environment maintained at 23±1°C and 50±2% relative humidity. A water reservoir or tub is filled with distilled water at 23±1°C to a depth of 3 inches (7.6 cm).

[0135] The sanitary paper towel product to be tested is carefully weighed on the balance to the nearest 0.01 grams. The dry weight of the sample is reported to the nearest 0.01 grams. The empty sample support rack is placed on the balance with the special balance pan described above. The balance is then zeroed (tared). The sample is carefully placed on the sample support rack. The support rack cover is placed on top of the support rack. The sample (now sandwiched between the rack and cover) is submerged in the water reservoir. After the sample has been submerged for 60 seconds, the sample support rack and cover are gently raised out of the reservoir.

[0136] The sample, support rack and cover are allowed to drain horizontally for 120±5 seconds, taking care not to excessively shake or vibrate the sample. Next, the rack cover is carefully removed and the wet sample and the support rack are weighed on the previously tared balance. The weight is recorded to the nearest 0.01 g. This is the wet weight of the sample.

[0137] The gram per sanitary paper towel product sample absorptive capacity of the sample is defined as (Wet Weight of the paper−Dry Weight of the paper).

[0138] The dimensions and values disclosed herein are not to be understood as being strictly limited to the exact numerical values recited. Instead, unless otherwise specified, each such dimension is intended to mean both the recited value and a functionally equivalent range surrounding that value. For example, a dimension disclosed as “40 mm” is intended to mean “about 40 mm”.

[0139] All documents cited in the Detailed Description of the Invention are, in relevant part, incorporated herein by reference; the citation of any document is not to be construed as an admission that it is prior art with respect to the present invention. To the extent that any meaning or definition of a term in this written document conflicts with any meaning or definition of the term in a document incorporated by reference, the meaning or definition assigned to the term in this written document shall govern.

[0140] While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications can be made without departing from the spirit and scope of the invention. It is therefore intended to cover in the appended claims all such changes and modifications that are within the scope of this invention.
What is claimed is:

1. An array of paper towel products comprising a first paper towel product housed within a first paper towel product package and a second paper towel product housed within a second paper towel product package, wherein the first and second paper towel products exhibit a different value of softness; and wherein the relative value of the softness of the first paper towel product compared to the second paper towel product is intuitively communicated to a consumer of paper towel products by psychologically matched non-textual indicia on the first and second packages and wherein the first and second packages comprise a common brand name.

2. The array of paper towel products according to claim 1 wherein the softness value of the first paper towel product is greater than about 0.3 psi than the softness of the second paper towel product.

3. The array of paper towel products according to claim 1 wherein psychologically different non-textual indicia are present on both the first and second paper towel product packages.

4. The array of paper towel products according to claim 1 wherein the non-textual indicia are selected from the group consisting of: colors, patterns, character representations exhibiting active poses and mixtures thereof.

5. The array of paper towel products according to claim 4 wherein the non-textual indicia comprise colors.

6. The array of paper towel products according to claim 1 wherein the first package comprises a color described by an L*-a*-b* color of 64.8, 54.9, and -4.4 and a Color Space Volume (V) of less than about 6,500.

7. The array of paper towel products according to claim 1 wherein the second package comprises a color described by an L*-a*-b* color of 61.7, -38.3, and 34.2 and a Color Space Volume (V) of less than about 15,000.

8. The array of paper towel products according to claim 1 wherein the array further comprises a third paper towel product housed within a third package comprising a color described by an L*-a*-b* color of 80.5, 14.7, and 78.4 and a Color Space Volume (V) of less than about 21,000.

9. The array of paper towel products according to claim 1 wherein the first package comprises a color described by an L*-a*-b* color of 64.8, 54.9, and -4.4 and a Color Space Volume (V) of less than about 6,500 and the second package comprises a color described by an L*-a*-b* color of 61.7, -38.3, and 34.2 and a Color Space Volume (V) of less than about 15,000.

10. The array of paper towel products according to claim 1 wherein the first package comprises a first color and the second package comprises a second color wherein the first color and second color differ from each other by a Color Space Total Difference (ΔE) of greater than about 30.

11. The array of paper towel products according to claim 1 wherein the first paper towel product exhibits a softness value greater than the softness value of the second paper towel product and the second paper towel product exhibits a greater common intensive property value of at least one other common intensive property selected from the group consisting of total dry tensile strength, absorbency, thickness and mixtures thereof than the same common intensive property value of the first paper towel product.

12. The array of paper towel products according to claim 11 wherein the at least one other common intensive property is total dry tensile strength.

13. The array of paper towel products according to claim 12 wherein a difference of at least 50 g/cm in total dry tensile strength exists between the first and second paper towel products.

14. The array of paper towel products according to claim 11 wherein the array further comprises a third paper towel product that exhibits a value for the common intensive property that is different from at least one of the values of the first and second paper towel products.

15. The array of paper towel products according to claim 1 wherein the first and second paper towel product packages comprise a common color.

16. An array of paper towel products comprising a first paper towel product and a second paper towel product, wherein the first and second paper towel products exhibit a different value for a common intensive property, wherein the first paper towel product is housed within a first package comprising a first color and the second paper towel product is housed within a second package comprising a second color; wherein the relative value of the common intensive property of the first paper towel product compared to the second paper towel product is intuitively communicated to a consumer of paper towel products by psychologically matched colors on the first and second packages, and wherein the first color and the second color differ from each other by a Color Space Total Difference (ΔE) of greater than about 30.

17. An array of paper towel products comprising:
   a. a first paper towel product housed within a first package; and
   b. a second paper towel product housed within a second package;

   wherein the first paper towel product exhibits a dominant first common intensive property and the second paper towel product exhibits a dominant second common intensive property different from the first common intensive property;

   wherein the first package comprises a first non-textual indicia psychologically matched to the first common intensive property and the second package comprises a second non-textual indicia different from the first non-textual indicia психологически matched to the second common intensive property;

   wherein the first common intensive property is softness.

18. A marketing article associated with an array of paper towel products, the marketing article comprises a non-textual indicia that is psychologically matched to an intensive property of one of the paper towel products within the array.