White Paper

Understanding Food Label Regulations

USA, EU and China

Contents

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1. Introduction

The past decade has seen an enormous increase in concerns over food safety. While many efforts have been made to mitigate contamination and improper handling of food products, it is only recently that similar concerns about consumer education have become part of the larger conversation. This is not to say that product labels have lacked for regulation—there are laws on the books going back decades dictating the sort of information that product labels require—but apart from a basic set of guidelines, labels could take on nearly any sort of appearance, so long as a few particular pieces of information were present in some form or another.

These simple pieces of information included the name of the product, a list of ingredients, the name of the manufacturer and the address of whichever company owned the brand name. Perishable foods required an expiration date, and other foods required lot codes for recall purposes, but even these were not particularly a priority. There were, until recently, no requirements for legibility, location, or size. More importantly, there were also no particular regulations governing the placement of allergen warnings beyond a requirement that product ingredients be present on the package.

Consumers, however, have long been growing more aware of what goes into the products they consume—and as consumers begin to demand more easily-accessible information about the food they eat, government and industry regulators have slowly but surely began to focus even more on product labeling. The release of the British Retail Consortium (BRC) Food Safety Issue 7, which added a new section to their regulations specifically dealing with print and label quality, is one such indicator of this trend, as is the EU's Food Information Law (or Regulation (EU) No 1169/2011), which is still taking full effect. Similarly, the FDA updated their Food Label Guide in 2013 and is considering further improvements to the nutrition information requirements for food product labels.

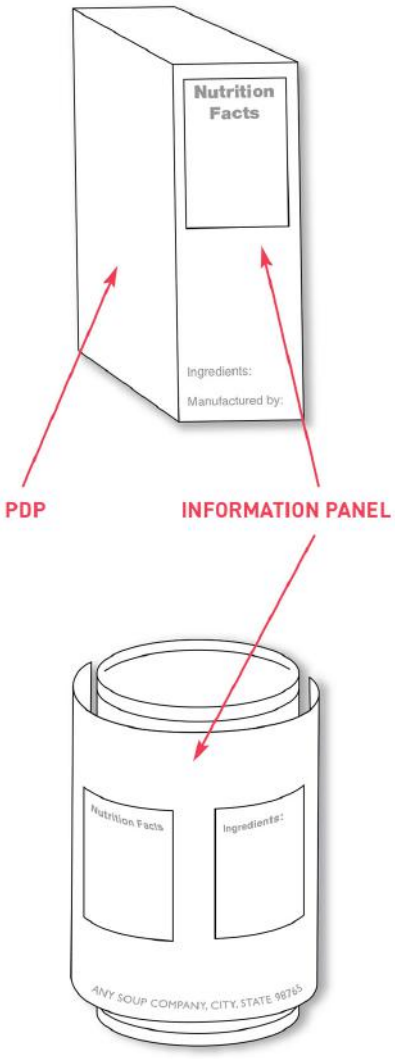
As governments and regulators move to respond to consumer pressures, food product manufacturers are left to comply with the new regulations in order to avoid recalls, decertification or fines. For manufacturers selling products globally, this means keeping track of the mounting labeling regulations for each country, as well as ensuring that every product label is up to specifications. There are an increasing number of ways in which a label might now fail to meet one of those specifications, making a strict label quality control process more necessary than ever.

Part of a strict label quality control program is the use of a vision inspection system to both prevent mislabeling and ensure the print quality of the label meets industry regulations. Exploring the labeling guidelines for some of the larger world markets shows shared traits among each, but also highlights differences which need to be kept in mind when designing product labeling. Industry regulations, such as the BRC's Issue 7, deal less with the content of the labels themselves and focus more on preventing labeling errors. This paper gives an overview of labeling regulations and requirements for the US, EU, and Chinese markets.

The Basics

Before going into what precisely the basic label regulations across all countries are, it is useful to define what we mean by the word 'label.' The definition of label which this paper uses is taken from the EU Food Information Law: "any tag, brand, mark, pictorial or other descriptive matter or symbol relating to a food and placed on any packaging, document, notice label, ring or collar accompanying or referring to such food" (Regulation (EU) 1169/2011, p. 16). In other words, 'label' can refer to any printed material on a package surface.

While there are indeed different regulations depending on what country or industry body is doing the regulating, there are a few constants when it comes to labeling requirements:



1. The Name of the Product
   There may be different regulations determining what the name of the product is allowed to be—some terms are only allowed for specific types of products, for example—but every product needs to have its name on the label.

2. The Name and Address of the Manufacturer
   The name and address of a company is required—typically, the name and address of whoever owns the product name rather than the facility that actually produced the good.

3. A List of Ingredients
   Some countries have stricter requirements about the order of ingredients, and how many of the ingredients need to be listed, but there does need to be some kind of list regardless of the country.

4. Allergen Warnings
   Consumers with allergies tend to react poorly when they stumble across an undocumented allergen in their food. All regulations outline common allergens that require warnings, although the placement and wording of the warning can vary depending on the regulation.

5. Net Quantity
   How much of the product is in the container? This can mean a measurement of volume (in the case of liquid) or a measurement of weight (cereals, etc.). This also includes alcoholic content. Over or under-representing the total amount of product on a label can be a problem for consumers—and by extension, manufacturers.

All five of these elements are required in some capacity on a product's label—although they are not necessarily required to be on the same label; multiple labels can be present on a product package, after all—but depending on the guidelines being followed, there are variances in where those labels are located and what they must look like.

3. US Regulations

Labeling regulations in the United States are controlled by the Food and Drug Administration (FDA) and outlined in A Food Labeling Guide, which lays out the regulations and suggestions for compliance in the United States. While it does not carry the full weight of law, the guide is a representation of the current thinking of the FDA and, provided manufacturers adhere to the suggestions within, keeps products in line with US governmental regulations.

Regulation Overview

Food Name	Country of Origin	Net Quantity	Nutrition Facts	Ingredient List	Expiration Date	Label Inspection
Required	Required	Required	Required	Required	Not Required	Not Required

Display of Information

The guide specifies that labeling should appear on the Principal Display Panel (PDP), defined as "that portion of the package label that is most likely to be seen by the consumer at the time of purchase." (Food Label Guide, p. 5) There are two options given for displaying required information—either on one front label, or split between the front panel and the "information panel," which is defined as the label "immediately to the right of PDP, as seen by the consumer facing the product." (ibid) In cases where the surface immediately to the right is not usable, the next surface to the right is used.

The only item that must appear on the PDP is the name of the product and the quantity; any other required content may appear on the information panel. Indeed, the name and net quantity of the product must appear on both the PDP and the information panel. The information panel is for "label statements...required to be placed together" (ibid, p. 6) including the name and address of the manufacturer, ingredient list, nutrition information and any allergen warning. The information must be presented using a font that is "conspicuous and easy to read," with letters "at least one-sixteenth (1/16) inch in height based on the lower case letter 'o.'" Lettering must contrast with the background upon which it is printed, with specific height and font requirements for nutrition information—larger than 8-point, and a legible font (the guide specifically mentions Helvetica).

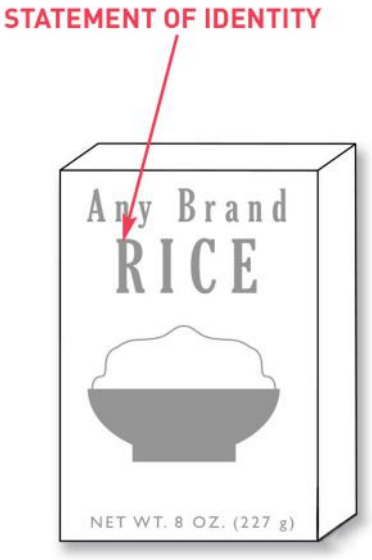
The name of the manufacturer in question does not actually have to be the name of the company that physically packaged the product—in most cases, the brand owner will put its name and address on the package rather than the contract packer's. In cases where the company name on the package is not the actual manufacturer, "it must be accompanied by a qualifying phrase which states the firm's relation to the product (e.g. 'manufactured for' or 'distributed by')" (ibid). This serves to emphasize just who is responsible for the ultimate state of the product label—not the third-party co-packer, but the company that has its name on the product. Should a labeling error occur, the fines and bad publicity are going to fall upon the brand owner—not the actual manufacturer.

Naming the Food

As already mentioned, the name of the food must appear on the PDP of a product, and it should "use prominent print…in bold type" (ibid p.7). The name of the product also must be no smaller than half the size of the largest print on the label—and the name must be placed parallel to the bottom of the package. The guide refers to the

name of the food as the "statement of identity," and, in the reference drawings provided, suggests the name be positioned at the top of the package, so that it is the first thing the consumer sees.

There are some qualifications as to what exactly constitutes a proper "statement of identity;" if the food has a common name, that name must be used to describe the product ("fanciful names" which are "commonly used and understood by the public" can also be used to describe the product if "the nature of the food is obvious" (ibid)). In other words, the priority is on what the food is—there are additional regulations against having pictures or graphics on the package which "hides or detracts from the prominence and visibility of required label statements or that misrepresent… the food" (ibid).



The name of the food also extends to so-called "imitation" foods, which are defined as "a new food that resembles a traditional food and is a substitute for the traditional food," such as fake cheese or meat. Imitation foods must have "imitation" in the name in text that is the "same type size and prominence" as the rest of the name of the food.

Country of Origin

The country of origin must appear in a location near to the name of the manufacturer and the manufacturer's address. Sometimes this is merely a part of the manufacturer's address in the case of truly imported goods, but for products of another country which are packed and distributed by a third-party manufacturer, that manufacturer's name and US address will appear on the label along with a "Product of x" notification directly below the address (Food Label Guide, p.8). The implication in this case is that unlike US-based brands, where third party distributors are not responsible for the labeling content, the distributer of imported foods is responsible in this case—although the onus is always on the manufacturer to provide the correct label.

Labels which use foreign languages are permitted, but with the note that "all required statements must appear… in English" alongside the foreign language. This is stating the obvious, perhaps, but this restriction ensures there is a US-specific label for imported products.

Net Quantity Statements

The net quantity statements (defined as "the statement on the label which provides the amount of food in the… package" (ibid, p. 14)) must appear in the bottom 30% of the PDP parallel to the base of the container. Net quantity amounts must be in both metric (milligrams, grams, liters, etc.) and Imperial units (pounds, gallons, etc.). The net quantity statement must be displayed in text of a size determined by the area of the PDP and referring to the following chart:

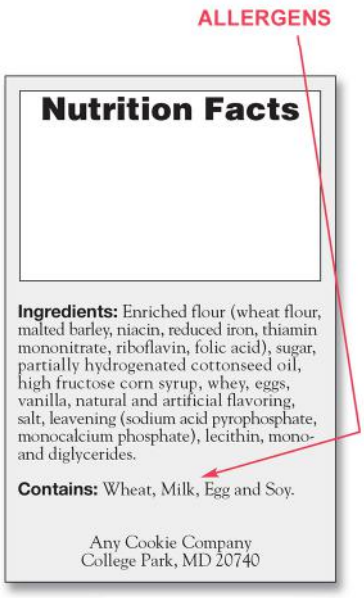
Minimum Type Size	Area of Principal Display Panel (PDP)
1/16 in (1.6 mm)	5 sq. in (32 sq. cm) or less
1/8 in (3.2 mm)	Between 5 sq. in (32 sq. cm) and 25 sq in (161 sq. cm)
3/16 in (4.8 mm)	Between 25 sq. in (161 sq. cm) and 100 sq. in (645 sq. cm)
1/4 in (6.4 mm)	Between 100 sq. in (645 sq. cm) and 400 sq. in (2580 sq. cm)
1/2 in (12.7 mm)	Over 400 sq. in (2580 sq. cm)

As with the name of the product, the net quantity statements must be in a prominent font and color to make them conspicuous and easy to read. The net quantity must also stand alone and free of interference from other graphical elements on the label (ibid, p. 16).

Ingredient List and Allergen Information

Ingredients must be listed on either the PDP or the information panel—the information must appear on the same label panel as the name and address of the manufacturer. The ingredients must be listed "in descending order of predominance," which is clarified to mean "the ingredient that weights the most is listed first, and the ingredient that weighs the least is listed last" (ibid, p. 17). This includes preservatives, artificial coloring, and, in the case of fruit juices, the actual percentage of juice present. Everything that goes into the product, even if it is merely water to dilute a concentrated ingredient, must be listed. Ingredients must be listed as "the common or usual name unless there is a regulation that provides for a different term" (ibid).

Preservatives must list both the common name and the function of the preservative—either by explicitly calling it out as a preservative or going into more detail such as "a mold inhibitor," "to retard spoilage" or "to help protect flavor." Ingredients which are present in "incidental" amounts, defined as "present…and [having] no functional or technical effect in the finished product" do not need to be present on the label (ibid, p. 18). The only area in which manufacturers are allowed to be cagey about the contents of their products is when it comes to the question of flavors and spices—the manufacturer is not required to list what particular spices and flavors are included in the product.



This assumes, of course, that none of the flavors or spices are known allergens. The FDA lists eight "major food allergens," and ingredients that are "one of the…eight foods or food groups [or contain] protein defined by one of them" must be clearly labeled as containing the allergen (Food Label Guide, p. 20-21). The eight allergens are as follows:

- Milk
- Egg
- Fish
- Crustacean shellfish
- Tree nuts
- Wheat
- Peanuts
- Soybeans

According to the guide, these allergens account for "90% of all food allergies" (ibid, p. 21). Allergens are listed in the same font size and area as the ingredients, but there is no requirement to put a specific warning about the presence of allergens. Allergens can be listed as part of the ingredients or, should the ingredient be derived from an allergen (i.e. whey being a milk product), the name of the allergen should follow in parenthesis. Manufacturers may also, if desired, break allergens into a separate list following the word "Contains" (ibid, p. 23). A new regulation is currently being developed that would make breaking out allergens into a separate list mandatory—many manufacturers, in preparation for this law, have already done so.

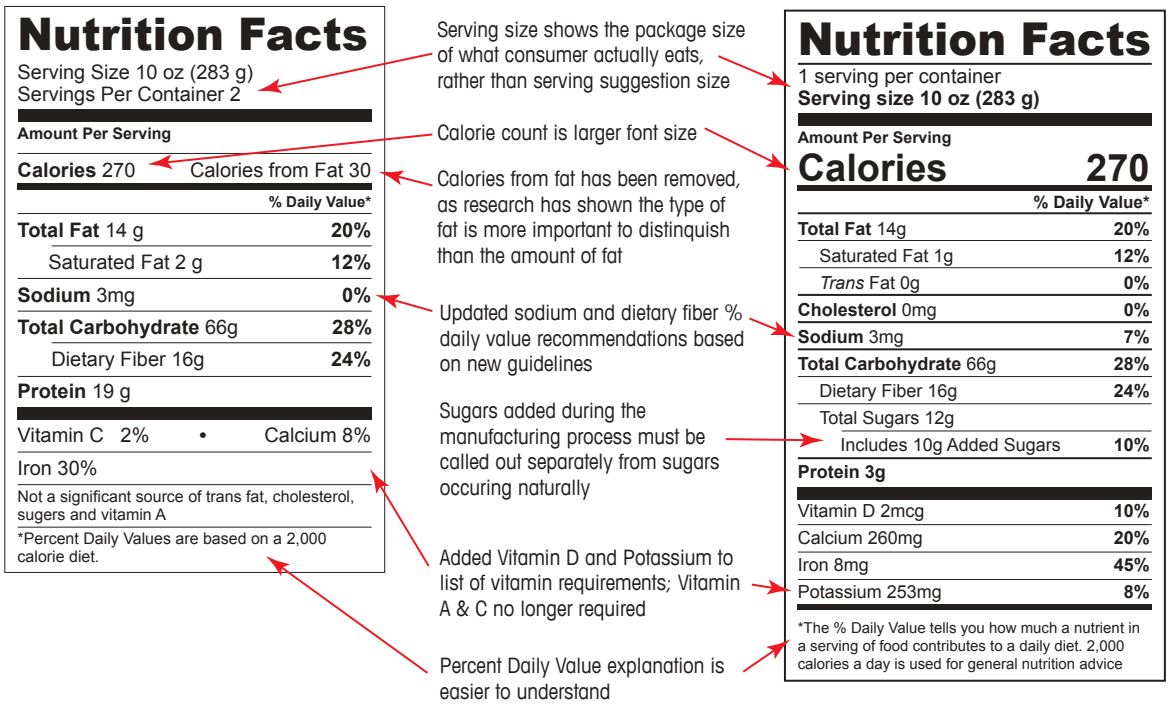
Nutrition Facts

All nutritional information on food packages must be placed in a box shape. There are no requirements for the orientation of the box, nor are there requirements for the size of the box itself. The box must stand alone, without the product name, and include a suggested serving size from which the rest of the nutritional information will be calculated. The box must also be clearly labeled as Nutrition Facts in large type. Included in the Nutrition Facts must be a calorie value, total fat (broken down into saturated and trans fat), cholesterol, sodium, total carbohydrates (broken down into dietary fiber and sugars) and protein. In a separate section of the box, any vitamins and mineral content must also be listed. All listings must include not only the amount (in grams or milligrams) but also must include the percentage of the daily recommended amount that each amount represents. In 2016, the FDA enacted a new set of guidelines for the Nutrition Facts box which changed the font size of the calorie value to make it more prominent and easier to find. In addition, the serving size and number of servings per container has also been increased in prominence. Other changes included altering the explanation of the % Daily Value and a requirement for calling out the amount of added sugars.

Unlike the other label elements discussed, there are multiple food products which do not require a nutrition facts box on the package. A complete list of exceptions can be found on page 26 of the Food Label Guide.

Best Before Date

Bizarrely, there are no laws in the United States requiring the application of a product's date of minimum durability, best before date, or sell by date. The addition of this information to a product is at the discretion of the manufacturer—although the risk of lost customers due to consumption of spoiled food is sufficient to ensure most, if not all, product labels in the United States possess that information.



Product example comparison of old versus new label with the 2016 FDA labeling regulations.

3. EU Regulations

European labeling requirements for food are specified in the regulation (EU) 1169/2011. The regulation is directly applicable in all member states and binding in its entirety. Every member state has its own name for Regulation (EU) 1169/2011; in Germany, the regulation is known as the 'LMIV,' or Lebensmittel-Informationsverordnung.

Regulation Overview

Food Name	Country of Origin	Net Quantity	Nutrition Facts	Ingredient List	Expiration Date	Label Inspection
Required	Required	Required	Required	Required	Required	Required

Display of Information

Mandatory information for pre-packed food needs to appear directly on the package or on a label attached thereto. Information has to be easily visible, clearly legible and, where appropriate, indelible. The characters shall have a height of at least 1.2mm based on the lower case letter 'o'. If the largest surface of the packaging or container is less than 80 cm^2, the height of the characters shall be equal or greater than 0.9mm based on the lower case letter 'o'. The name and the net quantity of the food as well as the alcoholic strength by volume for beverages containing more than 1.2% by volume of alcohol shall appear on the same surface. Nutritional information should be displayed on a surface that allows all information to be in the same field of view.

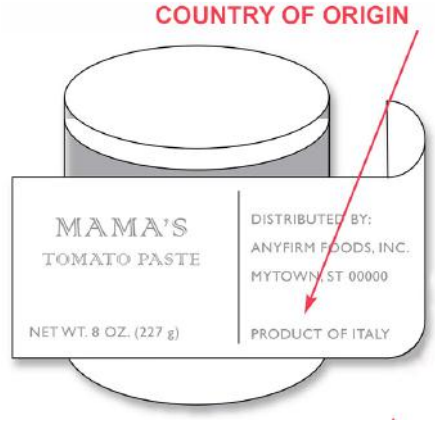
Labels must be in the officially spoken language of the country of sale, although other labels can feature multiple languages—this may even be required in some countries where multiple languages are recognized as officially spoken.

Naming the Food

The name of the food shall be the legal name of the product—i.e. the trademarked name. If such name does not exist, the name of the food shall be its customary name or descriptive name. Brand names must be followed by a description of the food, although there are no requirements for placement and size of the description. In other words, the name must be clear and easily understandable.

Country of Origin

Indication of the country of origin is mandatory where failure to indicate this might mislead the consumer, especially if the food or label would imply a different country of origin. For products where the country of origin is given and where it is not the same as that of its primary ingredient, the country of origin of that ingredient shall also be stated.
Mandatory information on country of origin for meat is specified in regulation (EU) 1337/2013 and became mandatory on December 13th, 2014. The regulation ensures traceability at all levels of the production process (from slaughter to packaging). The labeled meat at the end of the production process should be traceable to the country of origin of the individual animal or group of animals.



There are plans to strengthen regulations for meats, milk, dairy products, unprocessed foods and single-ingredient products. Specifically, there are plans to require tighter tracking and tracing of the origin of ingredients and their products.

Net Quantity Statements

The net quantity of a food shall be expressed using litres, centiliters, millilitres, kilograms or grams, as appropriate. This rule does not apply for net quantities below 5g or 5ml, as well as for spices, herbs and products sold by numbers (example cucumbers). For solid foods in liquid mediums, the drained net weight of the food shall additionally be indicated.

Ingredient List and Allergen Information

The list of ingredients shall be headed or preceded by a suitable heading which consists of or includes the word 'ingredients'. All ingredients shall be listed in descending order of weight, as recorded at the time of their use in the production process. Ingredients which are present in the form of engineered nanomaterials shall be clearly indicated in the list and the names of such ingredients shall be followed by the word 'nano' in brackets. Foods which do not require a list of ingredients are listed in article 19 of regulation (EU) 1169/2011 and include, among others, fresh fruits and vegetables, cheese, butter, fermented milk, cream etc.

Ingredients which might cause allergies shall be emphasized through a typeset that clearly distinguishes it from the rest of the list of ingredients, for example by means of the font, style or background color. This is not necessary if the product name of the food clearly refers to the substance or product concerned.

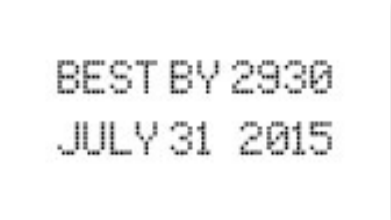
Nutrition Facts

Prior to the creation of Regulation 1169/2011, it was not required to provide nutritional information on food labels in the EU. Pressure from consumers to know the nutritional value of their food, however, caused the EU to draft guidelines mandating nutritional information be displayed on all food packaging.

The mandatory nutrition declaration will apply on December 13th, 2016. Information about the energy value, fat, saturate, carbohydrate, sugar, protein and salt shall be provided. Further, specific vitamins or minerals if present in significant amounts shall be listed. The energy value and amount of nutrients shall be expressed per 100g or per 100ml, whereby vitamins and minerals shall additionally be expressed as a percentage of the reference intakes set provided in the EU regulation. The energy value and amounts of nutrients may be expressed, as appropriate, as a percentage of the reference intake as well. Alternatively, these values can be expressed per portion and/or per consumption for specific products. Information about energy value and nutrients shall be presented in a tabular format with the numbers aligned. Where space does not permit this, the declaration shall appear in linear format.

Best Before Date

Products with minimum durability shall be indicated with "Best before…" or "Best before end…" For foods which are highly perishable and therefore likely to constitute an immediate danger to human health after a short period, the date of minimum durability shall be replaced by the "use by…" date.



Voluntary Food Information

Voluntary information can be provided, but shall not mislead the consumer. It further has to be based on relevant scientific data and shall not reduce the available space for mandatory information.

Country-specific Regulations

Member states may not adopt nor maintain national measures unless authorized by Union law. Possible changes for regulation (EU) 1669/2011 are very limited and listed in article 40ff. Further, adoption of EU law is only possible if it does "not give rise to obstacles to [the] free movement of goods, including discrimination as regards foods from other member States". As no source is known in which country specific adoptions are collected and presented, information can only be obtained from national regulations.

Label Inspection Requirement

Unique to the EU's regulations is a requirement that all manufacturers must have a documented label inspection process in place to ensure labels adhere to the regulations. The law does not specify what kind of inspection solution to use, but a vision inspection system with the ability to save inspection images and produce user logs showing system uptime would make documenting such a program simple to accomplish.

4. Chinese Regulations

Depending on the country, Asian regulations can either be incredibly strict, or surprisingly simplistic. Chinese regulations in particular are remarkably straightforward. The General Rules for the Labeling of Prepackaged Foods, issued by the Chinese Ministry of Health, lay out China's labeling requirements.

Regulation Overview

Food Name	Country of Origin	Net Quantity	Nutrition Facts	Ingredient List	Expiration Date	Label Inspection
Required	Required	Required	Not Required	Partially Required	Required	Not Required

Display of Information

The information must be "clear, prominent, indelible and readily legible" (General Rules for the Labeling of Prepackaged Foods, p. 3). Information must also be easy for consumers to understand, and any claims must be supported by scientific evidence—there is a specific ban against using language or imagery that is "superstitious, pornographic, debasing other products, or unscientific" (ibid). This requirement is followed by the statement that all information must be true and not presented in a way that obscures the information or misleads consumers—clear in content as well as font.

Any information regarding the food must be on the principal display panel (PDP), which is defined as the easiest panel to find on the package (ibid). All product information must be in Chinese characters, and minority languages (i.e. anything that is not Chinese) can only be used in concert with the corresponding Chinese character. The guidelines also specify the font size of the minority language cannot be larger than the font of the Chinese character—unless the registered trademark of the product happens to be in a minority language. Font size must be no smaller than 1.8mm in height, although packages with a PDP surface area smaller than 35 cm^2 can have smaller fonts—the guidelines are not specific as to how much smaller the font can go (ibid, p. 4).

Importantly, the date of manufacture and the date of "minimum durability" (expiration date) must both be displayed. These dates must be printed on the label and cannot be altered by any "pasted-over, supplement, or amendment" (ibid, p. 8). The date should be formatted as the year, month and date—codes with alternate formats are permitted provided they also include an explanation of their formatting.

Naming the Food

Like the other regulations discussed, the name of food must be on the PDP and "shall be presented in the prominent place of the label" (ibid, p. 4), taking precedence over the rest of the markings on the product. The name of the food must also indicate precisely what type of food is contained in the package, and cannot be "misleading or confusing to the consumer" (ibid). In the case of product names which may cause confusion as to the exact nature of the product, the guidelines require "a specific name which indicates the true nature of the food in the same word size, shall be used in close proximity to this name in the same display panel" (ibid). Further descriptive words or phrases (reconstituted, concentrated, etc.) must be placed before or after the name of the food.

Country of Origin

Like all other countries, Chinese regulations require the name, address and contact information of the manufacturer of the product to be displayed on the product label. Contact information must include "at least one item in the following: telephone number, fax number, contact information on web and so on, or post address declared accompanied with address" (ibid, p. 7). The regulations define the manufacturer as whoever "by law bears independent statutory responsibilities" (ibid), meaning that as in the US and Europe, the brand owner, not the contract packer, is held ultimately responsible (by the government at least) should defective or noncompliant product wind up being distributed to retailers. Imported goods must include the country of origin as well as the contact information (name, address, etc.) of the "agent, importer or distributer" (ibid).

Net Quantity Statements

The net weight of the product uses metric measurements and must be displayed on the PDP in the same manner as all other product information. The font size of the declaration of net weight is, curiously, determined by the weight/volume of the product, as seen in the table below:

Range of Net Weight Quantity	Minimum Height of Font (mm)
$Q \leq 50$ g/ml	2
50 ml/g $< Q \leq$ 200 g/ml	3
200 ml/g $< Q \leq$ 1 l/kg	4
$Q >$ 1 l/kg	5

Ingredient List and Allergen Information

Ingredients must also be called by their most common name and, like the name of the food, cannot be misleading to the consumer. When ingredients are converted through the production process into another ingredient (specifically referencing fermented products), there should be a list of "raw materials" instead of a list of ingredients (General Rules for the Labeling of Prepackaged Foods, p. 5).

Ingredients must be listed in descending order based on weight, and any ingredient making up less than 2% of the food's total weight does not need to be listed. Compound ingredients must also include their individual components in brackets.

Allergens must also be listed "near the ingredient list" (ibid, p. 9). The list of allergens includes gluten, crustaceans, fish, eggs, peanuts, soybeans, milk or other dairy, or any other type of nut or nut product.

Nutrition Facts

Missing entirely from the General Rules for the Labeling of Prepackaged Foods are any guidelines regulating the display of any nutritional information. There are regulations warning against misleading consumers as to the effects or benefits of a food—these are covered in the regulations for the name of the food—but no formal declaration of the nutritional facts is required.

5. Industry Regulations (BRC & IFS)

There is very little need for industry regulatory bodies such as the British Retailer Consortium or the IFS to lay out strict guidelines for the contents of a product label, because each governmental body has already done so. What regulatory bodies do in this case is reiterate the need for manufacturers to adhere to the individual regulations of each government.

BRC Global Standard Food Safety Issue 7

In other words: "All products shall be labeled to meet legal requirements for the designated country of use and shall include information to allow the safe handling, display, storage, preparation and use of the product within the food supply chain or by the customer. There shall be a process to verify that ingredient and allergen labelling is correct based on the product recipe and ingredient specifications" (BRC Issue 7, p. 40).

The BRC also mandates comprehensive reviews of labeling information whenever a change occurs to the product—including changes to the recipe, ingredients, suppliers or in response to new legislation. The BRC also includes a mandate that manufacturers who choose to use contract packagers or printers must provide "information to enable the label to be accurately created" and "information whenever a change occurs which may affect the label information" (ibid).

In addition to the standard government requirements, the BRC also insists manufacturers maintain documentation tracing the origin of all ingredients and raw materials which are put into the product. This requirement is emphasized for products with claims regarding their area of origin, "specific trademarked ingredients," genetically modified organism status (GMO free foods), or other information of that nature (ibid, p. 42). The BRC's requirements, in other words, are less concerned with the location of information on the product label and are instead concerned with the traceability of the materials included in the product. This information may not be on the final product label, but the labels of shipped materials (tracking numbers, etc.) need to be present so there is a clear chain of custody.

New in the BRC's food safety requirements for product labeling are requirements to reduce the risk of a mislabeled product. This includes requiring "[d]ocumented checks…carried out at product changes to ensure all products and packaging from the previous production have been removed from the line before changing to the next production," and "checks…that [ensure] only correctly printed material is available at the packaging machines" (ibid p. 46). These checks are mandated before, during and after the production process, and "shall also include verification of any printing carried out at the packaging stage including…date coding…batch coding…quantity information… pricing information…bar coding…country of origin" (ibid).

The guidelines also make special mention of the use of vision inspection systems as a method of verifying product labeling and print, stating "procedures shall be in place to ensure…the system is correctly set up and capable of

alerting or rejecting product when packaging information is out of specification" (ibid). This guideline is also new to Issue 7 of the BRC's standards, and assumes the use of vision inspection to ensure the proper labels are applied.

There are a few things to take away from Issue 7 as it relates to labels:

1. It is the responsibility of the manufacturer to ensure their product labeling falls in line with the regulations outlined, regardless of who is actually creating and applying the labels.

2. Traceability is a priority, so lot codes and date codes must be readable.

3. Vision inspection systems are a way to check product labels and printing. Manufacturers using vision inspection systems must regularly verify their inspection systems are functioning properly.

4. Regardless of what inspection solution the manufacturer chooses to go for, the label inspection process must be documented in order to be considered compliant with the regulations.

The remainder of the BRC guidelines are more concerned with preventing contamination by pathogens or allergens, but the addition in Issue 7 of label-specific guidelines highlights the growing importance of product labeling in the marketplace.

IFS Standard for Auditing Quality and Food Safety V6

Like the BRC, the IFS standards are primarily concerned with other food safety issues such as contamination by pathogens or allergens. The IFS, unlike the BRC, does not currently have any language specifically highlighting vision inspection as a method for label quality control. The standards do, however, address both packaging and labeling controls, mandating "[t]he company shall ensure that the packaging used corresponds to the product being packed. The use of correct packaging shall be regularly checked and checks shall be documented" (IFS Food Version 6, p. 63), and immediately following "[labeling] information shall be legible, indelible and shall comply with agreed customer product specifications. This shall be regularly checked and checks shall be documented" (ibid).

Interestingly, the IFS standards do not suggest manufacturers must comply with government regulations, assuming (correctly) that customer product specifications will most likely adhere to the regulations of the local government. The requirement that labels be legible is fairly basic in comparison to the government regulations, and the requirement that both labeling and packaging "be regularly checked" is fairly vague. It would not be a surprise to see the next version of the IFS' food regulations use language closer to that of the BRC's Issue 7.

6. Manufacturers Carry the Responsibility

There are differences among all the different labeling guidelines put out by countries all over the world, but one thing stands out above everything else. In all guidelines, regardless of origin, the ultimate responsibility for the contents of the label that ends up on a retailer's shelf is the manufacturer—not the contract packager, not the printer, not the importer.

It is the name on the label that bears the ultimate responsibility if a label fails to meet regulations. The most important thing a manufacturer can do is remain in control of the labeling process—similarly, contract packers and printers need to know the best ways to keep their customer (the manufacturer, in this case) from dropping them after one too many labeling errors. This includes being aware of the various markets in which products will be sold and familiarizing oneself with the regulations in that area. Provided there is awareness of the various regulations, a label design that satisfies government and industry requirements is a simple enough task to perform.

Provided the labels are designed with care, the only factor for manufacturers to really concentrate on is the application of the right label on each product. This is why the BRC guidelines in particular focus not on the design of the label, but on controlling the production environment such that the risk of a mislabeled product is drastically reduced, if not eliminated entirely. The BRC's guidelines acknowledge that a vision system is likely to be utilized in these situations as a guard against such labeling errors.

It is to the benefit of manufacturers to ensure that all levels of their labeling process—printers and packers alike—utilize a vision inspection solution capable of graphical identification, code reading and character recognition to inspect the quality and accuracy of their product labels. Deciding to install a vision system, however, is only the first step. It is important that the vision solution provided is well-suited for the production environment and that system operators are able to easily navigate the system in order to keep it functioning properly. Products need to be evaluated to ensure the vision system has the proper configurations available. Most importantly, the vision system should only be a component of a larger and comprehensive label control program. METTLER TOLEDO's vision inspection team guides manufacturers through every step of developing a label control program and vision inspection system to meet their specific needs; continuing to offer system support and additional training for the life of the system.

About Mettler-Toledo Product Inspection:

The Product Inspection Division of METTLER TOLEDO is a leader in the field of automated inspection technology. Our solutions increase process efficiency for manufacturers while supporting compliance with industry standards and regulations. Our systems also deliver improved product quality which helps to protect the welfare of consumers and reputation of manufacturers.

Metal Detection

X-ray Inspection

Checkweighing

Vision Inspection

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