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# Descriptive language on label nudging to promote plant-based diet

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# Abstract

The plant-based meat alternative products have gained huge attention from the public; however, meat products are still recorded as one of the highest consumptions in the market. The new innovative foods remain a niche product in the consumers' perception. The main reasons for the low consumption of meat alternatives are the unfamiliarity and unsimilarity to the traditional food in terms of the name, appearance, and tastes. Therefore, in order to increase the consumption of plant-based meat alternatives, the application of descriptive language on label nudging is applied to test whether changing the name of a product similar to the meat-like terms can categorize these products into the current meat groups and increase the selection and consumption of a plant-based product. Two online experiments were conducted, and the study found that the modified meat-terms (e.g., Bakon, Mylk, Be'f) would be more effective in increasing the perceived typicality of meat products compared with unmodified. Furthermore, although both modified and unmodified meat terms were found to be effective in increasing the willing-to-buy of plant-based meat alternatives to some extent, there is not enough evidence to conclude that modified terms are more effective than unmodified ones. Thus, framing a product with modified terms is a promising method of promoting the adoption of plant-based meat products.


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# 1 Introduction

In recent decades, humankind has been paying high prices for their activities and occurrences on the planet. These costs have exponentially escalated to the point that they put human existence at risk. In fact, climate changes, the appearance of incurable diseases, an unprecedented pandemic, the surge in obesity, and heart disease patients in the hospitals are raising the alarm about the negative impacts of humankind on the Earth.

Given different contents and environmental factors for various crises, the causes of the problems are logically related to the world population's diets. First, the expansion in agriculture, especially the meat and dairy industries, has been known as one of the main drivers of climate change ( Steinfeld et al., 2006). The livestock industry is releasing 14.5% green gas emissions, which does not mention the issues of biodiversity loss (Hilton, 2000), and the pollution of water and soil resources (Ivanova et al., 2016). Moreover, the shifts toward Western diets, which are based on animal products, high-convenience food, and processed foods, not only increase the further demand on the global food system but also appear at the expense of human health such as diabetes (Schulze et al., 2011; Micha et al., 2012 ). "The consumption of animal products exposes humans to saturated fat, cholesterol, lactose, estrogens, and pathogenic microorganisms while displacing fiber, complex carbohydrates, antioxidants, and other components needed for health" ( Barnard & Leyord, 2020, p.88), increasing the risk for these chronic diseases. Furthermore, the recent COVID-19 pandemic began in the "wet market" in Wuhan, China – where people buy the live animals for consumption - and start to infect the world population (Xiao et al., 2021). Therefore, this raises the concern in the public what if there is an absence of animal products or the world's population of plant-based food. One might wonder whether it is necessary to spend billions of dollars on R&D to develop advanced technology to solve human issues, given that humankind just switched to a plant-based diet instead of meat-based ones. Numerous research from various fields supports the idea that reducing the consumption of animal-based products bring remarkable changes for human and the planet as a whole, such as ending food poverty, lowering the effects of climate change (Scarborough et al., 2014), improving the human health, cutting risks of chronic diseases ( Miles et al., 2019)

A significant number of research papers have classified the methods to promote healthy diets as reducing the meat intake per meal. One of the most popular methods is in the application of Behavioral Economics - "nudges," which are defined as "an attempt at influencing people's judgment, choice, or behaviour in a predictable way" (Thaler & Sunstein, 2008, p. 121). In fact, the decision-making processes are intensely involved by psychological biases and unconscious impulses resulting from irrational results. Therefore, it is logical to use nudges to alter different factors in the environment in which individuals make choices in order to change their behavior to determine an optimal choice ( e.g. choosing plant-based food instead of meat products)

The primary nudging method in terms of food choices focuses on cognitively oriented intervention (Vandenbroele et al., 2020). Specifically, the appearance of information in products' packages and the languages used to demonstrate the products appear as fundamental factors to encourage consumers toward or away from certain products. In other words, descriptive labeling is the standard application used in the nudging field, which directly influences the consumers' attention, and then guides the optimal choices (Costanigro et al., 2014). Regarding the plant-based products in the marketplace, a variety of terms in labeling are created in the market to identify products that do not contain animal ingredients, such as "vegan," "meat-free," "meatless," and "plant-based." Differentiating the meat-free products from those containing animal ingredients through the language is convenient for target consumers, for example, vegans, vegetarians, or individuals concerned with environmental and health perspectives. However, labeling with the term “vegan” is a sensitive topic as this might limit many consumers in the marketplace, especially for people who currently have a regular diet containing animal products, thereby mitigating the initial motives for the research to encourage the public to adopt more plant-based food.

In fact, many research papers suggest that different word choices in labeling plant-based products can influence the consumers' selections, either positively or negatively ( Bacon et al., 2018, The Good Food Institute, 2016; Parry & Mitchell, 2019; Szejda, 2019). On the one hand, a traditional label for meat-free products has mainly emphasized the words ("vegan," "plant-based," and "meatless") to construct choice architecture. As shown in the recent literature, the word "plant-based" appears more friendly with a positive perception than "vegan" since the participants were more likely to interpret "plant-based" as a flexible dietary choice rather than a committed

lifestyle choice. Similarly, an online experiment in the United States by the Good Food Institute (2016) was conducted to analyze the US consumer perception regarding food label preferences. The result indicated that customers tend to purchase products labeled with the word "plant-based" compared with the ones labeled as" vegan" and "vegetarians." The previous scholar has shown that the performance of "plant-based" is more appealing and friendly in the consumers' perception compared with the word "vegan" since the participants are more likely to interpret the term "plant-based" as a dietary option instead of a lifestyle choice (Parry & Mitchell, 2019; Szejda, 2019; Watson, 2018).

On the other hand, Szejda et al. (2020) suggest a potential opportunity that utilizes a modern strategy for the plant-based product, which is founded based on a theory of mental shortcut and category. In fact, consumers tend to jump to conclusions by irrelevant factors such as "present-based biases, visceral factors, choice presentation format, social consumption norms and incentives, and a host of other influences" (Liu et al., 2014, p. 13). By leveraging consumers' categorization of food choice, the plant-based products are purposely integrated into the same category as other products, "[making] the mental shortcut easy and accessible for customers, increases familiarity and adaptability, and creates positive associations with already-familiar products" (Szejda et al., 2020, p. 54.). In other words, creating a new name to refer for the plant-based products with animal product-like, such as "ch'cken," "chekken," "bakon," "mylk," "veganaise," gives consumers a sense of familiarity and then encourages consumers consciously trying plant-based products (Szejda et al., 2020). However, no prior research has investigated the influence of product descriptors that integrate the meat-like descriptor with the similar name of animal ingredients. This is a valuable opportunity to revise the existing fundamental descriptor terms combined with a new meat-like term in food labeling, which is followed up the recommendation for the future direction of The Good Food Institute research in 2020. This potentially generates the comprehensive implementation for the promoters to enhance the likelihood of choosing plant-based food by different consumer segments, especially meat-consumers. The research question will be as follow:

*" Is labeling meat-like terms more effective than other word choices to enhance the willingness to buy?"*

The paper investigates the choices of plant-based category descriptors that boost the consumption of plant-based products at efficient and effective rates. Most terms brought into prior studies are as follow: " vegan," "plant-based," "plant-protein," "100% plant," "meat-free, "and meatless." At present, the result of these paper suggests "plant-based" is the most recommended terms for the labeling products. Besides, using meat-like terms appears as the potential strategy to boost plant-based consumption suggested by the GIF report (2020). Therefore, in this paper, by comparing two different word choices in the product labeling "plant-based" (unmodified terms) and " meat-like words" (modified terms), it is possible to highlight the most effective strategies for the promoters and regulators to nudge the public toward a better and healthier lifestyle. Besides that, the paper also controls the relevant variables, consisting of the taste of tested products, the product attributes of participants, the level of conformity, the environmental concerns, and the demographic characteristics. Therefore, the research constructed two online experiments in order to understand individuals' perceptions of products and descriptor terms used in plant-based products. In the first study, the study aims to capture the consumers' perception when reading these terms in terms of the level appealing, appropriateness, and the level of appropriate typical meat symbolics. Based on that, the study 2 would be designed to test how likely consumers would buy the products with different terms and relevant factors. A series of products are edited with a slight change in their appearance brought into the experiments.

In this research, the paper will be divided into five different parts. The paper will first build theoretical literature. The behavioural change and psychological theories will be extensively analysed to understand the work behind nudging on label terms. Following the theoretical foundation, two separate experiments have been conducted. The results found that the different labeling terms indeed evoke different perceptions in views of consumers. Especially, the modified meat terms appear to have higher meat typicality than unmodified ones; however, there is not enough evidence to confirm the effects on the willingness to buy. The paper will analyse the results of two studies, followed by a discussion on the general implication of the findings, as well as provide suggestions for future research.

# 2 Literature Review

## 2.1 Food Choice

The choices of what to eat and drink daily are complex, dynamic, and multi-aspects. It is formulated individually according to social, cultural, and psychological factors (Kelly & Barker, 2016). Food choices are not a static process. Instead, this is shifting across life courses based on the environment (Steenkamp, 1993) and individuals' experiences (Sobal & Bisogni, 2009). This also incorporates the value negotiations and personalized strategies, such as sensory perceptions, health and nutrition knowledge and concerns, and preferences. The decisions on what to eat every day might be biased by public perceptions and social norms, potentially causing cognitive loads, thereby limiting other tasks. Therefore, human beings are not usually rational and do not thoroughly pay attention to informed evidence and suggestion. Rather than, the process is mainly relied on habitual, random, poor guided by non-cognitive processes (Cohen &Babey, 2012). This quick, emotional, and instinctive food choice can be emphasized by the idea of System 1 in the dual-process theory

## 2.2 Dual Process Theory & Nudge Strategies

Based on the cognitive theories, the decision-making process has complicatedly involved the interactions between the contract stages of mental process and human behaviors. In other words, the ways of human actions are determined by two systems of thinking (Kahneman, 2013). Furthermore, the Elaboration Likelihood Model illustrates the human process stimuli with two main routes: the central and peripheral routes (Petty et al., 1983). These theories generally allow promoters to guide consumers to purchase more plant-based products based on leveraging unconscious processes.

### 2.2.1. System 1 and System 2

The book "Thinking, Fast and Slow" by Danniel Kahneman (2013) demonstrates that human thinking and decision-making interact as a dichotomy between two models of thinking: fast system (System 1) and slow system (System 2). The formal system S1 is illustrated as the mental operation of intuition, emotion, and heuristic judgments that function automatically and quickly without the

effort of voluntary control (Kahneman, 2013). On the other hand, slow system S2 is an analytical and rational way of thinking that requires full consciousness with complicated computations. In other words, the system is associated with mental concentration and experiences, whereby the information is captured, analyzed, and processed in a carefully and consciously operational system.

Although systems 1 and 2 are always active, system 2 (the slower one) is not always engaged in decision-making as it costs a high volume of cognitive efforts and capacity in the human brain (Kahneman, 2013). Unless system 1 faces difficult situations, System 2 will be mobilized to support the detailed information and suggest the solution to the problems. Hence, the division of labor between System 1 and System 2 is the efficient operation that optimizes efforts and performance, which prioritizes the use of System 1 in everyday decisions. Hence, acknowledging the food choice and cognitive system makes it possible to influence the environmental nudge strategies, creating a valuable opportunity to architect optimal and better food consumption for humans.

### 2.2.2. Nudge strategies toward food choice

Nudge towards better food choices is placed on the theoretical foundation of nudge theory, focusing on the strategies to shift the food choice without notifying individual awareness or forbidding any options (Thaler & Sunstein, 2008). The choice architecture exploits the premise of irrational decision-making in food selection, incorporating into the framework that food choice is constructed, including the consequence of subsequent food selection (Blumenthal & Burroughs, 2012). There are various approaches that prior research for the food choice architecture, such as providing defaults options (Campbell et al., 2014) change to the location of food options (Dayan & Bar-Hillel, 2011; Bacon & Krpan, 2018; Vennard et al., 2019), change to the visual (Gamburzew et al., 2016; Cohen et al., 2015; Levy et al., 2012), change in descriptive and evaluative labeling ( Roberto et al., 2010; Ellison et al., 2013; Chu et al., 2009). Since the rise of plant-based products in the marketplace is undoubted, the strategies to nudge the consumers towards more healthy and sustainable diets are significantly interested both by the producers and the governmental institution. One of the nudge strategies suggested by the prior research that can either encourage (or discourage) the individual toward (or away) from certain products is product labeling (Szejda et al., 2020; The Good Food Institute, 2016). The labeling strategy is crucial to determine the sales

of this product. Especially in terms of novel products – a new or different product from existing products in the market- the information provided on the label is critical in determining the consumers' willingness to try or buy. Consumers tend to be involved in the categorization process that they justify the novel product based on its provided information (e.g., labeling, appearances, tastes) and their previous consumption of existing products that share similar points to the novel one.

## 2.3 How customers identify the alternative products

The choice of a particular product depends not only on its appearance or features but also on other products in the same environment (Antonides & Raaij, 1998; Shocker et al., 2004). Yet, a set of product alternatives is formed in the society based on shared characteristics, allowing consumers to choose their favourite option from the same product category.

### 2.3.1. Categorization

Consumers tend to categorize products based on shared characteristics and purposes. Objects could be grouped if they contain similar attributes or generate similar outcomes (Felcher et al., 2001). Therefore, to merge new products into the current groups in an acceptable way in the marketplace, they must share similarities to a typical product from that category (Loken et al., 2008). This means plant-based products are more likely to be accepted by consumers as alternatives or substitutes for animal-based products if these plant-based goods can resemble a typical animal-based one. (Hoek et al., 2011). It seems that the plant-based food industries have achieved certain achievements in terms of replicating meat-like textures, visual appearances, and taste experiences thanks to the developments in food technology and innovation. For example, Impossible Foods, Beyond Meat, Oatly, and Daiya are numerous plant-based production companies that introduced alternative products to meat and dairy-based products. However, it is not only about the taste experiences of plant-based food, but also it needs to share the same scripts, which can be implemented through package design, languages, and communication styles (Hoek et al., 2011).

### 2.3.2. Assimilation theories & Contrast theories

Consumers are more likely to perceive a high similarity between the novel and existing category due to assimilation (Loken et al., 2008). The customers are more likely to interpret the new products based on their similar characteristics. In this case, consumers can acknowledge similarities at certain points (e.g., the appearances, the smell, the textures, the level of bloodiness, the cooking methods) between the meat substitutes (novel food) and the meat products ( existing products). Suppose the novel food is formulated at a high level of similarities to the existing ones. In that case, it allows the categorization process to operate quickly and efficiently, directly enabling the transfer of beliefs and expectations from the traditional meat category to the meat substitute, thereby making these novel products more familiar and acceptable in the consumers' perception (Lisa, 2022). On the other hand, in the scenario of low similarity or entirely new products – that do not match with any existing category, it is impossible to transfer the beliefs from the existing category to the novel one. In other words, new product judgments are formulated without information from the existing category. As a result, this novel product (e.g., meat altivatinatives ) is excluded and considered as a contrast with existing ones (e.g., meat products ) (Loken et al., 2008; Schwar & Bless, 1992). Therefore, the feature, characteristics, appearances, and the framing method of meat alternatives to traditional meats can determine whether the presence of assimilation or contrast in the consumers' perspectives.

### 2.3.2. Framing & Fast-thinking shortcuts

A prior scholar has studied the framing methods extensively for plant-based food; the results highlight the role of the languages used to describe the products or the word choices in labeling these goods (Good Food Institute, 2020). They mainly focus on the traditional strategy that frames unmodified animal meat-term together with the word the terms "plant-based" and vegan-related terms (such as "vegan" or "vegetarian"). To illustrate, Research by Watson (2018), and The Good Food Institutes (2016), analyzed the influence of the terms "plant-based" and "vegan" on consumers' perceptions. The results indicate that respondents tend to purchase a product labeled as "plant-based" than "vegan." This is because the term "plant-based" is associated with positive or inclusive labels, while other terms, mainly "vegan," are accidentally deprivation framing (Bacon

et al., 2018; Parry & Mitchell, 2019v). This phenomenon is explainable by the psychology behind it. Since food plays a vital role in forming social identity, the creation of an "in-group" (in this case, a meat-eater majority) of those who share similar habits and like-minded thinking is formed (Cruwys et al., 2012). Thus, individuals who are dissimilar to the "in-group" (vegan community) are considered part of an "out-group" (Hodson & Earle, 2018). This out-group derogation can lead to social rejection or alienation by the social majority due to misunderstandings and conflicting valuers (Minson & Monin, 2011). In other words, "social minorities are often devalued or denigrated by majority culture members" (Nezlek & Forestell, 2020, p. 48).

Consequently, the objects associated with the vegan and vegetarian community are critically seen as materials against the social majority values and perceptions. What is more, Cole and Morgen (2011) added that the combination of this discrimination amongst groups and the biased views toward veganism in the mainstream media leads to the social phenomenon of Veganphobia – defined as strong negative perceptions about everything related to veganism, including all vegan products in the markets (Vandermoere et al., 2019). Yet, the "plant-based" label combined with the use of unmodified meat terms could increase the consumption of plant-based products to some extent. However, this strategy might isolate the plant-based product as a new group. This might be beneficial for consumers willing to reduce their meat intakes (e.g., vegan or vegetarians). However, it is skeptical about the effectiveness of this framing method to other groups and the sales of these plant-based products.

When categorizing a specific food product, consumers are more likely to focus on three broad mental steps (Terrien, 2017). The model can be demonstrated as follow: " Food —> Meat —> Chicken." This highlights that if plant-based meat merges into the intermediate step as one of the protein categories. The practical method to integrate within an existing group is to utilize a fast-thinking shortcut by framing the plant-based products with meat-like terms. Indeed, a prior scholar has proven that framing is an effective strategy to influence consumers' categorization process ( Charette et al., 2015). The framing strategy for the product name can either emphasize a product's similarities or differences from an existing category. To illustrates, the term "Ch'kken," "Bakon," and "Mylk" - representing the products substituting chicken or bacon and milk product, respectively - are examples of the modified meat-term framing strategy. This method aims to

manipulate the word structures and sound effects to maximize the similarity level to the traditional meat terms. This method is expected to be more effective than the unmodified meat-term strategy, where the producers combine “plant-based” terms with the names of traditional food ( e.g., “Plant-Based Chicken, Plant-Based Bacon, or Plant-Based Milk) . “This integrated category approach makes the mental shortcut easy and accessible for customers, increases familiarity and adaptability, and creates positive associations with already-familiar products.” (Szejda et al., 2020, p. 56). Specifically, for the meat alternatives to increase the chance of replacing traditional meat, plant-based meat products need to merge with meat products into a specific category instead of a complementary relationship in a meal ( e.g., the protein category) (Hoek, 2010; Lynch et al., 1988). Regarding the legal perspective of meat-like terms, the European Parliaments affirmed that using meat-like terms for the marketing of plant-based products is allowed by the promoters and manufacturers, which enhances the legal framework for the approaches (Bryant & Sanctorum, 2021). In sum, the research expects that a frame that applies modified animal meat terms induces recognition by triggering an existing meat category while the unmodified animal meat terms strategy does not. Yet, the first hypothesis is formed as follows:

H1: Modified meat term framing evokes more perceived appropriate level to meat alternative than unmodified meat term framing.

H2: Modified meat term framing evokes more perceived appealing level to the meat alternative than unmodified meat term framing.

H3A: Nudging with a frame that highlights meat-alternative similarity to the tradition meat-terms (a modified meat-term framing) will stimulate a higher perceived typicality to traditional meat than the one does not (unmodified meat-term framing).

H3B: Nudging with a frame that highlights meat-alternative similarity to the tradition meat-terms (unmodified meat-term framing) will stimulate a higher perceived typicality to plant-based meat than the one does not (modified meat-term framing).

H4: Nudging with a frame that highlights meat- alternative similarity to the tradition meat-terms (a modified meat-term framing) will increase the willingness to try than the one does not (unmodified meat-term framing).

## 2.4 Familiarity and similarity to the conventional meat through product's appearance

"Onwezen et al. (2021) defined three drivers of consumer acceptance based on a framework for acceptance of novel foods". There are product-related, psychological, and external attributes ( e.g., social environment, social identity, culture). In general, the products' taste, costs, convenience, and familiarity are the main criteria when the consumers are motivated for their food choices. With the study of the adult population in the US, Glanz et al. (1998) found that the taste of the food is the most critical factor (accounted for 4.7 out of 5 point scale), followed by Cost ( 4.1/5.0), nutritional-related (3.9/5.0) and the level of convenience (3.8/5.0). What is more, the expectation of plant-based products in terms of taste is higher than other food; the consumers also expect "a desire for the products' sensory properties to closely resemble those of conventional meat" (Szejda, 2020, p.11). Notably, the familiarity does not reflect only on the sensory but also on the appearance, packaging, and marketing strategy. Plant-based products should be framed as similar to their conventional version, including descriptor terms for labeling such as "meat-like." Zhou & Nakamato (2007) cited that product familiarity is considered as a moderator to the incongruency effect as the level to which an attribute is perceived depending on the familiarity to existing products. Perceived differentiation, perceived risk, and perceived performance uncertainty are the main attributes of this process. Considering the new meat alternative as novel products might appear in the consumers' perception. In fact, previous studies indicate a product familiarity – defined as a prior experience with the product category – determines the new product learning and evaluation (Alba & Hutchinson, 1987). When identifying a new product, the more familiarity shared with a new product to a product category, the less uncertainty the consumers perceive, thereby perceiving a product more favourably over a dominant brand (Zhou& Nakamato, 2007). Therefore, the strategies to boost plant-based products should be based on this foundation, the consumers' perception criteria. Therefore, to increase the willingness to try or buy the meat-alternative product, the level of similarity in terms of sensory attributes and appearance to conventional products is significantly necessary (Elzerman et al., 2015). Indeed, the shape of a

novel meat alternative needs to represent the identical characteristics of traditional meat (e.g., ground, strips, pieces, slices, or cubes). Besides that, perception of certain appearances, for example, the color of plant-based meat representing the bloodiness, should also be considered to increase the familiarity and similarity of this novel food to the traditional ones (Szejda, 2020). Finally, extrinsic attributes, including the product name, preparation method, or packaging, are also elements to determine the familiarity level of novel food products.

## 2.5 The similarity and familiarity of novel food products through packaging

The product packaging is referred to as an extrinsic cue as a product-related attribute that is not related to the physical product (Olson & Jacoby, 1972). Richardson (1994) found that consumers tend to emphasize extrinsic cues as a surrogate indicator for product quality. This occurs more often in the situation (1) consumers are unfamiliar with the product or (2) they cannot evaluate intrinsic attributes among the products (Zeithaml, 1988). In today's society, two methods can reveal the appearance of the physical products to consumers: visual imagery and transparent packaging. To begin with, visual imagery, showing food visually through images on product packaging, has increased expectations about tastes, appearances, and quality (Elliott, 2008; Underwood & Klein, 2002). Where product knowledge is low, the picture is effectively diagnostic, evoking memorable and positive associations with the products. In regard to the second method, transparency packaging shares some characteristics with imagery packaging in terms of product evaluations. The experiments by Billeter et al. (2012) indicated that products with a transparent window received higher consumer preference scores, more trustworthiness, and greater purchase intention. Significantly, this effect becomes more significant for those products that the consumers are unfamiliar with or with a high degree of uncertainty (Chandran et al., 2009). The identical difference between transparent packaging from imagery is that the consumers can see the actual appearance of the product through a transparent window, which increases the level of certainty compared with the imagery packaging method. Nevertheless, the packaging method can determine the level of familiarity of novel products through the visual product information since this reveals certain information for the consumers based on their previous consumption and the characteristics of existing products. Therefore, the paper proposes the following hypotheses:

H5: The effects of framing with modified meat terms on the willingness to buy meat alternatives are moderated by the level of familiarity

## 2.6 Demographic

Based on the analysis above the willingness to purchase new food products in the marketplace is associated with food choice motives, individual attributes, and sociodemographic characteristics (Alemu & Olsen, 2019; Hoogland et al., 2007). More specifically, The choice motives are identified through the costs, sensory appeal, familiarity, convenience, and environmental and ethical concerns (Prescott et al., 2002; Steptoes et al., 1995). Parry & Mitchell (2019) found that a third of participants were willing to pay a higher premium price than conventional meat-based products, most of whom were flexitarians and millennials. The rest samples would spend the same amount (accounted for 47%) or only pay less ( accounted for 24%). The participants of these two groups were primarily recorded as omnivores and Generation X and Baby-boomers. Based on that, this research expects that the Demographic group conceived a moderating role in the relationship between the language of product labeling and the consumption of plant-based food.

# 3 Methodology

## 3.1 Study 1 – The perceived factors of unmodified meat terms and modified meat terms framing

### 3.1.1. Research Design

The study will first test the hypotheses in the framing methods on the meal alternatives in an online experimental study with responses from Amazon Mechanical Turk. We will manipulate the three framing methods above to capture the consumers' perception of these terms regarding the level of appropriate typical meat symbolics. The experiment design of the study was designed as a within-subject experiment with three different framing terms (default term, unmodified and modified animal meat term). In order to avoid the selection bias, participants were assigned randomly to rate one of three tested products. They are informed that the study examined the consumer decision-making process and consumers' perception of the new food product. The study presented subjects with a scenario that a new innovative meat alternative – that looks, tastes, and cooks just like conventional meat are widely available at grocery stores and restaurant. Participants were asked to imagine this themselves as a consumer to give their perspectives to these products in terms of the perceived appropriate level, the perceived appealing level, and the perceived typicality of meat alternative framing

The label terminology for plant-based products is categorized based on the Research by FoodFrontier (2021); three main testing categories for these meat-like label terminology to indicate animal-free products are listed, consisting of "unmodified animal meat terms," "modified animal-like terms," "do not use an animal meat term ."Based on the database of the research by Food Frontiers (2021) & GFI (2020), these names will be tested following the below table:

| Unmodified animal meat terms combined with "plant-based" terms | Modified animal meat terms | Do not use an animal meat terms (Default) |
|---|---|---|
| Plant-based Bacon Strips | Bakon Strips | Veggie Strips |
| Plant-based Ground Beef | Ground Be'f | Veggie Ground Crumbles |
| Plant-based Meatballs | Neatballs | Veggie Balls |

The unmodified meat terms will keep the original name of the meat product combined with the "plant-based" term. In contrast, the modified animal meat terms will focus on the appearance of the presented frame that maximizes the similarity between the modified terms and traditional terms by modifying the single element to a new one but maintaining the original character of the name. Regarding the default option, utterly unrelated to the traditional meat terms will be formulated. In order to keep the consistency of the experiment, the study will formulate a new name that contains the "Veggie terms" with the identified product characteristics terms (e.g., strips, crumbles, balls) based on the database of Food Frontiers (2021). As mentioned earlier, there will be three scenarios with the same indicators to avoid the bias. Even though the participants rated the different name for the different products ("bacon", "meatball", and "ground beef") , the same indicators and same framing methods are designed to maintain the similarity among the tested scenarios. The introduction for every scenario is constructed as followed:

*"New Generation of [ NAME OF PRODUCT ]*

*This new type of [ NAME OF PRODUCT ] is made entirely from plants and has no animal ingredients. It looks, tastes, and cooks just like conventional meat. It is produced using plant ingredients like protein, fat, and carbohydrates to mimic the structure of conventional meat. These new [NAME OF PRODUCT] have recently become widely available at grocery stores and restaurants. We are researching to find the appropriate name for the mention product, therefore, your opinion is very valuable and crucial for us. You will give several questions to answer regarding the name of this product."*

### 3.1.2. Measurement

#### Perceived emotions toward the framing terms

As discussed at the beginning of the study, the research will capture the perceived opinions of the consumers towards the specific framing methods. This aims to test whether the tested framing method creates a similar perceived feeling as the traditional meat products. The study by Wit (2017) proposed perceived typicality and perceived appealing factors as two essential perspectives to measure the similarity of perceived feelings between buying meat products and meat alternatives. In order words, if a meat alternative product is considered typical for an already existing category, the attitude toward the conventional meat product would be transferred to the new product of that category. Furthermore, the expected feeling will be categorized into three groups: meat and plant-based products. This categorization is crucial to identifying the effects of framing on meat alternatives. In order to measure whether a framing method was perceived to represent the meat symbolic, two typicality measurements are constructed based on research by Rosch & Mervis (1975). Respondents were asked to rate the following questions: " To what extent do [framing names] make you think of meat," and " To what extent, do [framing names] make you think of vegetarian products." The answers were based on a 5-point Likert scale from Strongly disagree (1) to Strongly agree (5).

Additionally, the study also wants to measure which one of three the framing terms method that a respondent perceived as the most favourite name for the product in terms of the appropriateness and appealing level. Perceived appropriateness was measured by asking respondents to rate three different framing names regarding the appropriate name for the products. Following the paper by the question " which of these product names is more appropriate for the product above." The most appropriate name would be rated at 3 points, whereas the least appropriate name would be rated at 1 point. Next, perceived appealing factors were measured by asking respondents to rate the perceived level of the three different framing names. The question was based on a 5-point Likert scale from Not at all appealing (1) to Extremely appealing (5).

### Control variables:

The study controlled certain consumers' dietary preferences regarding previous meat consumption, previous plant-based product consumption, personal diet, gender, and age.

**Gender & Age:** The attitudes about plant-based products are varied by demographic (especially ages and gender). Research in Australia by Lea & Worsley (2001) showed that the older generation believed that meat is the crucial component of a healthy diet by providing dense nutrition, and they are against the evidence that meat causes disease and fattening. Differently, millennials fear the iron and protein the veg*n diet deficiencies (Lea & Worsley, 2001). Moreover, the food choices of the young generation lean toward high-convenience & environmental impacts. At the same time, the Baby Boomers and Gen X are more influenced by the sensory tastes, familiarity level, and health considerations of plant-based products. Parry and Mitchell (2019) also reported that Millennials are more willing to buy sustainable and environmental-friendly, and humane products more frequently than Generation X and Baby Boomers. Due to the gender and age differences, this demographic information will be tested as a control variable. This data will be collected through general demographic questions in the survey.

**Previous Experience about the plant-based product:** Consumers are more likely to reduce their barriers to consuming novel products if they have tried or experienced them. This is supported by the behavioural change theory of Fogg (2009). Also, previous experience is a key element in determining food choices. Yet, if the consumers have tried the plant-based products before, they are more likely to perceive these new products as more open than those that are not. The question regarding the frequency consumption of plant-based product was presented : "Which statement best describes how frequently you consume meat substitutes ?" The answer are given as follow: "Rarely/never", "Once every few months," "Once a month," "Multiple time per weeks," and "Daily."

### Previous meat consumption

Meat consumption has become popular in the human diet ( De Barcellos et al., 2010; Wezemael et al., 2014). Different level of meat consumption might be influence the consumers' perception

to the meat product (Bryant et al. (2019) . High consumption in the meat product might evoke different level of the perceived typicality for the meat products and plant-based products. Similar to the plant-based consumption, the question regarding the frequency consumption of plant-based product was presented “Which statement best describes your meat consumption” with the answer: “ I never eat meat”, “I rarely eat meat”, “ I sometime eat meat”, “I often eat meat” and “I almost always eat meat”

### 3.1.3 Results

The research design was active for one week, from 11 July 2022 to 17 July 2022. The survey had been accessed by 121 responses, out of which 94 had passed all the attention-checking questions and completed the entire survey. Therefore, the data from 94 responses had been carried further for the research. All statistical data collected from Qualtrics have been processed with the STATA software.

#### A. Manipulation Check

To ensure high-quality level of data, the study designed several attention-checking questions throughout the study. First, two attention-checking questions (1) “ What were you doing 200 years ago” and (2) “Which of the following describes all of the product you just rated” formulated by Anderson (2019). If the respondents fail to select “ I was not born” for the question (1) and “ they did not contain animal products” (2), their data will be removed. Second, the contradiction level of information is also checked. In case of personal diet, if vegan and vegetarians did not choose the level of meat consumption was zero, the data that they gave is questioning in term of the quality of their data. Therefore, the data will be removed. Finally, the study also removed the incomplete data out of the dataset. In total, the study removed 27 out of 121 respondents during the data cleaning process.

#### B. Descriptive statistic

Since the research design in Qualtrics was set to randomly distributed over three conditions for all the participants. However, due to the removal of unqualified respondents at the end of the survey, participants for each condition were not perfectly equal. All conditions had between 30 and 33 respondents. The study will summary an overview of variable (for full statistic tests and output, see

Appendix F). With the consideration of the gender of respondents, the spread was distributed equally among conditions (X2 (2) = 3.8667, p.> 0.005 (p= 0.145)). Regarding the age structure, there was an overrepresentation of the gen Y (aged between 25 to 40 years old ) – which accounted for 59 respondents, 62.77%. The age category for generation X, Millennium, and Baby Boomer was respectively recorded as 18 respondents (19.15%), 6 respondents (6.38%), and 11 respondents (11.7%). The distribution of age group is considered random among conditions (X2 (6) = 8.5222, p.> 0.005 (p= 0.202)). Lastly, the personal diet of respondents was divided into two groups non-vegan (consisting of omnivores, flexitarians, and pescatarians) and vegans-vegetarians group. The respondents in this study were mainly out of non-veg*an groups, accounting for 84 people (or 89.36%). The distributions of this category were random spread among the conditions (X2 (2) = 1.8015, p.> 0.005 (p= 0.406)).

## A. Hypothesis testing

Based on the finalized dataset, the analyses for the hypothesis testing will be presented. The effects of perceived emotions in the literature reviews regarding the framing methods will be used as a dependent variable. The tests will be required one-way and two-way ANOVA/ANCOVA analyses. The direct relationship for the main effects as well as the full model – including the main effects and controlled variables – were displayed.

Since this is with-in subjects design, the same participants with the same characteristics ( age, gender, diet, the level consumption of meat and vegetable ) will rate three different terms ( modified, unmodified and default terms). That explains why the number of observations in the STATA is 282 instead of 94 . Hence, the repeated-measures ANOVA will be used in this study. Before conducting ANOVA analyses, there two important assumptions should be met. The first is that the dependent variable is normally distributed among other respondents (with the test result of Shapio Wilk, see Appendix F). The result of the Shapiro-Wilk test indicated that the perceived appropriate variable and perceived appealing appear normally distributed (SW(282) =0.99969, p-value = 1.0000 and SW(282)= 0.99537, p-value= 0.56436 respectively). However, the assumption could be met for the perceived meat-feeling (SW(282)= 0.975111, p-value = 0.0000), meat-alternative (SW(282)= 0.95431, p-value = 0.0000), and plant-based feeling (SW(282)= 0.97459, p-value = 0.0007) . Given

that, the data could still be analyzed as the assumption of a normal distribution is relaxed in which the sample size is larger than 25 (Statistics Solutions, n.d). Also, the second assumption about the equality of variances should be passed as well. In STATA software, the Bartlett test for equal variance is parallelly conducted when conducting the one-way ANOVA test. Therefore, the study will mention together with the result. In case of unequal variance, the further ANOVA Welch would be processed.

Starting with the first perceived emotions (for full output, see Appendix E)– the appropriate name for the product based on the framing methods, there were significant effects on framing methods on the level of appropriate name ($F(2) = 16.38$, $p > 0.05$ ( $p = 0.0000$)) . Based on the Figure 1, the result indicates that the unmodified framings have created the highest perceived appropriate level for the product name ($M = 2.41$, $SD = .79$), followed by the default framing ($M= 1.94$, $SD=. 73$) and modified framing ($M= 1.65$, $SD=. 74$). The differences in the means amongst three different methods were significantly confirmed by pairwise comparison test (Table 7). The result indicated that unmodified meat term framing evokes a more perceived appropriate level to meat alternative than modified meat term framing, thereby rejecting the hypothesis H1.

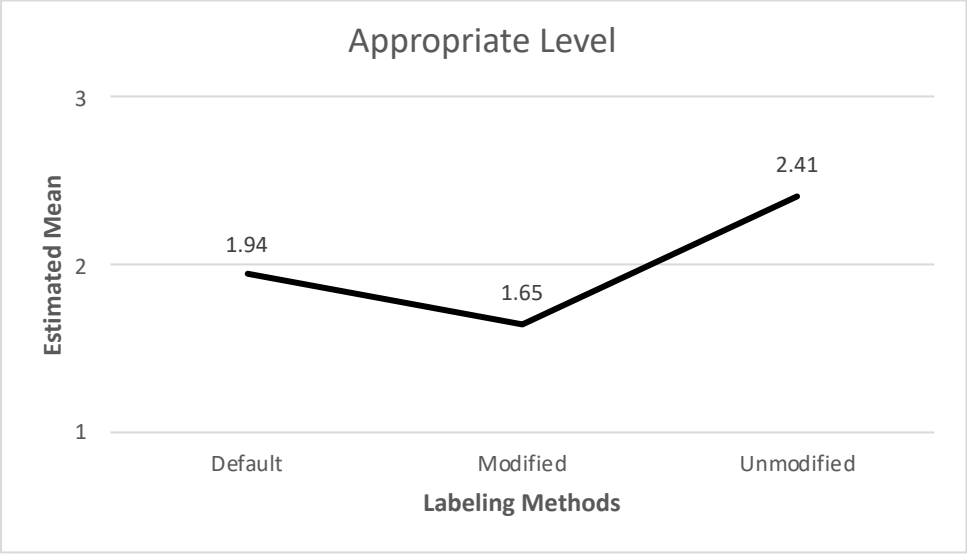



Figure 1: The marginal means of Appropriate Level (DV) for the labeling method

Similar to the result with the test for the perceived appropriate level to the name, the test of one-way ANOVA for the perceived appealing level indicates there was a significant difference in the level of appealing amongst framing methods ((F(2) = 16.38, p > 0.05 ( p = 0.0000)). The unmodified framing method again perceives the highest mean for the appealing level ( M=3.37, SD =1.1, on a 5-point Likert scale with 1= not at all appealing disagree and 5= extremely appealing ), followed by the modified framing method ( M= 2.48, SD= 1.24) (Figure 2). Hence, the Pairmean difference test also confirmed that unmodified meat term framing evokes a more appealing level to meat alternatives than modified meat term framing (p= 0.000). The result confirmed that hypothesis H2 was rejected.

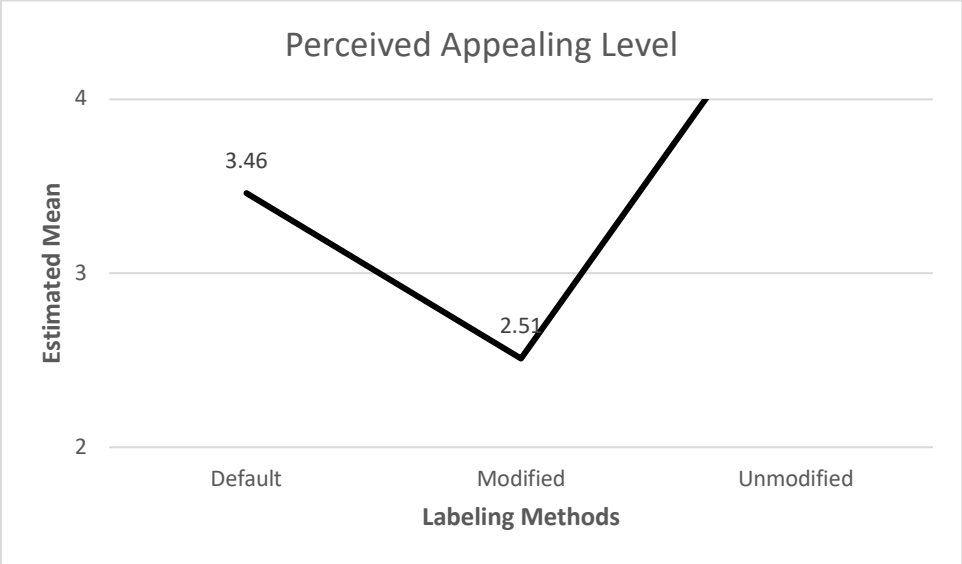
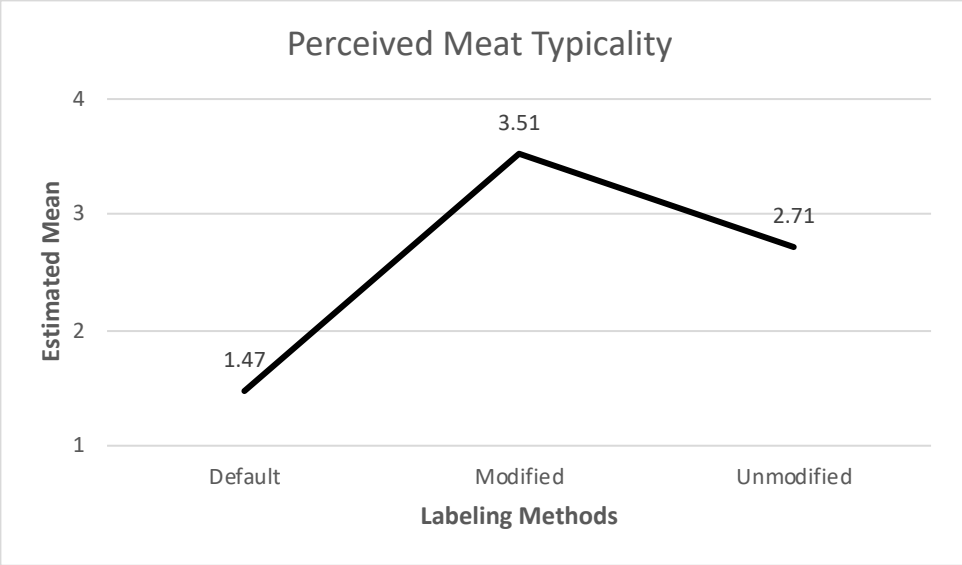



Figure 2: The marginal means of Perceived Appealing Level (DV) for the labeling method

The Bartlett test in ANOVA for the perceived typicality of meat, meat alternative, or plant-based product amongst three framing methods significantly indicates that variances were unequal in the datasets. Therefore, the study constructed the ANOVA Welch test for unequal variances (the outcome for these analyses is provided in the Appendix F). The result, illustrated in Figure 3, significantly indicated that the modified framing method (M= 3.51, SD= 0.15) evoked higher perceived feeling of meat product than the unmodified framing method (M= 2.71, SD= 0.15) ( t(187.93)= 3.69, p=0.001). When considering control factors, consisting of gender, dietary preferences, and age, the results were consistently & significantly the same for the main effects models. However, non-vegan& vegetarian respondents perceived modified framing names as

higher levels of meat products than unmodified ones. At the same time, there was indifference between the unmodified and modified framing models for the vegan & vegetarian respondents. In




term of age, all respondents evoked higher perceived meat typicality for the modified terms than the unmodified terms.

Figure 3: The marginal means of Perceived Meat Typicality (DV) for the labeling method

At the same time, in terms of the perceived feeling of plant-based products, the unmodified meat-terms (M= 4.84, SD= 0.51) perceived higher level compared with modified method M= 4.84, SD= 1.25); (t(124.19)= -18.8, p=0.000))(Figure 4). Therefore, the hypothesis **H3A & H3B** can be confirmed.

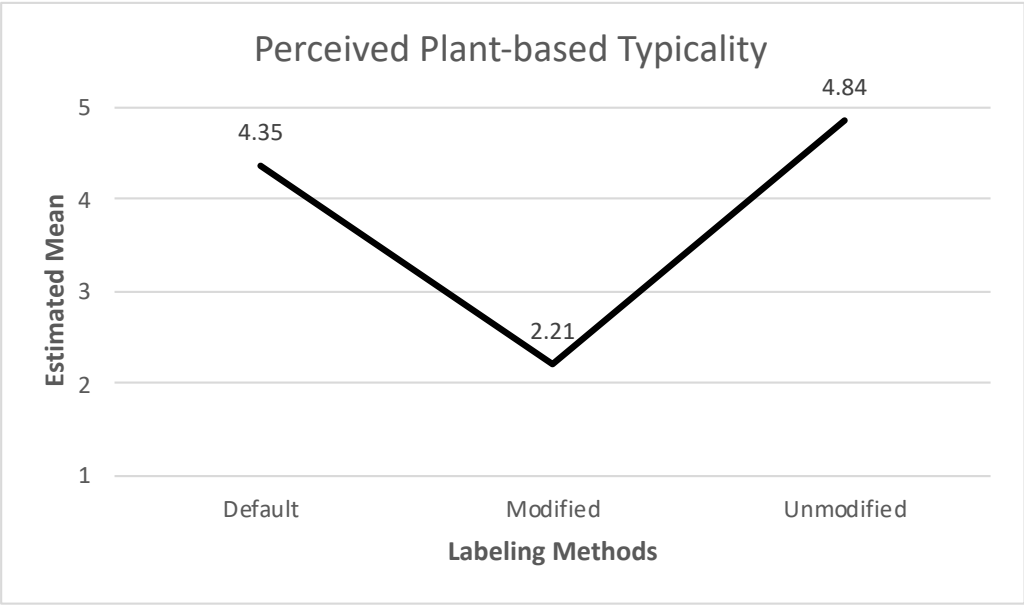


Figure 4: The marginal means of Perceived Plant-based Typicality (DVs) for the labeling method

## 3.2 Study 2 - The framing methods & the appearances of the products

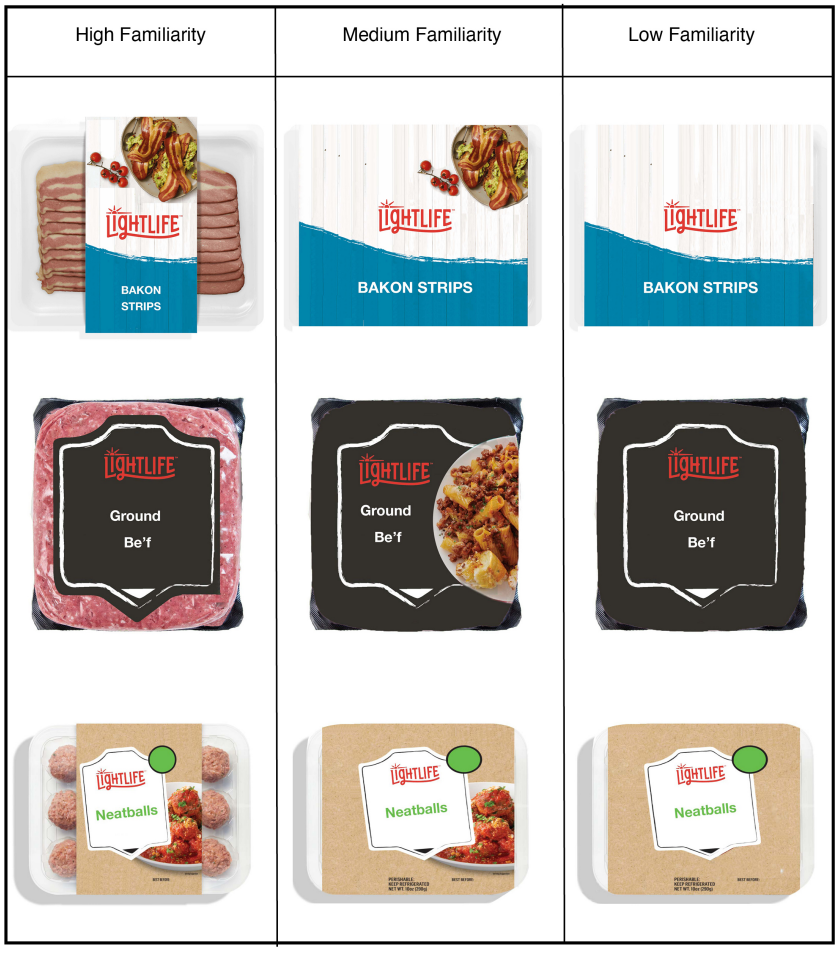
### 3.2.1. Research Design

After conducting study 1 on the perceived feelings of the customers regarding the framing methods, it was clear that modified meat terms evoke the perceived typicality as a meat product to some extent. Therefore, in this study, the research design aims to place the framing names into the real products in a closet manner. The aim is to study whether the meat-like terminology labeling methods increase the willingness to buy the meat alternative or not. Therefore, adopting a conclusive research design with an experimental approach is suitable for studying a given cause-and-effect style relationship cause-and-effect style relationship (Malhotra & Birks, 2007)

Based on the conceptual framework above, two main independent variables are used to embrace the experimental manipulation: the meat-like label terminology and the moderating variable of familiarity. Therefore, the design for the experiment has three pairs (meat-like label terminology: unmodified term, modified term, and do-not-use-animal term (default terms) ) x 3 (high familiarity, medium, and low familiarity) between-subject design. This means the participants will be exposed and assigned one of nine experimental conditions on a random basis. This method can mitigate the spill-over effects amongst experimental conditions (Greenwald, 1976). Since random distribution for assignments can distribute extraneous factors, thereby increasing the study's internal and external validity (Malhotra & Birks, 2007).

In order to manipulate the level of familiarity, three different appearances of the products will be designed. First, the transparency package will be designed to show the similarity of products as close as conventional meat products in terms of shape, texture, and colour. This means the respondents can reveal the appearance of the product through the window packaging, this also means the product must be manipulated as the highest similar to the tradition meat. Second, for the medium level of familiarity, an imagery packaging will be designed to show the medium level of familiarity. In this case, the respondents are not able to see the product inside the package, so

they will justify the product based on the image printed in the label. Finally, the low familiarity level, there will be an absence of transpanrent window and food images, only the background and the framing name will be illustrated. An idea behind this setting is following the method developed by Szejda, Urbanovich, and Wilks "if Product A mimics the packaging of a typical meat package, traditional meat consumers and flexitarians may be more inclined to try it because it cues familiarity. However, if Product B's packaging is unique and the product is framed as a specialty plant-based product, traditional meat consumers and flexitarians may be less likely to try it." (Szejda et al., 2020, p.51). Therefore, this study will architect the outlooks of the testing products into three versions from the high to low familiarity level, the manipulated designs for the tested products are illustrated in the Picture 1.




Picture 1 – Designed Product based on Familiarity level

The study is conducted as a questionnaire survey in an online experimental study with participants from Amazon Mechanical Turk. The study's actual purpose is hidden from the participants to avoid bias. Instead, the consent form tells the participants that they answered questions about their grocery preferences to help the store improve on stocking products. The first part of the study will begin with a series of demographic questions consisting of age and gender. Next, questions regarding the grocery and food preferences, such as what ingredients they usually select, the amount of vegetable intake, what meal they prefer, and whether they have any the dietary preferences. In the second phase of the study, A set of questions were presented for respondents to rate the labelling terms based on the research dependent, independent and control variables. In the next sections, the detail measurement for all variables will be provided.

### 3.2.2 Measures & Variables

#### 3.2.2.1. Independent Variable: Meat-like label terminology

A question survey will be used as the main choice architecture for the experiment design. Similar to study 1, three main testing categories for these meat-like label terminology to indicate animal-free products are listed, consisting of "unmodified meat terms," "modified meat terms," "do not use an animal meat term (default terms)" will be used to test as an independent variable.

#### 3.2.2.2. Perceived Meat typicality & Perceived Plant-based typicality

Based on the measurement method of perceived typicality the study 1, the study 2 will slightly change the measurement slightly different compared with the previous study. Based on the study of Glecke (2020), two questions "Do you think this product is made from an animal? " and "Do you think that eating this product tastes like eating vegetables" were used to measure whether the participants think whether the products made from the animal ingredients or vegetable based on the framing terms. These questions will be used to replace " To what extent do [framing names] make you think of meat" and " To what extent do [framing names] make you think of vegetable" the study 1. This is because respondents in study 2 with the images of the products, therefore, asking whether the tested product is made from an animal ingredient is more appropriate. The study expects the unmodified terms would make the participants evoking the perceived typicality for this product as the traditional meats. Whereas the modified meat terms would be accounted for the higher perceived plant-based typicality products because of the term "plant-based".

#### 3.2.2.3. Willingness to Buy

The level of willingness to buy will be selected as a dependent variable to determine the effects of labeling methods on the purchase intention of plant-based products. This variable measurement has been widely applied in numerous nudge- and food-related research. There will be survey questions where participants will choose an input about their willingness to buy certain products. Following the paper of Keramitsoglou et al. (2018), using a Likert scale to measure the level of willingness-to-buy appears effective in illustrating more details of the influences of the independent and moderating variables on the willingness-to-buy products. Therefore, the question "from the 7-point Likert scale, I would buy this product" will be asked in which 1 means strongly disagree, and 7 means strongly agree.

#### 3.2.2.4. Moderating Variables: Level of familiarity with meat

As discussed in literature review and study designs, the packaging design will be used to reflect different level of familiarity. The default packaging (no imagery or transparent window) is designed as low familiarity, whereas the imagery packing is selected as medium familiarity and the transparent window packaging is selected as high familiarity. Obviously, it is necessary to check the familiarity manipulation. Based on the research by Gleckel (2020), the question to measure the familiarity level was proposed as “How well can you imagine what this product tastes like?" through the 7-point Likert scale (1 = strongly clear and 7= strongly unclear). Hence, respondents will be expectedly answered this based on their previous food consumption. Based on the result of study 2 . The result confirmed that there is a significant difference in the level of familiarity among three conditions ($F(2)= 59.29$, $p=0.0000$), in which the transparent packaging scenario was recorded as the highest familiarity ($M=1.48$, $SD= 1.62$), followed by the imagery packaging scenario ($M=0.23$, $SD= 1.36$) and default packaging scenario($M= -1.12$, $SD= 1.95$). As expected, the overall manipulation met the expectations of the study, and the scenarios were successfully manipulated.

### 3.2.3. Control Variables

In order to determine the effects of meat-like label terminology on the willingness-to-buy other extraneous variables that possibly drive the main effects should be controlled. As discussed within

the literature review, the five most relevant factors are gender, age, food neophobia, previous experience, and environmental, health and animal-cruelty concerns. For some control variables that already discussed in study 1, consisting of the meat consumption and previous plant-based consumption, age, and gender, therefore these explanations for the measurement will not discuss again.

### Attitude towards meat & meat attachments

Meat has played a certain role in the human diet throughout human history, which is often considered a healthy and necessary element of a regular diet ( De Barcellos et al., 2010; Wezemael et al., 2014). A study by Bryant et al. (2019) indicates that the level of meat attachment can be used to predict the intention of consuming plant-based meat. That the level of meat attachment can be. Therefore, the study will apply the set of questions developed by the study of Graca et al. (2015) to measure the attitudes regarding meat consumption "To eat meat is one of the good pleasures in life.","I love meals with meat." "I am a big fan of meat." "A good steak is without comparison," "I do not picture myself without eating meat regularly," "If I couldn't eat meat I would feel weak," "I would feel fine with a meatless diet," and "If I were forced to stop eating meat I would feel sad" and "Meat is irreplaceable in my diet.". Each statement will be measured through a 7-point Likert scale (1= strongly disagree and 7= strongly agree). These questions will indicate two aspects of meat consumption: the level of dependency on meat intake and the level of Hedonism.

### 3.2.3.4. Food neophobia

Consumers avoid behaviour toward novel and unfamiliar food products ( Pliner & Hobden, 1995). Given that plant-based products are more similar to animal meat products compared to other meat alternatives (for example, tofu and insect-based protein), it is still considered a novel food. The studies conducted in the US, India, and China (N=3030) suggested that food neophobia is one of the barriers to mitigating the willingness to try or purchase plant-based meat (Bryant et al., 2019). (This tendency appears to significantly influence the consumer decision for new & innovative food items. This means an individual scoring a higher food neophobia tends to be less willing to consume a novel food. Following the study of Bryant et al. (2019), this study will use the questions developed

by Pliner & Hobden (1992); "I am afraid to eat things I have never had before.", "I am very particular about the foods I eat.". "Ethnic foods look too weird to eat." "I do not trust new foods.", "If I do not know what a food is, I will not try it.", "I will eat almost anything. The answers will be answered based on a 7-point Likert scale (1= strongly disagree and 7= strongly agree).

#### 3.2.3.5. Reliability Test for food neophobia and meat attachment

There are two sets of questions to measure food neophobia and meat attachment; the study had to recode into their underlying factor based on the research by Graca et al. (2015) – meat attachment scales & Pliner & Hobden (1992) – food neophobia scales. Before transforming into one reliable, Cronbach's test was calculated for these two variables. The results for food neophobia and meat attachment were considered as high reliable ( $\alpha_{\text{food neophobia}} = 0.92$ & $\alpha_{\text{meat attachment}} = 0.89$ (N= 285)). (see Appendix D )

#### 3.2.3.6. Environmental, animal-cruelty and health concerns

The concerns about the environmental impacts, animal-cruelty and personal health have received positive attention from the public in recent years. Consumers are more prone to involve and willing to mitigate the issues. This might influence the shopping attitude and purchasing intentions since food consumption, especially animal agriculture, is one of the main drivers of climate change (Konuk et al., 2015). Yet, transforming from a conventional meat diet to a more plant-based or vegan diet are constructive and progressive options that directly tackle environmental problems, stop animal-cruelty and improve the human health ( Dyett et al., 2013; Jassen et al., 2016). Therefore, this study will control an environmental, animal-cruelty and health concern control variable by following the measured statement: "When I buy foods, I try to consider how my use of them will affect the environment" developed by Roberts (1996), "It is important that the food I eat has been produced in a way that animal rights have been respected." by Vecchino & Annunziata (2011), "I am very particular about the healthiness of the food I eat" by Boereboom et al.( 2022). The answer for this will be measured through a-7point Likert scale ( "1" means strongly disagree and "7" means strongly agree)

### 3.3. Results:

## A. Manipulation Check

The survey was active from 22 July to 28 July 2022. In this period, 482 respondents participated in the survey through MTurk Amazon. However, after checking all criteria, attention-checking questions, and manipulating questions, only the data from 285 respondents were used for further data analyses. The large reduction in the number of respondents were statistically justified. Since the quality of data is extremely crucial for the research, the survey was designed that the respondents were expected to focus and answer the questions consciously. Notably, the instruction at the beginning of the survey was clearly provided for the respondents. The instruction was as follow:

*"… You must focus on every question and your answers, if your results are contradicted with each other or you do not answer some attention checking questions rights, you will never get the code for compensation. Furthermore, the answers are of course randomized therefore it is very easy that YOUR ANSWERS ARE CONTRADICTED Please do this survey seriously in order to get paid. If you do not have the codes, this means you might answer one of these questions wrong…*
*If you wish to be part of the study, click "Next".”*

It is clear that the expectations of study and the cautions for the attention-checking was clearly stated. This means the study did not secretly to place the attention-checking to create a trap for respondents or manipulate the data to any extent. Instead, they were well-informed about the study and confirmed that they already read the instructions carefully. Compared with study 1, there was an increase in the number of attention-checking questions due to an increase in the length of study. Besides two attention-checking questions mentioned in the study 1, the statement " Please choose "Completely Disagree" for the attention checking" were placed randomly in Matrix table questions as the respondents might choose randomly their answers without reading the questions. If they are not conscious during the experiment, they are more likely to select the wrong answer. Also, at the end of the study, respondents were asked to imagine if they wanted to buy the tested products and where they should look up in the supermarket (the study will represent the supermarket map with different sections). This question can check whether the respondents consciously answer questions. Since it does not make sense that the food products will be found in the non-food, baking products, pasta &rice, snacks, and soft-drink sections, respondents will be removed if they choose these locations on the map. Overall, the study recorded 62 participants either failed to answer these attention-checking questions or did not finish the study. Finally, the

duration spent on the survey was recorded to check whether the respondents spent their time reading and answering the questions carefully. The average time to finish the survey was at least 200 seconds. This result was confirmed by testing for 5 participants, including the author of this research. Therefore, the respondents take less than 200 seconds to complete this study, their data will be removed from the survey (135 of 482 respondents were removed out the dataset).

### B. Descriptive statistics

A general overview of study 2 will be provided (for all STATA output of the descriptive statistics, see Appendix G). Although the Qualtrics software is randomly distributed over nine conditions, the data clearing process might cause unbalancing problems across conditions. The group MMF (modified term– medium familiarity condition) had only 11 respondents. All other conditions had between 31 to 38 respondents. Regarding the gender of the participants, there was an equal distribution amongst conditions (X2 (8) = 5.6661, p>0.005(p= 0.685)). However, this study was unbalancing between females (45.26%) and males (54.74%). Second, the age structure was also misbalanced among different groups, in which generation X was the highest group ( 47.02%), and the Baby Boomer generation was the lowest group (1.75%). Yet, it is inevitable that the spread of age groups is not random equally X2 (24) = 52.69, p= 0.001). Regarding personal dietary, around 88% of participants were non-vegans or vegetarians, and the rest were either vegans or vegetarians. The distributions of personal diet was also random across all conditions (X2 (8) = 5.0368, p>0.005 (p= 0.754)).

Besides that, an overview of the control variables will briefly be stated. To begin with food neophobia, the average score for food neophobia was at the center of the mean across different conditions. Therefore, it might indicate that the participants in the study were open-mind to the new food product (for the average score of food neophobia, see Appendix G ). The spread of food neophobia was randomly distributed (X2 (32) = 23.28, p=0.869). Second, the result found that the respondents' overall level of meat attachments was considered high attachment (M= 4.2, SD= 0.77 on a 7-point Likert scale with 1= strongly disagree and 7= strongly agree). The high level of meat attachment in the sample can reflect the view of the non-vegan & vegetarian consumers when choosing plant-based meat products. The normal distributions for meat attachment (X2 (32) =

25.70, p=0.777) was confirmed. Similar to meat attachment & food neophobia, previous meat consumption(X2 (40) = 35.85, p=0657), previous vegetable consumption (X2 (40) = 40.38, p=0.453), environmental concerns (X2 (48) = 49.20, p=0.425), health concerns (X2 (48) = 58.02, p=0.152) and animal-cruelty concerns(X2 (48) = 35.84, p=0.902) were found normally distributed

## B. Hypothesis testing:

The report was constructed by first analyzing the perceived feelings from the labels. The study aimed to confirm whether the results are consistent with study 1 when testing product labeling terms. After that, the report used the willingness to buy measured through a Likert scale as a dependent variable to measure the influences of labeling framing methods. Both one-way and two-way ANOVA/ANOVA analyses were conducted for this study. Besides that, the full models, including the main effects and the control variables, were also presented. Before conducting ANOVA analyses, two important assumptions should be met. The first is that the dependent variable is normally distributed among other respondents (with the test result of Shapio Wilk, see Appendix F). The result of the Shapiro-Wilk test indicated that the perceived meat typicality variable (SW(282) = 0.95849, p-value = 0.000) and willingness to buy (SW(282)= 0. 0.96129, p-value= 0.56436) are not normal distributed. Given that, the data could still be analysed even not optimal since the assumption of a normal distribution is relaxed in which the sample size is larger than 25 (Statistics Solutions, n.d). Also, the second assumption about the equality of variances should be passed as well. In STATA software, the Bartlett test for equal variance is parallelly conducted when conducting the one-way ANOVA test. Regarding to the two-way ANOVA, the Levene's test will be carried out to check the homogeneity of variance. Therefore, the study will mention together with the result. In case of unequal variance, the further ANOVA Welch would be processed.

### Perceived emotions of the framing labels

The questions about the perceived meat and plant-based typicality were manipulated so that respondents would not know the study's intention. Respondents were asked to indicate their perceived quality of the products with the expected ingredients on a 7-point Likert scale. Since the measurements were through the Likert scale, ANOVA analysis had to be applied, in which the label

framing methods were considered independent variables. The ANOVA revealed a significant perceived meat typicality on the framing methods ((F(2) = 2.53, p<0.1( p = 0.0817)). However, the study only found a significant result between the modified and unmodified framing method, in which respondents evoked more perceived meat typicality in the modified meat-like terms (M=2.33, SD= 1.30) than unmodified framing terms (M=1.90, SD= 1.39) (Figure 5).

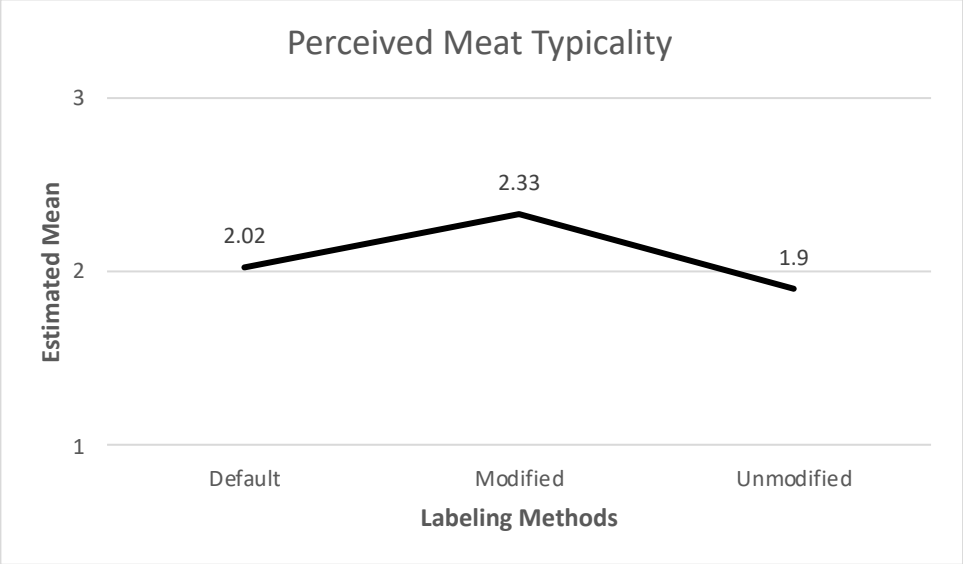



Figure 5: The marginal means of Meat Typicality (DV) for the labeling method

Additionally, a significant interaction was found between the label and packaging ( familiarity) ( F(2,285)= 2.29, p<0.1 (p=0.0604))( Table X, see Appendix H). As show in Figure 6, the interaction

effects show that when transforming modified terms to unmodified terms, the level of familiarity moderated the effects of labeling terms on the perceived meat typicality.

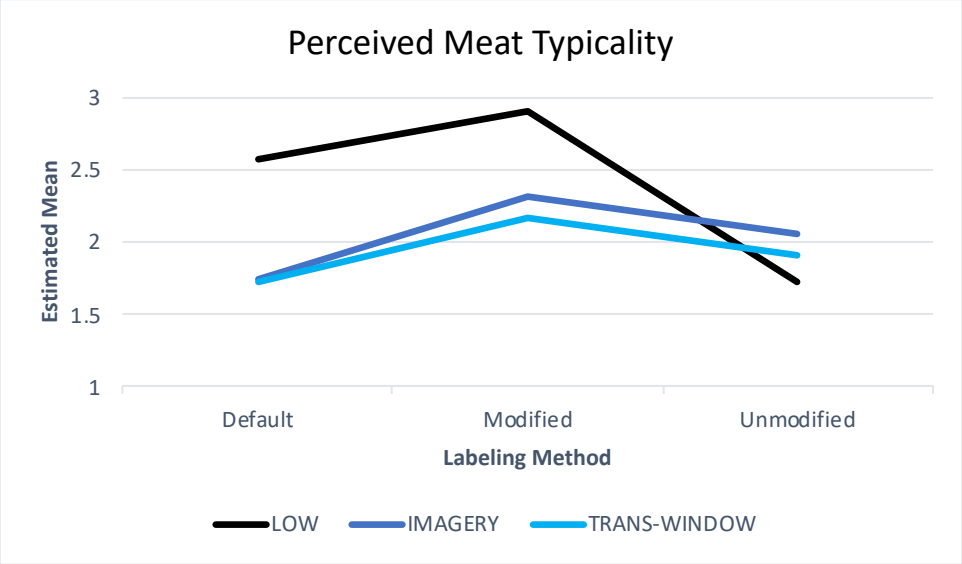



Figure 6: The marginal means of Meat Typicality (DV) for the labeling & packaging method

This means, in the scenarios of low familiarity, there is a significant difference between unmodified terms and modified terms in terms of the perceived meat typicality for the plant-based products. Whereas the differences is less when there is an increase in the level of familiarity.

With the same test for perceived plant-based typicality, the study found that there were significant differences among the three framing methods ((F(2) = 12.52, p = 0.0214)). The estimated mean for the plant-based typicality were illustrated in Figure 7 ( For the full output, see appendix H).

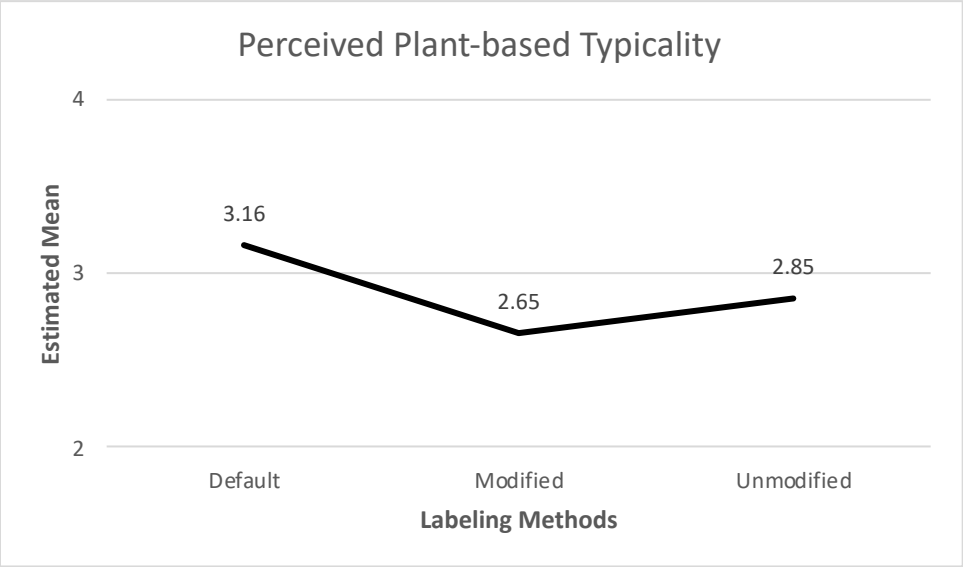



Figure 7: The marginal means of perceived plant-based product (DV) for the labeling methods

The perceived typicality of unmodified terms (M= 3.16, SD= 1.30) was less than the default term (M=2.65, SD= 1.22), whereas the difference is not significant between the modified terms and unmodified terms. Again, study 2 supported hypothesis H3A. Next, a control variable was included in the ANOVA test (for the complete output for this test, see Table in Appendix H). Consistently with the prior result, the modified meat-term had been found to have higher perceived meat typicality than the unmodified one. The result was found consistently; there is a significant difference effect of labeling terms on the level of meat typicality ($F(2,285) = 4.65$, $p<0.05$ ($p= 0.0103$)). The analysis influences of age ($F(3,285= 2.53$, $p<0.1$($p=0.0575$), animal-cruelty concern ($F(1,285)= 3.46$, $p<0.1$($p= 0.064$)) was found to be significant.

### Willingness to buy

The study moved to the ANOVA analysis on the main effects of labeling methods and familiarity variable and their interactions on the willingness to buy the testing products (all statistical tests were provided in Appendix H). A sole effect of the label framing methods showed significant effects of different label terms on the willingness to buy ($F(2,284) = 6.05$, $p= 0.0027$).

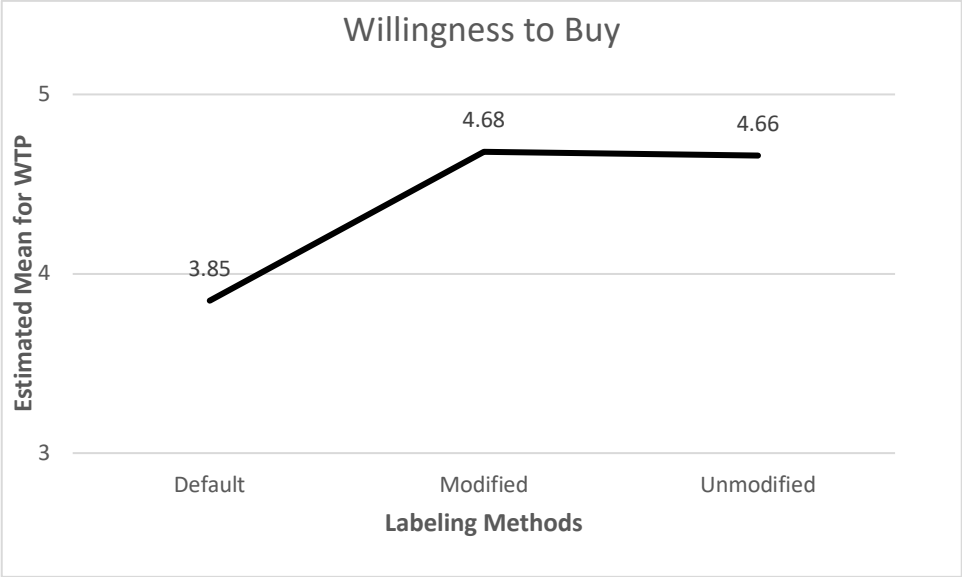



Figure 8: The marginal means of Willingness to Buy (DV) for the labeling method

According to the Figure 8 , Overall, the modified meat terms had the highest level of willingness to buy (M= 4.68, SD=1.67 on a 7-point Likert scale with 1= extremely unlikely and 7= extremely likely), followed by the unmodified meat terms (M= 4.66, SD=1.98) and the default terms (M=3.85, SD=2.05). Although both modified and unmodified terms were found to have higher WTP than the default significantly, the effects of these two terms on the WTP are not found to be significant. Therefore, hypothesis H4 could not be confirmed.

Next, the study included the moderating variables in the ANOVA model. First, significant effects of the "labeling terms" have been found consistently in the test above ($F(2, 285) = 5.09$, $p < 0.1$). Both modified and unmodified methods again accounted for higher WTP than the default method significantly (full result, see Appendix H). In regard to the moderating variable, there was not found

to have a significant effect on the level of WTP (F(4,285) = 1.1, p>. 10 ( p= 0.35)). This means there is no interaction between the framing methods and familiarity, thereby rejecting Hypothesis H5. Nevertheless, the observed results indicated that within the packaging with the transparent-window condition, the mean WTP was maximized when labeling with the unmodified terms (M= 4.88, SD= 0.34 on a 7-point Likert scale with 1= extremely unlikely and 7= extremely likely) compared with unmodified (M= 4.38, SD= 0.35) and default terms (M=4.38, SD= 0.33). In comparison, the use of modified terms (M= 4.82, SD= 0.34 on a 7-point Likert scale with 1= extremely unlikely and 7= extremely likely) accounted for the highest score of WTP in the imagery packaging condition when compared with unmodified terms (M= 4.58, SD= 0.32) and default terms (M=3.53, SD= 0.31). With observed data, there might be an interaction between familiarity and labeling methods. However, hypothesis H6 was not confirmed.

For the next step, the study started by adding the controlled variables mentioned in the model ( for the complete statistical output, see Appendi H ). Again, the effects of label on the WTP were significantly confirmed (F(2, 285) = 13.31, p<0.001), in which the mean WTP for the products labeling by modified and unmodified terms were higher than the one labeling by default terms. This means there are no different effects between modified and unmodified terms on willingness to buy. Moreover, the interaction between labeling and the familiarity conditions was still not found to have significant effects (F(4, 285) = 0.17, p >0.1(p=0.9533)). Regarding the control variables, the study will report the overview effects of these variables on the WTB. The analysis found significant influences of health concerns (F (1, 285) = 3.09, p <0.1(p=0.079)), previous plant-based consumption (F(1, 285) = 6.91, p <0.01(p=0.001)), perceived appealing (F(6, 285) = 4.28, p <0.01(p=0.004)). In contrast, the effects of vegan&nonvegan (F(1, 285) = 0.08, p >0.1(p=0.7741)) , gender (F(1, 285) = 0.33, p >0.1(p=0.5672)), age (F(3, 285) = 0.82, p >0.1(p=0.4845)), food neophobia (F(1, 285) = 0.64, p >0.1(p=0.4238)) and meat attachment(F(1, 285) = 0.02, p >0.1(p=0.8988)) were not found to have influences on the WTP.

# 4 Discussion

Based on the actual analyses of data and the statistical tests, the discussion about the conceptual model and practical implications will be presented. First, the analyses on whether this study confirms the conceptual model and the possible reasons for rejecting the research hypotheses. Second, an extensive explanation of the research finding will be provided, creating a general foundation for the practical implications. This might also be relevant for other academics. At the end of this section, the possible limitation, and recommendations for future research within this field will be provided.

## 4.1 General Implications

The study focused on two important indicators: perceived emotions and the willingness to buy. The first one aims to measure the perceived emotion in terms of the appropriate level, appealing, typicality meat, and plant-based product when looking at the framing methods without considering the purchasing intention factors. The WTP indicators might require respondents to consider relevant factors, either the product or personal characteristics. Understanding the differences between these two indicators is important to access the conceptual model. First, the results of the perceived feelings of respondents will be discussed. The study found significant evidence that nudging the consumers with different framing methods will evoke different perceived feelings toward the products. Study 1 rejected the hypothesis H1 & H2 and confirmed that the unmodified terms appear to have a higher perceived appropriate and appealing level than modified terms. This was augured by the design of modified terms as this term is constructed not following of the normal rule of language. In other words, the modified terms aim to maximize the presence and pronunciation of terms as similar to the normal meat term as possible, even violating the grammar rule or creating no-meaning words (i.e., "Mylk," "Bakon," "Neatball"). This might evoke the feeling of inaccurate labeling, which might decrease the perceived appealing. In the condition that respondents only rated the name of the product without the influences of other factors, the accuracy and meaning of the word might be crucial, suggesting the unmodified terms (i.e., "plant-based milk," "plant-bant bacon") are preferred. In fact, when applying the labeling terms to the products in study 2, the observed mean level of perceived appealing for modified terms is slightly

higher than the mean of unmodified terms. However, this finding was not statistically confirmed. As expected, the modified terms would be more effective in increasing the perceived typicality of meat products compared with unmodified in both studies 1 and 2 (H3A). This can be explained by the absence of "plant-based"- the diet or food category indicator words – in the front of unmodified meat terms. This appearance of the indicator words might force the customers to separate or categorize the product into different groups. That is why the unmodified terms evoke higher perceived typical of plant-based products than modified terms, in which the result was significantly confirmed (H3B). Adding the moderating effects of familiarity into the equation, the level of familiarity can positively moderate the relationship between the labeling terms and meat typicality. When the level of familiarity is high, the unmodified terms evoke higher meat typicality compared with the low familiarity condition. Acknowledging these findings, the study continued to study whether changing the unmodified terms to modified terms can increase the willingness to buy of plant-based products across various conditions based on the level of familiarity. The idea behind this is that the effects of modified terms are expected to have strong effects on the WTP when the level of familiarity increases. The effects of labeling terms on the WTP are significantly in different equations, either the main effect or the full model.

Given that modified and unmodified terms both increase the willingness to buy plant-based products compared with the control conditions, there is no evidence confirming a difference between modified and unmodified terms on WTP (H4). There could be multiple reasons for this finding. First, since both modified and unmodified terms appear to have positive effects on the products to a certain extent (either the perceived feelings of the product or the willingness to buy), it is hard to measure the actual difference. Second, the level of familiarity might moderate the effects of unmodified terms on the WTB, causing the indifferences between modified and unmodified terms. Alternatively, it could be because of an absence of the actual price, and the respondents do not seriously consider the actual level of WTP.

## 4.2 Practical implication

The research can provide useful information for the plant-based food industry in how they design an effective nudge for the consumers to consume the novel product. Throughout the research,

labeling terms or the product name play a vital role in determining customers' perceptions of the characteristics of the products as well as the willingness to buy or try. In order to nudge the consumers to reduce the pressure of a novel product in the first stage and increase consumption of these products, a strategy to merge novel products (meat alternative products) into the current category product (the traditional meat product) should be prioritized. Not only should the meat alternative be made as similar to traditional meat in terms of the taste, the smell, and its appearance (i.e., shape/ color /bloodiness), but also the way the names of the products should be similar to the current meat category. Psychologically, when customers perceive the meat alternatives as one of the products in the meat or protein category, the fewer considerations and justification for the product customers would do and the higher chance they would consume these later. Besides, this study does not criticize the unmodified terms or recommend that the manufacturers switch to using the modified terms. Instead, using modified terms should be considered a nudging strategy to alter consumers' views on meat-alternative products positively. Yet, the plant-based product might be perceived as one of the selections when looking at the protein selection. Depending on the consumer's segmentation or the corporation's marketing strategy, the optimal name for the product name can be made.

## 4.3 Limitations and Recommendations

In this paragraph, the limitations of this research will be discussed after finishing the study, and based on that, the recommendation for future research will be represented. To begin with the generalizability of the research, the sample might not represent the characteristics of the true population. In fact, there are some overrepresentations in terms of personal diet and the age of sampling, which might result from the study's small sampling size. Furthermore, the recruitment of respondents should be stricter as the data removal of this study is considered high as the respondents failed to answer the attention questions, provided low-quality data, and did not participate seriously. This caused the problem of the randomization among testing conditions, which seriously decreased the level of generalizability of the population.

In this research, some real-life factors are removed from the equations, consisting of the prices of the products, and the co-existence of competitive & complementary products. To start with the prices of the products, the measurement of the study is the willingness to buy on the Likert scale, which only reveals the intention to buy products assuming the absence of the prices and rival or alternative products. The effects of labeling terms on the willingness to buy might be changed if the product's price is included. In other words, the price of a product and a rival product might influence the effects of nudging methods. Another factor that might appear to affect the influence of labeling terms on the willingness to buy is other elements in the label and packaging method. The quality of the image, the presence of a nudging quote, the nutrition score, the symbolic or logo, and the nutritional label are some examples of this point. Moreover, due to time, and financial constraints, the study had to remove factors to maintain its durability. In fact, it is very complicated and costly to construct a real environment as close as the grocery where the participants can give their opinions and reactions to the real-life products. Therefore, the research used online experiments software to conduct the survey. Nevertheless, it is very necessary and valuable for future studies to carry the real-life experiments, which can provide useful insights for food manufacturing and institutions to apply in practice.

Last but not least, it does not guarantee that the finding of moderated framing terms is significant in another language. The research method is indeed based on English, where it is possible to maintain the meaning and pronunciation by changing, removing, or customizing a few characteristics in the word. The method does not guarantee the results for the perceived emotions as the research did if the language is not English. Furthermore, It might not be practical for the language formulated in symbolic such as Chinese, Korean, and Japanese. Therefore, future research is recommended to investigate the similar effects in different languages or formulate new framing methods based on the characteristics and rules of these languages. In other words, the ultimate strategy is to use the language to nudge the consumer to perceive the plant-based product as one of the "meat" products in the same category instead of the novel food in a different category.

# 5 Conclusion

The purpose of this research aimed to provide new nudging strategy to increase the willingness to buy of the plant-based product by framing a labeling term that highlight meat-alternative similarity to the tradition meat terminology. Overall, the study found significant evidence that the modified meat term can evoke high level of perceived typicality of the traditional meat for the plant-based products. Also, the positive effects of modified and modified meat-like terms on the willingness to buy was found. Still, there is no evidence to confirm the modified terms can accounted higher purchasing intention than unmodified terms. Furthermore, when the study manipulated the level of familiarity through the packaging methods, it seems that the familiarity does not moderate the effects of labeling on the willingness to buy even the significant interaction between labeling and familiarity on the perceived typicality of meats was confirmed. Therefore, it is important for future research to explore this relationship further by considering other influences that the research does not include in the concept model.

It is surprisingly that by changing only the product names in the way that share the similarity of the meat terminology can merge the plant-based product into same category with tradition meat at some extent. Notably, the plant-based food manufacturing should acknowledge that nudging the consumers by descriptive language may encourage the consumers to try or buy the product in the first stage. Maintaining the consistent consumption of plant-based products is another aspect, this highly depend on the actual product characteristics and attributes such as the tastes and the smell of the product itself.

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# 7 APPENDICES

## 7.1 APPENDIX A – Survey 1 Overview

Start of Block: Instruction Study

Q1.1 My Name is Rick Bui. I am conducting a research study about consumers perceptions when grocering to improve the stocking strategies for the supermarket. There are no foreseeable risks on or discomforts to your participation. Participation in this study involves answering survey question. The survey will take about 5 minutes to complete. We will not ask your name or any other identifying information in this survey.

For research purpose, an anonymous numeric code will be assigned to your responses. However, your Amazon Mturk worker ID number will be temporarily stored in order to pay you for your time, this data will be deleted as soon as it is reasonably possible. You have the option of making your personal information private by changing your Mturk settings through Amazon,

**ATTENTION: You must focus on every questions and your answers, if your results are contradicted with each other or you do not answer some attention checking questions rights, you will never get the code for compensation. Furthermore, the answers are of course randomized therefore it is very easy that YOUR ANSWERS ARE CONTRADICTED Please do this survey seriously in order to get paid. If you do not have the codes, this means you might answer one of these questions wrong.**

The results of this study may be used in reports, presentations, or publications. Your participants in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. You must be 18 or order to participate in the study. Compensation for participating will be paid in this study. If you have any questions concerning the research study, please email me rick.buiduc@gmail.com)

Sincerely
Rick Bui

If you wish to be part of the study, click "Next"

End of Block: Instruction Study

Start of Block: Demographic

Q2.1 Gender

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer not to say

Q2.2 What is your age?

- 0 - 15 year old
- 15 - 30 year old
- 30 - 45 year old
- 46 - 60 year old
- over 60 year old

End of Block: Demographic

Start of Block: 200 years ago

Q3.1 What were you doing 200 years ago?

- I was not born.
- I was working in a shipyard.
- I was travelling the world.
- I was watching a movie.

End of Block: 200 years ago

Start of Block: MEATBALL

Q4.1
A New Generation of Meatball

This new type of meatball is made entirely from plants and has no animal ingredients. It looks, tastes, and cooks just like conventional meat. It is produced using plant ingredients like protein, fat, and carbohydrates to mimic the structure of conventional meat. These new meatballs have recently become widely available at grocery stores and restaurants. We are researching to find the appropriate name for the mention product, therefore, your opinion is very valuable and crucial for us. You will give several questions to answer regarding the name of this product.

- I have read the description of the meatball and am ready to continue the survey

Page Break

Q4.2 First, you will see a series of **three words** that could be used to describe this type of Meatball. Please indicates **the ranking levels to each name** in which you personally find the name that is **appropriate** for the product above.
**( "1" = The least appropriate name and "3" = the most appropriate name)**

_____ Neatballs
_____ Plant-Based Meatballs
_____ Veggie Ball

Page Break

Q4.3 First, you will see a series of **three words** that could be used to describe this type of Meatball.
For each word, please indicates **the degree to which you personally find the name of the product "Appealing"**

| | Not at all appealing | Somewhat appealing | Moderately Appealing | Very Appealing | Extremely Appealing |
|---|---|---|---|---|---|
| ⊗Neatballs | ○ | ○ | ○ | ○ | ○ |
| ⊗Plant-based Meatballs | ○ | ○ | ○ | ○ | ○ |
| ⊗Veggie Balls | ○ | ○ | ○ | ○ | ○ |

Page Break

Q4.4 To what extent, does "Neatballs" make you think of Meat?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q4.5 To what extent, does "Neatballs" make you think of meat-alternatives?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q4.6 To what extent, does "Neatballs" make you think of plant-based products

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Page Break

Q4.7 To what extent, does "Plant-based Meatballs" make you think of Meat ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q4.8 To what extent, does "Plant-based Meatballs" make you think of Meat-alternatives ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q4.9 Is it true that "twenty-seven plus twenty-three equals sixty one"

- Completely disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Completely agree

Q4.10 To what extent, does "Plant-based Meatballs" make you think of Plant-based products ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Page Break

Q4.11 To what extent, does "Veggie Balls" make you think of Meat ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q4.12 To what extent, does "Veggie Balls" make you think of Meat-alternatives ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q4.13 To what extent, does "Veggie Meatballs" make you think of Plant-based products ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

End of Block: MEATBALL

Start of Block: BACON

Q5.1
A New Generation of Bacon

This new type of bacon is made entirely from plants and has no animal ingredients. It looks, tastes, and cooks just like conventional meat. It is produced using plant ingredients like protein, fat, and carbohydrates to mimic the structure of conventional meat. These new bacon have recently become widely available at grocery stores and restaurants. We are researching to find the appropriate name for the mention product, therefore, your opinion is very valuable and crucial for us. You will give several questions to answer regarding the name of this product.

◯ I have read the description of the meatball and am ready to continue the survey

Page Break

Q5.2 First, you will see a series of **three words** that could be used to describe this type of Bacon. Please indicates **the ranking levels to each name** in which you personally find the name that is **appropriate & appealing** for the product above.
**( "1" = The least appropriate name and "3" = the most appropriate name)**

_____ Bakon Strips
_____ Plant-Based Bacon Strips
_____ Veggie Strips

Page Break

Q5.3 First, you will see a series of **three words** that could be used to describe this type of Meatball.
For each word, please indicates **the degree to which you personally find the word "Appealing"**

| | Not at all appealing | Somewhat appealing | Moderately Appealing | Very Appealing | Extremely Appealing |
|---|---|---|---|---|---|
| ⊗Bakon Strips | ◯ | ◯ | ◯ | ◯ | ◯ |
| ⊗Plant-Based Bacon Strips | ◯ | ◯ | ◯ | ◯ | ◯ |
| ⊗Veggie Strips | ◯ | ◯ | ◯ | ◯ | ◯ |

Page Break

Q5.4 To what extent, does "Bakon Strips" make you think of Meat?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q5.5 To what extent, does "Bakon Strips" make you think of meat-alternatives?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q5.6 To what extent, does "Bakon Strips" make you think of plant-based products

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Page Break

Q5.7 To what extent, does "Plant-Based Bacon Strips" make you think of Meat ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q5.8 To what extent, does "Plant-Based Bacon Strips" make you think of Meat-alternatives ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q5.9 Is it true that "twenty-seven plus twenty-three equals sixty one"

- Completely disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Completely agree

Q5.10 To what extent, does "Plant-Based Bacon Strips" make you think of Plant-based products ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Page Break

Q5.11 To what extent, does "Veggie Strips" make you think of Meat ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q5.12 To what extent, does "Veggie Strips" make you think of Meat-alternatives ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q5.13 To what extent, does "Veggie Strips" make you think of Plant-based products ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

End of Block: BACON

Start of Block: MINCEMEAT

Q6.1
A New Generation of Ground Beef

This new type of Ground Beef is made entirely from plants and has no animal ingredients. It looks, tastes, and cooks just like conventional meat. It is produced using plant ingredients like protein, fat, and carbohydrates to mimic the structure of conventional meat. These new Ground Beef have recently become widely available at grocery stores and restaurants. We are researching to find the appropriate name for the mention product, therefore, your opinion is very valuable and crucial for us. You will give several questions to answer regarding the name of this product.

◯ I have read the description of the meatball and am ready to continue the survey

Page Break

Q6.2 First, you will see a series of **three words** that could be used to describe this type of Ground Beef. Please indicates **the ranking levels to each name** in which you personally find the name that is **appropriate & appealing** for the product above.
**( "1" = The least appropriate name and "3" = the most appropriate name)**

_____ Ground Be'f
_____ Plant-Based Ground Beef
_____ Veggie Crumble

Page Break

Q6.3 First, you will see a series of **three words** that could be used to describe this type of Meatball.
For each word, please indicates **the degree to which you personally find the word "Appealing"**

| | Not at all appealing | Somewhat appealing | Moderately Appealing | Very Appealing | Extremely Appealing |
|---|---|---|---|---|---|
| ⊗Ground Be'f | ◯ | ◯ | ◯ | ◯ | ◯ |
| ⊗Plant-based Ground Beef | ◯ | ◯ | ◯ | ◯ | ◯ |
| ⊗Veggie Crumbles | ◯ | ◯ | ◯ | ◯ | ◯ |

Page Break

Q6.4 To what extent, does "Ground Be'f" make you think of Meat?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q6.5 To what extent, does "Ground Be'f" make you think of Meat-alternatives?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q6.6 To what extent, does "Ground Be'f" make you think of plant-based products

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Page Break

Q6.7 To what extent, does "Plant-based Ground Beef" make you think of Meat ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q6.8 To what extent, does "Plant-based Ground Beef" make you think of Meat-alternatives ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q6.9 Is it true that "twenty-seven plus twenty-three equals sixty one"

- Completely disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Completely agree

Q6.10 To what extent, does "Plant-based Ground Beef" make you think of Plant-based products ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Page Break

Q6.11 To what extent, does "Veggie Crumbles" make you think of Meat ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q6.12 To what extent, does "Veggie Crumbles" make you think of Meat-alternatives ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q6.13 To what extent, does "Veggie Crumbles" make you think of Plant-based products ?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

End of Block: MINCEMEAT

Start of Block: CHECKING ATTENTION

Q7.1 Which of the following describes all of the products you just rated?

- They did not contain animal products
- They used locally sourced meat/dairy
- They used humane meat/dairy
- They used quality meat/dairy with no additives
- They used organic meat/dairy

End of Block: CHECKING ATTENTION

Start of Block: Meat Attachment

Q8.1 When thinking about all the food and beverages you consume, please select the statement that best describes you.

- Omnivore - ( I eat meat, such as beef, pork, chicken, turkey, fish and/or shellfish)
- Pescatarian - ( a person who does not eat meat but does eat seafood.)
- Flexitarian - ( I sometimes eat meat, but I often chose plant-based foods instead)
- Vegetarian - ( I don't eat meat of any kind, but I do eat eggs and/or dairy products)
- Vegan - ( I don't eat meat, eggs, dairy products, or other animal-derived ingredients)

Q8.2 Which statement best describes your meat consumption

- I never eat meat
- I rarely eat meat
- I sometime eat meat
- I often eat meat
- I almost always eat meat

Q8.3 Which statement best describes how frequently you consume meat subtitutes ? ( for example, veggie burgers, plant-based sausages, hot dogs, tofu, seitan)

- Rarely/never
- Once every few months
- Once a month
- Multiple time per weeks
- Daily

End of Block: Meat Attachment

Start of Block: Random ID

Q9.1 Here is your ID: ${e://Field/Random%20ID}

**You need copy this value to paste into Mturk to indicate your completion of the study.**

**When you copied this ID, please click next button to submit your survey. You will NOT receive credit unless you click this button. Thank you**

End of Block: Random ID

## 7.2 APPENDIX B – Survey 2 Overview

**Final**

Start of Block: Instruction Study

Q1.1 I am conducting a research study about consumers perceptions when grocering to improve the stocking strategies for the supermarket. Your honest opinions for certain products are needed for the study. There are no foreseeable risks on or discomforts to your participation. Participation in this study involves answering survey question. The survey will take about 10 minutes to complete. We will not ask your name or any other identifying information in this survey.

For research purpose, an anonymous numeric code will be assigned to your responses. However, your Amazon Mturk worker ID number will be temporarily stored in order to pay you for your time, this data will be deleted as soon as it is reasonably possible. You have the option of making your personal information private by changing your Mturk settings through Amazon,

**ATTENTION: You must focus on every questions and your answers, if your results are contradicted with each other or you do not answer some attention checking questions rights, you will never get the code for compensation. Furthermore, the answers are of course randomized therefore it is very easy that YOUR ANSWERS ARE CONTRADICTED Please do this survey seriously in order to get paid. If you do not have the codes, this means you might answer one of these questions wrong.**

The results of this study may be used in reports, presentations, or publications. Your participants in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. You must be 18 or order to participate in the study. Compensation for participating will be paid in this study.

Sincerely

If you wish to be part of the study, click "Next"

Q2.1 **In this page, the study will ask about your daily consumption preferences, consisting of the questions regarding Your Dietary, Your Perceptions about Food Choices, Environmental Perspectives and New Food Trend.**

JS X→

Q3.1 When thinking about all the food and beverages you consume, please select the statement that best describes you.

- Omnivore - ( I eat meat, such as beef, pork, chicken, turkey, fish and/or shellfish)
- Pescatarian - ( a person who does not eat meat but does eat seafood.)
- Flexitarian - ( I sometimes eat meat, but I often chose plant-based foods instead)
- Vegetarian - ( I don't eat meat of any kind, but I do eat eggs and/or dairy products)
- Vegan - ( I don't eat meat, eggs, dairy products, or other animal-derived ingredients)

X→

Q3.2 How often do you consume meat ( including: seafood/ red meat/ poultry/ wild animal etc.) ?

- Never
- Tried only a few times
- Less than once a week
- 1–2 times a week
- 3–4 times a week
- 5 times a week or more

X→

Q3.3 Personal Dietary Preferences

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| To eat meat is one of the good pleasures in life. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Meat consumption is crucial to my balance. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| A full meal is a meal with meat. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| According to our position in the food chain, we have the right to eat meat | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I would feel fine with a meatless diet. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Please choose "Disagree" for attention-checking question | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| To eat meat is disrespectful towards life and the environment | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| By eating meat I'm reminded of the death and suffering of animals. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is true that 25+ 26= 50 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I don't picture myself without eating meat regularly. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

End of Block: Control Variables

Start of Block: Food Neophobia

X→

Food Neophobia Food Preferences

| | Completely Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | Completely Agree |
|---|---|---|---|---|---|---|---|
| I am constantly sampling new and different foods | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I do not trust new foods | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| If I do not know what is in a food, I won't try it | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Please choose "Completely Disagree" | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| At dinner parties, I will try a new food | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| "I am afraid to eat things I have never had before | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I will eat almost anything | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

End of Block: Food Neophobia

Start of Block: Shopping Behavior

Q3.4 Shopping Behavivor

| | Completely Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | Completely Agree |
|---|---|---|---|---|---|---|---|
| When I buy foods, I try to consider how my use of them will affect the environment | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important that the food I eat has been produced in a way that animals have not experienced pain | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I am very particular about the healthiness of the food I eat | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

End of Block: Shopping Behavior

Start of Block: Plant-based Consumption

Vegan Consumption How often do you consume plant-based meat alternatives?

- Never
- Tried only a few times
- Less than once a week
- 1–2 times a week
- 3–4 times a week
- 5 times a week or more

End of Block: Plant-based Consumption

Start of Block: 200 years ago

Q4.1 What were you doing 200 years ago?

- I was not born.
- I was working in a shipyard.
- I was travelling the world.
- I was watching a movie.

End of Block: 200 years ago

Start of Block: Chapter 3

Q5.1 In this section, you will be asked several questions about the products based on your grocery preferences in order to help the store improving on stocking products.

End of Block: Chapter 3

Start of Block: PLANT-BASED BACON - HF

Q6.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q6.2 Imagine this product is widely available at grocery stores, How likely are you going to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q6.3 How well can you imagine what a product tastes like ?

- Extremely unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Extremely clear

Q6.4 How good or bad does the name "Plant-based Bacon" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q6.5 Please indicate what you think about "Plant-based Bacon" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Q6.6 Do you think that the product "Plant-based Bacon" comes from an animal ?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q6.7 Do you think this product "Plant-based Bacon" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q6.8 Do you think this product "Plant-based Bacon" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: PLANT-BASED BACON - HF

Start of Block: ATTENTION CHECKING

Q489 Based on the text below, what would you say your favorite drink ?

This is a simple question, you don't need to be think about your personal perferences for this answer, When asked for your favorite food, you need to select "SMOOTHIE".

- Wine
- Beer
- Tea
- Whiskey
- Smoothie
- Juice
- Other

End of Block: ATTENTION CHECKING

Start of Block: PLANT-BASED GROUND BEEF - HF

Q8.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q8.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Q8.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q8.4 How good or bad does the name "Plant-based Ground Beef" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q8.5 Please indicate what you think about "Plant-based Ground Beef" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q8.6 Do you think that the product "Plant-based Ground Beef" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q8.7 Do you think this product "Plant-based Ground Beef" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q8.8 Do you think this product "Plant-based Ground Beef" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: PLANT-BASED GROUND BEEF - HF

Start of Block: PLANT-BASED MEATBALL - HF

Q7.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q7.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q7.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q7.4 How good or bad does the word "Plant-based Meatballs" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q7.5 Please indicate what you think about "Plant-based Meatballs" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q7.6 Do you think that the product "Plant-based Meatballs" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q7.7 Do you think this product "Plant-based Meatballs" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q7.8 Do you think this product "Plant-based Meatballs" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: PLANT-BASED MEATBALL - HF

Start of Block: BAKON STRIPS - HF

Q9.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q9.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q9.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q9.4 How good or bad does the word "Bakon Strips" sound to you?

- ○ Extremely bad
- ○ Moderately bad
- ○ Slightly bad
- ○ Neither good nor bad
- ○ Slightly good
- ○ Moderately good
- ○ Extremely good

Q9.5 Please indicate what you think about "Bakon Strips" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q9.6 Do you think that the product "Bakon Strips" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q9.7 Do you think this product "Bakon Strips" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q9.8 Do you think this product "Bakon Strips" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: BAKON STRIPS - HF

Start of Block: NEATBALL - HF

Q10.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q10.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q10.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q10.4 How good or bad does the name "Neatballs" sound to you?

- ○ Extremely bad
- ○ Moderately bad
- ○ Slightly bad
- ○ Neither good nor bad
- ○ Slightly good
- ○ Moderately good
- ○ Extremely good

Q10.5 Please indicate what you think about "Neatballs" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q10.6 Do you think that the product "Neatballs" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q10.7 Do you think this product "Neatballs" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q10.8 Do you think this product "Neatballs" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: NEATBALL - HF

Start of Block: GROUND BEEF - HF

Q11.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q11.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q11.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q11.4 How good or bad does the name "Ground Be'f" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q11.5 Please indicate what you think about "Ground Be'f" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q11.6 Do you think that the product "Ground Be'f" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q11.7 Do you think this product "Ground Be'f" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q11.8 Do you think this product "Ground Be'f" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: GROUND BEEF - HF

Start of Block: VEGGIE STRIPS - HF

Q12.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q12.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q12.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q12.4 How good or bad does the word "Veggie Strips" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q12.5 Please indicate what you think about "Veggie Strips" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q12.6 Do you think that the product "Veggie Strips" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q12.7 Do you think this product "Veggie Strips" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q12.8 Do you think this product "Veggie Strips" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: VEGGIE STRIPS - HF

Start of Block: VEGGIEBALLS - HF

Q13.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q13.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q13.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q13.4 How good or bad does the name "Veggie Balls" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q13.5 Please indicate what you think about "Veggie Balls" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose " Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q13.6 Do you think that the product "Veggie Balls" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q13.7 Do you think this product "Veggie Balls" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q13.8 Do you think this product "Veggie Balls" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: VEGGIEBALLS - HF

Start of Block: VEGGIE CRUMBLE - HF

Q14.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q14.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q14.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q14.4 How good or bad does the name "Veggie Ground Crumbles" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q14.5 Please indicate what you think about "Veggie Ground Crumbles" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q14.6 Do you think that the product "Veggie Ground Crumbles" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q14.7 Do you think this product "Veggie Ground Crumbles" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q14.8 Do you think this product "Veggie Ground Crumbles" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: VEGGIE CRUMBLE - HF

Start of Block: BAKON STRIPS - MF

Q15.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q15.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q15.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q15.4 How good or bad does the word "Bakon Strips" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q15.5 Please indicate what you think about "Bakon Strips" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q15.6 Do you think that the product "Bakon Strips" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q15.7 Do you think this product "Bakon Strips" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q15.8 Do you think this product "Bakon Strips" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: BAKON STRIPS - MF

Start of Block: NEATBALL - MF

Q16.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q16.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q16.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q16.4 How good or bad does the name "Neatballs" sound to you?

- ○ Extremely bad
- ○ Moderately bad
- ○ Slightly bad
- ○ Neither good nor bad
- ○ Slightly good
- ○ Moderately good
- ○ Extremely good

Q16.5 Please indicate what you think about "Neatballs" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q16.6 Do you think that the product "Neatballs" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q16.7 Do you think this product "Neatballs" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q16.8 Do you think this product "Neatballs" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: NEATBALL - MF

Start of Block: GROUND BEEF - MF

Q17.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q17.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q17.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q17.4 How good or bad does the word "Ground Be'f" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q17.5 Please indicate what you think about "Ground Be'f" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q17.6 Do you think that the product "Ground Be'f" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q17.7 Do you think this product "Ground Be'f" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q17.8 Do you think this product "Ground Be'f" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: GROUND BEEF - MF

Start of Block: PLANT-BASED BACON - MF

Q18.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q18.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q18.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q18.4 How good or bad does the word "Plant-based Bacon" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q18.5 Please indicate what you think about "Plant-based Bacon" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q18.6 Do you think that the product "Plant-based Bacon" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q18.7 Do you think this product "Plant-based Bacon" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q18.8 Do you think this product "Plant-based Bacon" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: PLANT-BASED BACON - MF

Start of Block: PLANT-BASED MEATBALL - MF

Q19.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q19.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q19.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q19.4 How good or bad does the name "Plant-based Meatballs" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q19.5 Please indicate what you think about "Plant-based Meatballs" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q19.6 Do you think that this product comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q19.7 Do you think this product tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q19.8 Do you think this product is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: PLANT-BASED MEATBALL - MF

Start of Block: PLANT-BASED GROUND BEEF - MF

Q20.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q20.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q20.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q20.4 How good or bad does the name "Plant-based Ground Beef" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q20.5 Please indicate what you think about "Plant-based Ground Beef" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q20.6 Do you think that the product "Plant-based Ground Beef" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q20.7 Do you think this product "Plant-based Ground Beef" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q20.8 Do you think this product "Plant-based Ground Beef" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: PLANT-BASED GROUND BEEF - MF

Start of Block: VEGGIE STRIPS - MF

Q21.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q21.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q21.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q21.4 How good or bad does the name "Veggie Strips" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q21.5 Please indicate what you think about "Veggie Strips" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q21.6 Do you think that the product "Veggie Strips" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q21.7 Do you think this product "Veggie Strips" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q21.8 Do you think this product "Veggie Strips" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: VEGGIE STRIPS - MF

Start of Block: VEGGIEBALLS - MF

Q22.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q22.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q22.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q22.4 How good or bad does the name "Veggie Balls" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q22.5 Please indicate what you think about "Veggie Balls"" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q22.6 Do you think that the product "Veggie Balls"" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q22.7 Do you think this product "Veggie Balls"" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q22.8 Do you think this product "Veggie Balls"" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: VEGGIEBALLS - MF

Start of Block: VEGGIE CRUMBLE - MF

Q23.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q23.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q23.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q23.4 How good or bad does the name "Veggie Ground Crumbles" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q23.5 Please indicate what you think about "Veggie Ground Crumbles" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q23.6 Do you think that the product "Veggie Ground Crumbles" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q23.7 Do you think this product "Veggie Ground Crumbles" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q23.8 Do you think this product "Veggie Ground Crumbles" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: VEGGIE CRUMBLE - MF

Start of Block: BAKON STRIPS - LF

Q24.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q24.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q24.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q24.4 How good or bad does the name "Bakon Strips" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q24.5 Please indicate what you think about "Bakon Strips" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q24.6 Do you think that the product "Bakon Strips" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q24.7 Do you think this product "Bakon Strips" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q24.8 Do you think this product "Bakon Strips" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: BAKON STRIPS - LF

Start of Block: NEATBALL - LF

Q25.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q25.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q25.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q25.4 How good or bad does the name "Neatballs" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q25.5 Please indicate what you think about "Neatballs" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q25.6 Do you think that the product "Neatballs" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q25.7 Do you think this product "Neatballs" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q25.8 Do you think this product "Neatballs" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: NEATBALL - LF

Start of Block: GROUND BEEF - LF

Q26.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q26.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q26.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q26.4 How good or bad does the name "Ground Be'f" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q26.5 Please indicate what you think about "Ground Be'f" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q26.6 Do you think that the product "Ground Be'f" comes from an animal ( ex: cow/pork/chicken)?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q26.7 Do you think this product "Ground Be'f" tastes like eating vegetables?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q26.8 Do you think this product "Ground Be'f" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: GROUND BEEF - LF

Start of Block: PLANT-BASED BACON - LF

Q27.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q27.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q27.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q27.4 How good or bad does the name "Plant-based Bacon" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q27.5 Please indicate what you think about "Plant-based Bacon" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose " Strongly Disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q27.6 Do you think that the product "Plant-based Bacon" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q27.7 Do you think this product "Plant-based Bacon" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q27.8 Do you think this product "Plant-based Bacon" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: PLANT-BASED BACON - LF

Start of Block: PLANT-BASED MEATBALL - LF

Q28.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q28.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q28.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q28.4 How good or bad does the name "Plant-based Meatballs" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q28.5 Please indicate what you think about "Plant-based Meatballs" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q28.6 Do you think that the product "Plant-based Meatballs" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q28.7 Do you think this product "Plant-based Meatballs" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q28.8 Do you think this product "Plant-based Meatballs" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: PLANT-BASED MEATBALL - LF

Start of Block: PLANT-BASED GROUND BEEF - LF

Q29.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q29.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q29.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q29.4 How good or bad does the name "Plant-based Ground Beef" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q29.5 Please indicate what you think about "Plant-based Ground Beef" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q29.6 Do you think that the product "Plant-based Ground Beef" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q29.7 Do you think this product "Plant-based Ground Beef" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q29.8 Do you think this product "Plant-based Ground Beef" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: PLANT-BASED GROUND BEEF - LF

Start of Block: VEGGIE STRIPS - LF

Q30.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q30.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q30.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q30.4 How good or bad does the word "Veggie Strips" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q30.5 Please indicate what you think about "Veggie Strips" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Strongly disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q30.6 Do you think that the product "Veggie Strips" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q30.7 Do you think this product "Veggie Strips" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q30.8 Do you think this product "Veggie Strips" is a good source of protein?

- ○ Far below average
- ○ Somewhat below average
- ○ Average
- ○ Somewhat above average
- ○ Far above average

End of Block: VEGGIE STRIPS - LF

Start of Block: VEGGIEBALLS - LF

Q31.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q31.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Moderately unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Moderately likely
- Extremely likely

Q31.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q31.4 How good or bad does the word "Veggie Balls" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q31.5 Please indicate what you think about "Veggie Balls" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Neither agree nor disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q31.6 Do you think that the product "Veggie Balls" comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q31.7 Do you think this product "Veggie Balls" tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q31.8 Do you think this product "Veggie Balls" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: VEGGIEBALLS - LF

Start of Block: VEGGIE CRUMBLE - LF

Q32.1 **Imagine you are at the grocery store, you are walking through the protein sections, you see this product below in the shelfs.**

Q32.2 Imagine this product is widely available at grocery stores, How likely are you to buy this product ?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

Q32.3 How well can you imagine what a product tastes like ?

- Totally unclear
- Moderately unclear
- Slightly unclear
- Neither clear nor unclear
- Slightly clear
- Moderately clear
- Totally clear

Q32.4 How good or bad does the name "Veggie Ground Crumbles" sound to you?

- Extremely bad
- Moderately bad
- Slightly bad
- Neither good nor bad
- Slightly good
- Moderately good
- Extremely good

Q32.5 Please indicate what you think about "Veggie Ground Crumbles" with regards to the following attributes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Overall, I expect that this product would be very appealing. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would taste very good. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing texture. | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would have an appealing smell. | ○ | ○ | ○ | ○ | ○ |
| Please choose "Somewhat disagree" | ○ | ○ | ○ | ○ | ○ |
| I expect that this product would be very satiating/filling. | ○ | ○ | ○ | ○ | ○ |

Page Break

Q32.6 Do you think that the product "Veggie Ground Crumbles"  comes from an animal ( ex: cow/pork/chicken)?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

Q32.7 Do you think this product "Veggie Ground Crumbles"  tastes like eating vegetables?

- Extremely unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Extremely likely

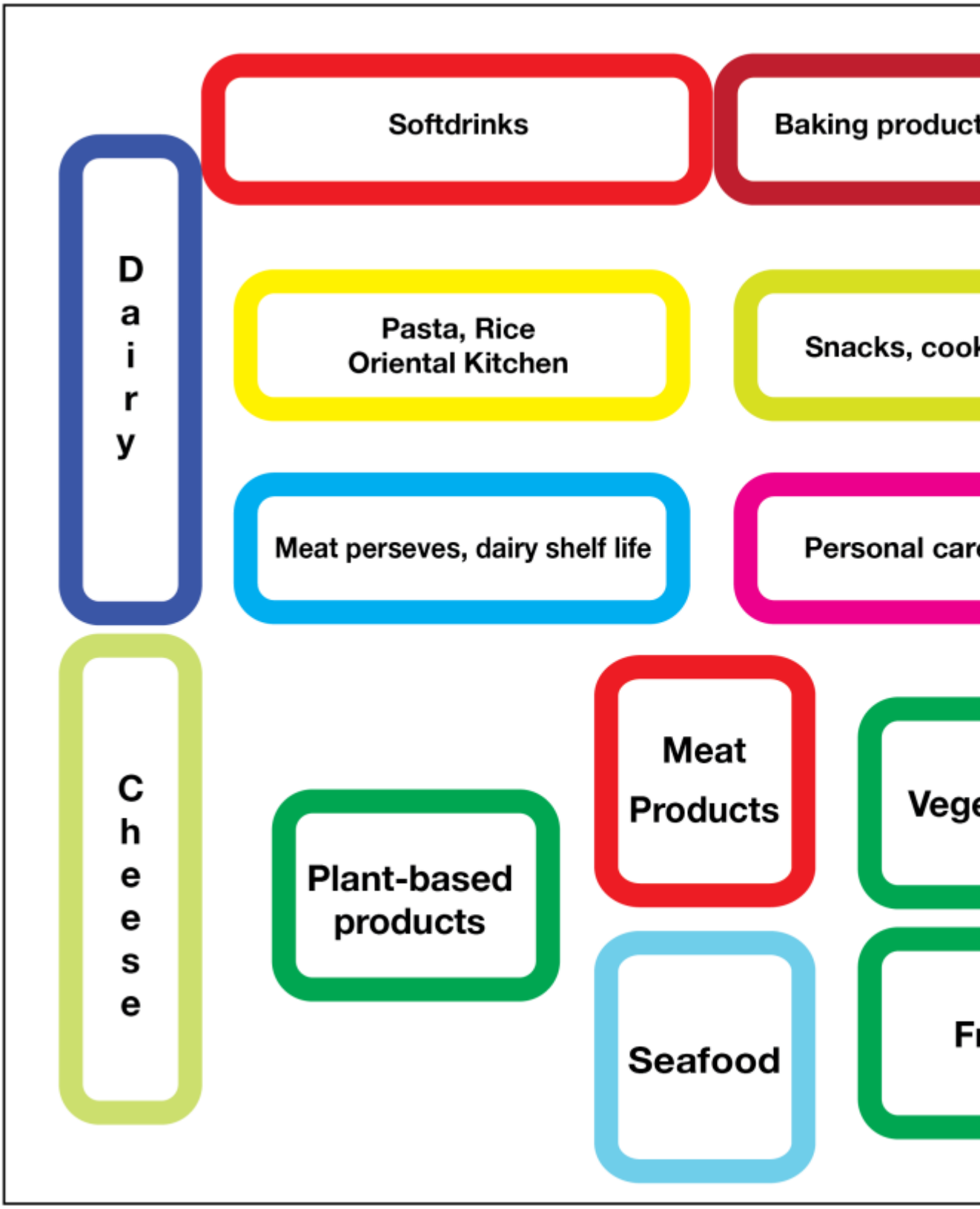
Q32.8 Do you think this product "Veggie Ground Crumbles" is a good source of protein?

- Far below average
- Somewhat below average
- Average
- Somewhat above average
- Far above average

End of Block: VEGGIE CRUMBLE - LF

Start of Block: Catagorization

Q1 When looking for these products ( that you are just rated ) in the supermarket, what is the first place you would go to find the product? Please indicate this in the picture below.


Softdrinks
Baking product
Dairy
Pasta, Rice
Oriental Kitchen
Snacks, cook
Meat perseves, dairy shelf life
Personal care
Cheese
Meat
Products
Vege
Plant-based
products
Seafood
Fr

End of Block: Catagorization

Start of Block: Demographic

Q34.1 Gender

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Q34.2 What is your age?

- 0 - 15 year old
- 15 - 30 year old
- 30 - 45 year old
- 46 - 60 year old
- over 60 year old

Q34.3 What is the highest degree or level of education you have completed

- ○ High School
- ○ Bachelor's Degree
- ○ Master's Degree
- ○ Ph.D. or higher
- ○ Prefer not to say

End of Block: Demographic

Start of Block: Random ID

Q488 Here is your ID: ${e://Field/Random%20ID}

**You need copy this value to paste into Mturk to indicate your completion of the study.**

**When you copied this ID, please click next button to submit your survey. You will NOT receive credit unless you click this button**

End of Block: Random ID

## 7.3 APPENDIX C - Manipulating Checking – Familiarity

*Attached on the file S102054_DATA_APPENDIX.pdf*

## 7.4 APPENDIX D – Reliability Statistics

*Attached on the file S102054_DATA_APPENDIX.pdf*

## 7.5 APPENDIX F – Descriptive Statistics – Study 1

*Attached on the file S102054_DATA_APPENDIX.pdf*

## 7.6 APPENDIX E : ANOVA TEST – STUDY 1

*Attached on the file S102054_DATA_APPENDIX.pdf*

## 7.7 APPENDIX G: Descriptive Statistics – Study 2

*Attached on the file S102054_DATA_APPENDIX.pdf*

## 7.8 APPENDIX H: ANOVA TEST – STUDY 2

*Attached on the file S102054_DATA_APPENDIX.pdf*