

TITLE PAGE

NOVA classification of the National Diet and Nutrition Survey, waves 1 to 11 (2008/09 to 2018/19)

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For code see: https://github.com/zoecolombet/NOVA_NDNS_code

1. NOVA Classification

The NOVA classification was created by Monteiro *et al.* It classified all foods and beverages according to the nature, extent, and purpose of food processing. Food processing as identified by NOVA involves physical, biological, and chemical processes used after foods are separated from nature, and before being consumed or prepared as dishes and meals. Methods used in the culinary preparation of food at home or in restaurant kitchens are not industrial, by definition, and so are not considered by NOVA, which classifies all foods, including culinary ingredients and other food products, into groups. First it was a 3 groups classification, but a 4th group was added. Now, all foods and beverages are divided into four main groups: ‘unprocessed or minimally processed foods’ (G1); ‘processed culinary ingredients’ (G2); ‘processed foods’ (G3); and ‘ultra-processed food and drink products’ (G4).

This table (from Monteiro et al. 2019. Ultra-processed foods, diet quality, and health using the NOVA classification system. Rome, FAO) details the definitions and gives examples.

NOVA GROUP	DEFINITION	EXAMPLES
GROUP 1 - Unprocessed or minimally processed foods	<p><i>Unprocessed</i> Edible parts of plants (fruit, seeds, leaves, stems, roots, tubers) or of or from animals (muscle, fat, offal, eggs, milk), and also fungi, algae, all after separation from nature. Spring and tap water.</p> <p><i>Minimally processed</i> Unprocessed foods altered by industrial processes such as removal of inedible or unwanted parts, drying, powdering, squeezing, crushing, grinding, fractioning, steaming, poaching, boiling, roasting, and pasteurization, chilling, freezing, placing in containers, vacuum packaging, non-alcoholic fermentation, and other methods that do not add salt, sugar, oils or fats or other food substances to the original food.</p> <p>The main aim of these processes is to extend the life of unprocessed foods, enabling their storage for longer use, or to make them edible, and, often, to make their preparation easier or more diverse.</p> <p>Infrequently, minimally processed foods contain additives that prolong product duration, protect original properties or prevent proliferation of microorganisms.</p>	<p>Fresh, squeezed, chilled, frozen, or dried fruit and leafy and root vegetables; grains such as brown, parboiled or white rice, corn cob or kernel, wheat berry or grain; legumes such as beans, lentils, and chickpeas; starchy roots and tubers such as potatoes, sweet potatoes and cassava; fungi such as fresh or dried mushrooms; meat, poultry, fish and seafood, whole or in the form of steaks, fillets and other cuts; fresh, powdered, chilled or frozen eggs; fresh, powdered or pasteurized milk; fresh or pasteurized fruit or vegetable juices (with no added sugar, sweeteners or flavours); grits, flakes or flour made from corn, wheat, oats, or cassava; tree and ground nuts and other oily seeds (with no added salt or sugar); herbs and spices used in culinary preparations, such as thyme, oregano, mint, pepper, cloves and cinnamon, whole or powdered, fresh or dried; fresh or pasteurized plain yoghurt; tea, coffee, and drinking water.</p> <p>Also includes foods made up from two or more items in this group, such as dried mixed fruits, granola made from cereals, nuts and dried fruit with no added sugar, honey or oil; pasta, couscous and polenta made with flours, flakes or grits and water; and foods with vitamins and minerals added generally to replace nutrients lost during processing, such as wheat or corn flour fortified with iron and folic acid.</p>

<p>GROUP 2- Processed culinary ingredients</p>	<p>Substances obtained directly from group 1 foods or from nature by industrial processes such as pressing, centrifuging, refining, extracting or mining.</p> <p>Used to prepare, season and cook group 1 foods. May contain additives that prolong product duration, protect original properties or prevent proliferation of microorganisms.</p>	<p>Vegetable oils crushed from seeds, nuts or fruit (notably olives); butter and lard obtained from milk and pork; sugar and molasses obtained from cane or beet; honey extracted from combs and syrup from maple trees; starches extracted from corn and other plants; vegetable oils with added anti-oxidants; salt mined or from seawater, and table salt with added drying agents.</p> <p>Also includes products consisting of group 2 items, such as salted butter, and group 2 items with added vitamins or minerals, such as iodised salt.</p>
<p>GROUP 3- Processed foods</p>	<p>Products made by adding salt, oil, sugar or other group 2 ingredients to group 1 foods, using preservation methods such as canning and bottling, and, in the case of breads and cheeses, using non-alcoholic fermentation.</p> <p>Processes and ingredients here are designed to increase the durability of group 1 foods and make them more enjoyable by modifying or enhancing their sensory qualities. They may contain additives that prolong product duration, protect original properties, or prevent proliferation of microorganisms</p>	<p>Canned or bottled vegetables and legumes in brine; salted or sugared nuts and seeds; salted, dried, cured, or smoked meats and fish; canned fish (with or without added preservatives); fruit in syrup (with or without added anti-oxidants); freshly made unpackaged breads and cheeses.</p>
<p>GROUP 4 - Ultra-processed foods</p>	<p>Formulations of ingredients, mostly of exclusive industrial use, made by a series of industrial processes, many requiring sophisticated equipment and technology (hence 'ultra-processed'). Processes used to make ultra-processed foods include the fractioning of whole foods into substances, chemical modifications of these substances, assembly of unmodified and modified food substances using industrial techniques such as extrusion, moulding and pre-frying; use of additives at various stages of manufacture whose functions include making the final product palatable or hyper-palatable; and sophisticated packaging, usually with plastic and other synthetic materials. Ingredients include sugar, oils or fats, or salt, generally in combination, and substances that are sources of energy and nutrients that are of no or rare culinary use such as high fructose corn syrup, hydrogenated or interesterified oils, and protein isolates; classes of additives whose function is to make the final product palatable or more appealing such as flavours, flavour enhancers, colours, emulsifiers, and sweeteners, thickeners, and anti-foaming, bulking, carbonating, foaming, gelling, and glazing agents; and additives that prolong product duration, protect original properties or prevent</p>	<p>Many ready-to-consume products such as carbonated soft drinks; sweet or savoury packaged snacks; chocolate, candies (confectionery); ice-cream; mass-produced packaged breads and buns; margarines and other spreads; cookies (biscuits), pastries, cakes, and cake mixes; breakfast 'cereals', 'cereal' and 'energy' bars; 'energy' drinks; milk drinks, 'fruit' yoghurts and 'fruit' drinks; 'cocoa' drinks; 'instant' sauces.</p> <p>Many pre-prepared ready-to-heat products including pies and pasta and pizza dishes; poultry and fish 'nuggets' and 'sticks', sausages, burgers, hot dogs, and other reconstituted meat products; and powdered and packaged 'instant' soups, noodles and desserts.</p> <p>Infant formulas, follow-on milks, other baby products; 'health' and 'slimming' products such as meal replacement shakes and powders.</p>

	<p>proliferation of microorganisms.</p> <p>Processes and ingredients used to manufacture ultra-processed foods are designed to create highly profitable products (low-cost ingredients, long shelf-life, emphatic branding), convenient (ready-to-consume) hyper-palatable products liable to displace freshly prepared dishes and meals made from all other NOVA food groups.</p> <p>Adapted from Monteiro et al., 2017a</p>	
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References:

Monteiro, C.A., Cannon, G., Lawrence, M., Costa Louzada, M.L. and Pereira Machado, P. 2019. Ultra-processed foods, diet quality, and health using the NOVA classification system. Rome, FAO.

Monteiro C., Cannon G., Levy R., Moubarac J.C., Jaime P., Martins A.P., Canella D., Louzada M.L., Parra D. (2016) NOVA. The star shines bright. Food classification. Public Health. World Nutr. J. 7, 28–38.

Monteiro CA, Cannon G, Moubarac J-C, et al. (2018) The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing. Public Health Nutr. 21, 5–17. Cambridge University Press.

Monteiro CA, Cannon G, Levy RB, et al. (2019) Ultra-processed foods: what they are and how to identify them. Public Health Nutr. 22, 936–941. England:

2. Applying the NOVA Classification to NDNS

To apply the NOVA classification into data, you need to **classify all foods and beverages** according to the nature, extent, and purpose of food processing.

For the NDNS data, a previous paper used the NOVA 4 group classification, and published in a supplemental table their choices (**Rauber et al. 2018. Ultra-Processed Food Consumption and Chronic Non-Communicable Diseases-Related Dietary Nutrient Profile in the UK (2008–2014).**

Based on their classification, we have compared it to a previous published 3 group classification (Adams & White. 2015. Characterisation of UK diets according to degree of food processing and associations with socio-demographics and obesity: cross-sectional analysis of UK National Diet and Nutrition Survey (2008–12)).

STEP 1

For our work, we decided not to work with some specific groups.

EXCLUDED Subsidiary food group code (SubFoodGroupCode)	EXCLUDED Subsidiary food group name
54A	Cod liver oil and other fish oils
54B	Evening primrose oil and other plant oils
54C	Single vitamins/minerals not Folic acid, iron, calcium
54D	Folic acid
54E	Iron only or with vitamin C
54F	Calcium only or with vitamin D
54G	Vitamins (two or more including multivitamins) no minerals
54H	Minerals (two or more including multiminerals) no vitamins
54I	Vitamins and minerals (including multivitamins & minerals)
54J	Non-nutrient supplements(including herbal)
54K	Other nutrient supplements
54L	Vitamin C
54M	Single vitamins/minerals not Folic acid, iron, calcium or vitamin C
54N	Cod liver oil and other fish oils (including with vitamins A, D, E)
54P	Multivitamins and/or minerals with omega ultra-processed

```
#STEP 1 - exclude NDNS groups we don't want to work with for our NOVA classification
test$NOVA0 <- as.factor(ifelse(test$SubFoodGroupCode=="47A" |
  test$SubFoodGroupCode=="54A" |
  .....
  test$SubFoodGroupCode=="55R", "NC", "NA"))
```

NOTE: NC stand for Non classified; NA stand for Non Available

STEP 2

According to the NOVA classification, some products belong to one specific group. Thus, we took some keywords to quickly classify the food and beverages.

KEYWORD	NOVA GROUP
Artificial	4
Chocolate	4
Flavoured	4
Ice cream	4
Margarine	4
Milkshake	4
Sandwich	4
Panini	4
Bagel	4
Wrap	4
Sausage	4

Also, if “PASTRY” and purchased or retailed or frozen, or with margarine, then it’s 4

Also, if “BREADCRUMB” and purchased or retailed or frozen, or with margarine, then it’s 4

Also, if “BATTER” and purchased or retailed or frozen, or with margarine, then it’s 4

#STEP 2 - put all the item link to these keywords into adequate NOVA group

```
test$NOVA2 <- as.factor(ifelse(test$NOVA1=="NC", "NC",
  ifelse(test$NOVA1=="4", "4",
    ifelse((str_detect(test$FoodName, "ARTIFICIAL") & !str_detect(test$FoodName, "NOT ARTIFICIAL"))
      | (str_detect(test$FoodName, "CHOCOLATE") & !str_detect(test$FoodName, "NOT CHOCOLATE"))
      | (str_detect(test$FoodName, "FLAVOURED") & !str_detect(test$FoodName, "NOT FLAVOURED"))
      | (str_detect(test$FoodName, "ICE CREAM") & !str_detect(test$FoodName, "NOT ICE CREAM")) &
        !str_detect(test$FoodName, "HOMEMADE")))
      | (str_detect(test$FoodName, "ICECREAM") & !str_detect(test$FoodName, "NOT ICECREAM"))
      | (str_detect(test$FoodName, "MARGARINE") & !str_detect(test$FoodName, "NOT MARGARINE"))
      | (str_detect(test$FoodName, "MARG") & !str_detect(test$FoodName, "NOT MARG"))
      | (str_detect(test$FoodName, "MILKSHAKE") & !str_detect(test$FoodName, "NOT MILKSHAKE"))
      | (str_detect(test$FoodName, "SANDWICH") & !str_detect(test$FoodName, "NOT SANDWICH"))
      | (str_detect(test$FoodName, "SAUSAGE") & !str_detect(test$FoodName, "NOT SAUSAGE"))

      | (str_detect(test$RecipeName, "sausage") | str_detect(test$RecipeName, "Sausage"))
      | (str_detect(test$RecipeName, "Sandwich") | str_detect(test$RecipeName, "sandwich"))
      | (str_detect(test$RecipeName, "Panini") | str_detect(test$RecipeName, "panini"))
      | (str_detect(test$RecipeName, "Bagel") | str_detect(test$RecipeName, "bagel"))
      | (str_detect(test$RecipeName, "Wrap") | str_detect(test$RecipeName, "wrap"))
      | (str_detect(test$RecipeName, "Flavoured") & !str_detect(test$FoodName, "not"))
      | (str_detect(test$RecipeName, "flavoured") & !str_detect(test$FoodName, "not"))
      | (str_detect(test$RecipeName, "chocolate") & !str_detect(test$RecipeName, "not chocolate"))
      | (str_detect(test$RecipeName, "Chocolate") & !str_detect(test$RecipeName, "not Chocolate"))
      | (str_detect(test$RecipeName, "choc") & !str_detect(test$RecipeName, "not choc"))
      | (str_detect(test$RecipeName, "ice cream") & !str_detect(test$RecipeName, "not ice cream")), "4", "NA"))))
#not putting burger in RecipeName because the bread is not in "burgers" recipe, thus its 3 or 4
```

NOTE: test is the database name, FoodName is the name of the variable containing the name of the food/beverage declared.

STEP 3

Run the brand code and **check if every item list with these BRAND really belongs in group 4.**

If not, modify the code in accordance.

NOTE than RecipeName only works for years 9 to 11. When using other years, or all the years, implement RecipeName=NULL. Thus the code will still work.

```
#STEP 3 - check if every item list with these BRAND is on group 4
test$NOVA3 <- as.factor(ifelse(test$NOVA2=="NC", "NC",
  ifelse(test$NOVA2=="4", "4",
    ifelse((test$RecipeName=="9 bar super seeds"
      | str_detect(test$RecipeName, "Aah Bisto")
      | (str_detect(test$RecipeName, "Aldi") & !(test$RecipeName=="Aldi peppery salad"
        | test$RecipeName=="Aldi full fat greek style natural yogurt, with cream 500g per pot"
        | test$RecipeName=="Aldi salmon with ginger, chilli & lime"))
      | test$RecipeName=="Alesto honey roasted peanuts, 200g pack"
      | test$RecipeName=="Alfez moroccan meatball sauce"
      | str_detect(test$RecipeName, "Alpen")
      | str_detect(test$RecipeName, "Alpro")
      | str_detect(test$RecipeName, "Aloe vera drink") | str_detect(test$RecipeName, "Aloe Vera Drink") |
str_detect(test$RecipeName, "aloe vera drink")
      | str_detect(test$RecipeName, "Amy's Kitchen")
      | str_detect(test$RecipeName, "Ann Forshaw")
      | test$RecipeName=="Apple and cinnamon flakes"
      | str_detect(test$RecipeName, "Appleby")
      | (str_detect(test$RecipeName, "Arla") & !test$RecipeName=="Arla BOB milk")
      | ((str_detect(test$RecipeName, "Asda") | str_detect(test$RecipeName, "ASDA"))
        & !(test$RecipeName=="Asda apple & mango juice" | test$RecipeName=="Asda Classic Salad"
          | test$RecipeName=="Asda golden sunrise seed, fruit & nut mix" | test$RecipeName=="Asda mixed
vegetables"
          | test$RecipeName=="Asda minty baby potatoes" | test$RecipeName=="Asda root veg"
          | test$RecipeName=="Asda garlic passata" | test$RecipeName=="Asda semi-dried tomatoes and
mozzarella pot"
          | test$RecipeName=="Asda Wholegrain Micro Rice"))
      | str_detect(test$RecipeName, "Ashfield")
      | str_detect(test$RecipeName, "Askeys")
      | str_detect(test$RecipeName, "Attack a snack") | str_detect(test$RecipeName, "Attack a snak")
      | str_detect(test$RecipeName, "Aunt") | str_detect(test$FoodName, "AUNT BESSIE") #Aunt Bessie & Aunty's golden syrup
steamed pudding
      | str_detect(test$RecipeName, "B free")
      | str_detect(test$RecipeName, "Balocco")
      | str_detect(test$RecipeName, "Batchelors") | str_detect(test$RecipeName, "batchelors") | str_detect(test$FoodName,
"BACHELORS")
      | str_detect(test$RecipeName, "Barney")
      | str_detect(test$RecipeName, "Barney bear")
      | str_detect(test$RecipeName, "Bernard Mat") #Bernard Matthews
      | test$RecipeName=="Bilash garlic & coriander naan bread"
      | test$RecipeName=="Billionaires meringue stack"
      | str_detect(test$RecipeName, "Billy bear") | str_detect(test$RecipeName, "Billy Bear")
      | test$RecipeName=="Bioset salty spice mix"
      | test$RecipeName=="Birds eye breaded haddock" | test$RecipeName=="Birds eye burger"
      | test$FoodName==" BIRDS EYE LIVER & ONION GRAVY"
      | str_detect(test$RecipeName, "Bonne Maman")
      | str_detect(test$RecipeName, "Bon apetit") | str_detect(test$RecipeName, "Bon Appetit")
      | str_detect(test$RecipeName, "Bottlegreen")
      | str_detect(test$RecipeName, "Britaninia")
      | str_detect(test$RecipeName, "Brompton house")
      | test$RecipeName=="Brown ciabatta roll (GF)"
      | str_detect(test$RecipeName, "Butterkist")
      | str_detect(test$RecipeName, "Cadbury")
      | str_detect(test$RecipeName, "Cambridge die")
      | str_detect(test$RecipeName, "Caramac")
```

```

| str_detect(test$RecipeName, "Cathedral City")
| test$RecipeName=="Caxton Pink 'N' Whites wafers"
| test$RecipeName=="Charlie Bingham fish pie"
| test$RecipeName=="Claudi & fin mini greek yogurt lolly" | test$RecipeName=="Claudi & Fin mini lolly"
| str_detect(test$RecipeName, "Co-op") | str_detect(test$RecipeName, "Co op") | str_detect(test$RecipeName, "coop")
| str_detect(test$RecipeName, "Coop")
| str_detect(test$RecipeName, "Costa")
| test$RecipeName=="COOK Roasted Vegetable Lasagne"
| test$RecipeName=="Cordial squash with carobel"
| str_detect(test$RecipeName, "Crownfield")
| str_detect(test$RecipeName, "Cheetos")
| str_detect(test$RecipeName, "Chicago") #Chicago town
| str_detect(test$RecipeName, "Crestwood")
| str_detect(test$RecipeName, "Daim")
| str_detect(test$RecipeName, "Dessert Menu") | str_detect(test$RecipeName, "Dessert menu")
| str_detect(test$RecipeName, "Del monte raspberry iced smoothie")
| str_detect(test$RecipeName, "Diet Cola") | str_detect(test$RecipeName, "in cola") | str_detect(test$RecipeName, "Cherry-
cola")

| str_detect(test$RecipeName, "Dimme")
| str_detect(test$RecipeName, "Disney")
| str_detect(test$RecipeName, "Dolce cappucino") | str_detect(test$RecipeName, "dolce gusto")
| str_detect(test$RecipeName, "Dolmio") | str_detect(test$FoodName, "PASTA SAUCE WITH ONIONS MUSHROOM AND
DOLMIO")

| str_detect(test$RecipeName, "Domino")
| str_detect(test$RecipeName, "Dorset") | str_detect(test$FoodName, "DORSET")
| test$RecipeName=="Eat & Go Cheese & Tomato Pasta Pot"
| test$RecipeName=="EAT ham & jarlsberg baguette "
| str_detect(test$RecipeName, "Emporium") | str_detect(test$RecipeName, "Dip-It cheese dip")
| test$RecipeName=="Fage strawberry yogurt"
| str_detect(test$RecipeName, "Fanta")
| str_detect(test$RecipeName, "Ferrero") | str_detect(test$RecipeName, "Ferro rocher")
| str_detect(test$RecipeName, "five guys") | str_detect(test$RecipeName, "Five guys")
| test$RecipeName=="Figo Cuttlefish Balls "
| test$RecipeName=="Findlater's Fine Foods Sesame Seed Buns"
| test$RecipeName=="Fit Kitchen pad thai chicken with zesty sauce"
| test$RecipeName=="Figo Cuttlefish Balls"
| str_detect(test$RecipeName, "Frappacino")
| test$RecipeName=="Fruit & nut bar"
| test$RecipeName=="Fruit twist"
| test$RecipeName=="Frusli bar"
| str_detect(test$RecipeName, "Genesis")
| str_detect(test$RecipeName, "Genius")
| test$RecipeName=="Gianni's Cookie dough Ice cream"
| str_detect(test$RecipeName, "Ginsters")
| test$RecipeName=="Glorious goan tomato & lentil soup"
| test$RecipeName=="Golden sweet & salty popcorn"
| str_detect(test$RecipeName, "Goodfellas")
| test$RecipeName=="Grace aloe vera reduced sugar drink"
| str_detect(test$FoodName, "GRACE INSTANT CORNMEAL PORRIDGE")
| str_detect(test$RecipeName, "Graze mini protein balls") | test$RecipeName=="Graze Protein Peanut Butter Dipper with
Baked Hemp Seeds"

| str_detect(test$RecipeName, "Greggs")
| str_detect(test$RecipeName, "Grenadine")
| test$RecipeName=="Gressingham Bistro Duck Legs in Plum Sauce"
| test$RecipeName=="Gu zillionaires cheesecake"
| test$RecipeName=="Gullon sugar free shortbread biscuits"
| test$RecipeName=="h@sbal glucose fructose syrup with honey"
| str_detect(test$RecipeName, "Harvest") #Harvest Morn
| str_detect(test$RecipeName, "Hartley")
| str_detect(test$RecipeName, "Hearty food")
| str_detect(test$RecipeName, "Hershey")
| str_detect(test$RecipeName, "Heinz")
| str_detect(test$RecipeName, "Herta")
| str_detect(test$RecipeName, "Hi-fi") | str_detect(test$RecipeName, "Hifi") | str_detect(test$RecipeName, "Hi fi")
| str_detect(test$RecipeName, "High five")
| test$RecipeName=="Holland's meat & potato pie"
| test$RecipeName=="Hollands potato & meat pie"
| test$RecipeName=="Hollands potato and meat pies"
| test$RecipeName=="Homepride pasta bake"
| test$RecipeName=="Honeybuns brownie"
| (str_detect(test$RecipeName, "Iceland") & !(test$RecipeName=="Iceland 4 multi greens steam bags, 150g per steam bag")

```


750ml"	test\$RecipeName=="Iceland luxury aberdeen angus quarter pounders"))
	test\$RecipeName=="Indomie chicken noodles"
	test\$RecipeName=="Innocent diary free coconut milk" test\$RecipeName=="Innocent super smoothie berry protein,
	test\$RecipeName=="Instant mash potato"
	str_detect(test\$RecipeName, "Irwin") str_detect(test\$RecipeName, "irwin")
	test\$RecipeName=="Itsu vegetable dumplings"
	test\$RecipeName=="Jack Link's Meat Snacks Beef Jerky Original"
	test\$RecipeName=="Jacobs flatbread salt & cracked pepper"
	test\$RecipeName=="Jelly Bean Sports Beans"
	test\$RecipeName=="John West tuna infusions chilli & garlic"
"M&S"))	test\$RecipeName=="Jordans fruit & nut granola"
	test\$RecipeName=="Just Tasty Cheese Layered Salad"
	str_detect(test\$RecipeName, "Kefco")
	str_detect(test\$RecipeName, "Kellogg")
	test\$RecipeName=="Kershaws Beef Dinner"
	str_detect(test\$RecipeName, "KFC")
	str_detect(test\$RecipeName, "Kiddylicious")
	str_detect(test\$RecipeName, "Kinder")
	test\$RecipeName=="Kings Rib Eye Flavour Biltong"
	str_detect(test\$RecipeName, "Koka")
"Mccain")	str_detect(test\$RecipeName, "Koko")
	str_detect(test\$RecipeName, "Knorr gravy")
	test\$RecipeName=="Kubus carrot apple and raspberry"
	str_detect(test\$RecipeName, "Laughing cow cheese")
	str_detect(test\$RecipeName, "Lidl")
	str_detect(test\$RecipeName, "Lighthouse bay")
	str_detect(test\$RecipeName, "Linda Mccartney") str_detect(test\$RecipeName, "Linda McCartney")
	str_detect(test\$RecipeName, "Lindt")
	str_detect(test\$RecipeName, "Lindhouse")
	str_detect(test\$RecipeName, "Linwood")
"Mcdonald")	str_detect(test\$RecipeName, "Little angels")
	str_detect(test\$RecipeName, "Little coco")
	str_detect(test\$RecipeName, "Little dish")
	test\$RecipeName=="Little yeo yogurt" test\$RecipeName=="Little yeos fromage frais"
	str_detect(test\$RecipeName, "Lizi")
	str_detect(test\$RecipeName, "Lotus")
	str_detect(test\$FoodName, "LOPROFIN LOW PROTEIN PASTA")
	str_detect(test\$RecipeName, "Loyd grossman")
	str_detect(test\$RecipeName, "Lucky Charms")
	str_detect(test\$RecipeName, "lunchables") str_detect(test\$RecipeName, "Lunchables")
"Mcmuffin")	test\$RecipeName=="Ma Raeburn's 12 sweetened pancakes"
	test\$RecipeName=="Mae's Kitchen 4 Spicy Bean Quarter Pounders, 105g per quarter pounder"
	str_detect(test\$RecipeName, "Maxwell")
	test\$RecipeName=="McVities bonkers berry jaffa cake bar"
	str_detect(test\$RecipeName, "Maggi")
	str_detect(test\$RecipeName, "Malteasers")
	((str_detect(test\$RecipeName, "Marks and") str_detect(test\$RecipeName, "Marks &") str_detect(test\$RecipeName,
	& !(test\$RecipeName=="M&S chicken & lentil soup"
	test\$RecipeName=="M&S Chicken and Grain Soup"
	test\$RecipeName=="M&S Colcannon Potato Mash"
"Mesa")	test\$RecipeName=="M&S new potatoes with butter, parsley, chives and mint 385g pack"
	test\$RecipeName=="M&S new potatoes with herbs"
	test\$RecipeName=="M&S santini tomato side salad"
	test\$RecipeName=="M&S Rainbow Salad"
	test\$RecipeName=="M&S Spicy Lenti soup"
	test\$RecipeName=="M&S super broccoli, spinach & pea soup"
	test\$RecipeName=="Marks and spencers chicken & supergrain soup"
	test\$RecipeName=="M&S fruit salad"))
	test\$RecipeName=="mario breadsticks"
	str_detect(test\$RecipeName, "Mars protein bar") str_detect(test\$RecipeName, "Mars bar")
"Milkbar")	test\$RecipeName=="Mazadar chickpea dahl"
	str_detect(test\$RecipeName, "Mc Cain") str_detect(test\$RecipeName, "McCain") str_detect(test\$RecipeName,
	str_detect(test\$RecipeName, "Mcdonald") str_detect(test\$RecipeName, "McDonald") str_detect(test\$RecipeName,
	test\$RecipeName=="McD Fiery Buffalo Chicken one - crispy"
	test\$RecipeName=="Mesa sunrise"
	test\$RecipeName=="Milbona stracciatella creamy yogurt"
	str_detect(test\$RecipeName, "Milky bar") str_detect(test\$RecipeName, "Milkybar")

```

| ((str_detect(test$RecipeName, "Morrison") | str_detect(test$RecipeName, "Morrsons"))
  & !(test$RecipeName=="Morrison's ranch salad"
    | test$RecipeName=="Morrison's Cod in Parsley Sauce with mash, carrots and peas"
    | test$RecipeName=="Morrison's pilau rice (if microwave flavouring so 4)"))
| str_detect(test$RecipeName, "Muller")
| test$RecipeName=="Ms Molly's strawberry milk lolly"
| test$RecipeName=="Mug Shot chicken & sweetcorn noodles"
| test$RecipeName=="Multi seed roll"
| test$RecipeName=="MyProtein Traditional Oat Flavour Flapjack"
| str_detect(test$RecipeName, "Nairn") | str_detect(test$RecipeName, "nairns")
| test$RecipeName=="Naked Noodle Singapore Curry" | test$RecipeName=="Naked singapore curry noodles" |
str_detect(test$RecipeName, "Nakd")
| test$RecipeName=="Naked Green Machine apple & banana smoothie"
| test$FoodName=="NAKED MANGO MACHINE SMOOTHIE, FORTIFIED" | test$FoodName=="NAKED BLUE MACHINE
BLUEBERRY SMOOTHIE"
| test$FoodName=="NAKED STRAWBERRY, RASBERRY & CRANBERRY JUICE SMOOTHIE FORTIFIED"
| test$RecipeName=="Nandos peri peri hot sauce"
| test$RecipeName=="Nando's peri peri sauce medium"
| test$RecipeName=="Naturis ACE Vitamin Juice Drink"
| str_detect(test$RecipeName, "Nature Valley") | str_detect(test$RecipeName, "Nature valley")
| str_detect(test$RecipeName, "Nescafe")
| str_detect(test$RecipeName, "Nestle")
| test$RecipeName=="New covent garden chicken & vegetable soup" | test$RecipeName=="New covent garden classic
chicken soup"
| test$RecipeName=="New covent garden mushroom soup" | test$RecipeName=="New covent garden slow roasted tomato
soup"
| test$RecipeName=="New York red onion & chive bagel"
| test$RecipeName=="Nobbly Bobbly"
| test$RecipeName=="Nobbly Dobbly"
| test$RecipeName=="Nomadic yogurt & oats crunch clusters strawberry"
| test$RecipeName=="Nongshim Shin Ramyun Noodle Soup"
| test$RecipeName=="Noodles koka"
| str_detect(test$RecipeName, "Nush almond") | str_detect(test$RecipeName, "Nush Almond")
| test$RecipeName=="Nut bar"
| str_detect(test$RecipeName, "Nutella")
| str_detect(test$RecipeName, "Oakhouse Foods")
| test$RecipeName=="Oat so simple coconut"
| test$RecipeName=="Onken 0% fat strawberry yogurt"
| str_detect(test$RecipeName, "oreo") | str_detect(test$RecipeName, "Oreo")
| str_detect(test$RecipeName, "Pasta n sauce") | str_detect(test$RecipeName, "Pasta 'n' sauce")
| test$RecipeName=="Paluszki breadsticks"
| test$RecipeName=="Parsnip nut burger"
| test$RecipeName=="Peter's potato, beef, onion, carrot, and swede in puff pastry"
| str_detect(test$RecipeName, "Phadelphia") | str_detect(test$RecipeName, "Philadelphia")
| str_detect(test$RecipeName, "Pieminister")
| str_detect(test$RecipeName, "Pizza express") | str_detect(test$RecipeName, "pizza express") |
str_detect(test$RecipeName, "Pizza Express")
| str_detect(test$RecipeName, "Pizza Hut")
| str_detect(test$RecipeName, "Pop chips") | str_detect(test$RecipeName, "Popchips")
| str_detect(test$RecipeName, "Popeyes chicken") | str_detect(test$RecipeName, "Popeye chicken")
| test$RecipeName=="Pran Special Chicken Flavour Instant Noodles"
| test$RecipeName=="Pret an manger breakfast muffin"
| test$RecipeName=="Pret blueberry muffin"
| test$RecipeName=="Pret breakfast muffin"
| test$RecipeName=="Pret chicken and bacon baguette"
| test$RecipeName=="Pronutro cooked with milk"
| test$RecipeName=="Propercorn sweet & salty popcorn"
| test$RecipeName=="Provenance Sweet Chilli & Cranberry Coleslaw"
| test$RecipeName=="Pureety Ultimate Soup Kit Fragrant Thai Broth with Vermicelli Noodles"
| test$RecipeName=="Quaker golden syrup porridge"
| test$RecipeName=="Quaker oats sultana, raisin & apple porridge"
| str_detect(test$RecipeName, "Radnor Fizz") | str_detect(test$RecipeName, "Radnor fizz")
| test$RecipeName=="Rankin irish barmbrack"
| test$RecipeName=="Raspberry Smoothie lolly"
| str_detect(test$RecipeName, "Reese")
| test$RecipeName=="Regal Original Cake Rusks"
| test$RecipeName=="Regal rusk cakes"
| test$RecipeName=="Rivercote lightly salted rice crackers"
| test$RecipeName=="Roast in the bag chicken pork sage and onion"
| test$RecipeName=="Roll ups"
| str_detect(test$RecipeName, "Roosters chicken")

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| str_detect(test$RecipeName, "Rustlers") | str_detect(test$RecipeName, "rustlers")
| (str_detect(test$RecipeName, "Sainsbury") & !(test$RecipeName=="Sainsburys Sweet and Crunchy Stir Fry"
| test$RecipeName=="Sainsburys Red Cabbage"
| test$RecipeName=="Sainsbury's Indian Pilau"
| test$RecipeName=="Sainsbury's Sweet Potato Fries with a Polenta and Herb Crumb"
| test$RecipeName=="Sainsburys Sweet Potato Fries with a Polenta and Herb Crumb"
| test$RecipeName=="Sainsbury's Sweet potato, coconut and chilli soup"
| test$RecipeName=="Sainsbury's Wensleydale Cheese with Cranberries"
| test$RecipeName=="Sainsburys parsley sauce"
| test$RecipeName=="Sainsburys tomato, lentil & red pepper soup"
| test$RecipeName=="Sainsburys roasted red pepper houmous"))
| test$RecipeName=="Salted caramel crunch costa"
| test$RecipeName=="Savagers pork meateors"
| test$RecipeName=="Science in Sport Go Isotonic Energy Gel"
| str_detect(test$RecipeName, "Schar")
| str_detect(test$RecipeName, "Screwball")
| test$RecipeName=="Seafood sticks"
| test$RecipeName=="Seeds of change classic bolognese sauce"
| test$RecipeName=="Sharwood's Low Fat Poppadoms"
| test$RecipeName=="Shangri-la chicken flavour noodles"
| test$RecipeName=="Shwartz parsley sauce"
| test$RecipeName=="Sicilian lemon yogurt"
| test$RecipeName=="Ski Yogurt"
| test$RecipeName=="Skyr fat free icelandic style strained vanilla yogurt"
| test$RecipeName=="Skyr strawberry yogurt"
| str_detect(test$RecipeName, "Slimming World")
| str_detect(test$RecipeName, "Smarties")
| test$RecipeName=="Smak American Cola"
| test$RecipeName=="Smiley faces"
| test$RecipeName=="Snackster breakfast muffin"
| test$RecipeName=="Snaktastic sweet & salted popcorn"
| str_detect(test$RecipeName, "Snack a Jack") | str_detect(test$RecipeName, "Snack a jack")
| str_detect(test$RecipeName, "Snack stop")
| str_detect(test$RecipeName, "Snackrite")
| str_detect(test$RecipeName, "Soreen")
| str_detect(test$RecipeName, "Southern fried")
| str_detect(test$RecipeName, "sparkling ice black raspberry")
| test$RecipeName=="Spar Chicken Mayo and Stuffing"
| test$RecipeName=="Spelga low fat toffee yogurt"
| test$RecipeName=="Starbucks Chai Latte"
| str_detect(test$FoodName, "STORK WITH BUTTER SPREAD ONLY")
| str_detect(test$RecipeName, "Subway") | str_detect(test$RecipeName, "subway")
| test$RecipeName=="Sula butterscotch"
| test$RecipeName=="Sunbites popcorn"
| test$RecipeName=="Super easy birthday cake - cocoa cake"
| test$RecipeName=="Taiko yasai sushi"
| str_detect(test$RecipeName, "Tassimo")
| test$RecipeName=="Tasty foods chicken & ham pie"
| test$RecipeName=="Teasers bar"
| test$RecipeName=="Tempeh maple bacon style tofury"
| test$RecipeName=="Tempur mini fillets"
| ((str_detect(test$RecipeName, "Tesco") | str_detect(test$RecipeName, "tesco"))
& !(test$RecipeName=="Tesco apple & mango juice" | test$RecipeName=="Tesco golden syrup instant oats"
| (test$RecipeName=="Tesco houmous" & test$FoodName!="HUMMUS/HOUMOUS, LOW/REDUCED FAT")
| test$RecipeName=="Tesco lentil curls" | test$RecipeName=="Tesco spanish chicken & rice soup"
| test$RecipeName=="Tesco Peppery Babyleaf Salad" | test$RecipeName=="Tesco mediterranean roasting
vegetables"))
| str_detect(test$RecipeName, "The City Kitchen")
| test$RecipeName=="The collective dairy peach & apricot yogurt"
| test$RecipeName=="The Delicatessen Wasabi Peanuts"
| test$RecipeName=="The food doctor mild korma corn & soy crisps"
| test$RecipeName=="The foodie market paleo macadamia & coconut"
| test$RecipeName=="The Great Dairy Collective for Kids, Banana Suckies"
| test$RecipeName=="The original oatley vanilla custard"
| test$RecipeName=="The Original Patty Co. Vegetable Jamaican Patty"
| str_detect(test$RecipeName, "The village bakery") | str_detect(test$RecipeName, "The Village bakery")
| test$RecipeName=="Tilda chilli & lime basmati rice"
| test$RecipeName=="Tilda Kids Mild Curry Rice"
| test$RecipeName=="Tilda mushroom rice"
| test$RecipeName=="Tilda wholegrain pilau basmati rice"
| str_detect(test$FoodName, "TIPTOP") | str_detect(test$FoodName, "TIP TOP")

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| test$RecipeName=="Tiramisu"
| test$RecipeName=="Trek cocoa oat protein bar"
| test$RecipeName=="Trifle"
| test$RecipeName=="Trop 50 Mixed Fruit Juice Drink with Sweetener and Vits C, B3, B5 & B6"
| test$RecipeName=="Tropicana Trop 50 orange and mango juice drink"
| str_detect(test$FoodName, "TYPHOQ QT")
| test$RecipeName=="Ufit Protein Shake Drink Strawberry"
| test$RecipeName=="Uncle Ben's Medium Curry with Rice" | test$RecipeName=="Uncle Ben's Mexican Style Rice"
| test$RecipeName=="Uncle Bens spicy mexican rice"
| test$RecipeName=="Uncle Rons Mutton Pattie"
| test$RecipeName=="Uncle sams original skinny sweet 'n' salt popcorn"
| test$RecipeName=="USN lactose free protein strawberry milkshake"
| test$RecipeName=="Vegan cheese slices"
| test$RecipeName=="Vegan raspberry doughnuts"
| test$RecipeName=="Vidal Strawberry pencils"
| str_detect(test$RecipeName, "Violife")
| str_detect(test$RecipeName, "Wacko")
| (str_detect(test$RecipeName, "Waitrose") & !(test$RecipeName=="Waitrose essential houmous"
| (test$RecipeName=="Waitrose wheatberries, lentils & green vegetables")
| test$RecipeName=="Waitrose wholesome & herby chickpea, spinach & quinoa"))
| str_detect(test$RecipeName, "Wagon wheel") | str_detect(test$RecipeName, "wagon wheely")
| test$RecipeName=="Walnut cob Sainsburys"
| test$RecipeName=="Warburtons fruit teacake"
| test$RecipeName=="weight watchers wrap"
| str_detect(test$RecipeName, "Whitworth")
| str_detect(test$RecipeName, "Wicked kitchen")
| test$RecipeName=="Worldwide foods classic egg fried rice"
| test$RecipeName=="Yarden aubergine salad"
| str_detect(test$RecipeName, "Ye Olde") | str_detect(test$RecipeName, "Ye olde")
| test$RecipeName=="Yeo satay sauce"
| test$RecipeName=="Yeo valley lemon curd"
| str_detect(test$RecipeName, "Yollies")
| str_detect(test$RecipeName, "Yoo moo")
| test$RecipeName=="Yoplait hazelnut yogurt"
| str_detect(test$RecipeName, "Young")
| test$RecipeName=="Yushoi"
| str_detect(test$RecipeName, "Yutaka Takoyaki octopus balls")
| test$RecipeName=="coconut n honey kefir"
| str_detect(test$RecipeName, "Trek protein cocoa coconut flapjack")), "4",

ifelse((test$RecipeName=="Aldi peppery salad" | test$RecipeName=="Aldi full fat greek style natural yogurt, with cream 500g
per pot"
| test$RecipeName=="Arla BOB milk"
| test$RecipeName=="Asda apple & mango juice" | test$RecipeName=="Asda Classic Salad"
| test$RecipeName=="Asda golden sunrise seed, fruit & nut mix" | test$RecipeName=="Asda mixed vegetables"
| test$RecipeName=="Birds eye steamfresh mixed veg"
| str_detect(test$RecipeName, "Copella apple and mango juice")
| test$RecipeName=="Cypressa seeds & fruits mix"
| str_detect(test$RecipeName, "Ellas kitchen") | str_detect(test$RecipeName, "Ella's Kitchen") |
str_detect(test$RecipeName, "ellas kitchen")
| test$RecipeName=="Iceland 4 multi greens steam bags, 150g per steam bag" | test$RecipeName=="Iceland luxury
aberdeen angus quarter pounders"
| test$RecipeName=="Innocent apple & mango fruit juice"
| test$RecipeName=="Milled linseed"
| test$RecipeName=="Morrisons ranch salad"
| test$RecipeName=="M&S fruit salad"
| test$RecipeName=="Rude health bircher soft and fruity"
| test$RecipeName=="Sainsburys Sweet and Crunchy Stir Fry"
| test$RecipeName=="Tesco apple & mango juice" | test$RecipeName=="Tesco Peppery Babyleaf Salad"
| test$RecipeName=="Tesco mediterranean roasting vegetables"
| test$RecipeName=="Tetley superfruits boost tea with vitamin B6"
| test$RecipeName=="tilda brown basmati" | test$RecipeName=="Tilda brown basmati & wild rice" |
test$RecipeName=="Tilda wholegrain rice"
| test$RecipeName=="Total 5% fat green yogurt"
| test$RecipeName=="Tropicana orange, grape & lime juice"
| test$RecipeName=="Waitrose mushroom stirfry", "1",

ifelse((test$RecipeName=="Aldi salmon with ginger, chilli & lime"
| test$RecipeName=="Asda minty baby potatoes" | test$RecipeName=="Asda root veg" | test$RecipeName=="Asda garlic
passata"
| test$RecipeName=="Asda semi-dried tomatoes and mozzarella pot" | test$RecipeName=="Asda Wholegrain Micro Rice"

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| test$RecipeName=="Birds eye steamfresh golden vegetable rice"
| test$RecipeName=="Covent Garden Chicken Soup" | test$RecipeName=="Covent garden chicken soup"
| test$RecipeName=="Daria unsalted nuts"
| test$RecipeName=="Itsu crispy seaweed thin"
| test$RecipeName=="James white beetroot juice"
| test$RecipeName=="Little Dish 1yr+ Mild Korma Cooking Sauce"
| str_detect(test$RecipeName, "Mash Direct")
| test$RecipeName=="M&S chicken & lentil soup"
|   | test$RecipeName=="M&S Chicken and Grain Soup"
|   | test$RecipeName=="M&S Colcannon Potato Mash"
|   | test$RecipeName=="M&S new potatoes with butter, parsley, chives and mint 385g pack"
|   | test$RecipeName=="M&S new potatoes with herbs"
|   | test$RecipeName=="M&S santini tomato side salad"
|   | test$RecipeName=="M&S Rainbow Salad"
|   | test$RecipeName=="M&S Spicy lenti soup"
|   | test$RecipeName=="M&S super broccoli, spinach & pea soup"
|   | test$RecipeName=="Marks and spencers chicken & supergrain soup"
|   | test$RecipeName=="Marks & Spencers Super Rice & quinoa"f22b
| test$RecipeName=="McGerty Fine Foods Caramelised Red Onion Marmalade"
| test$RecipeName=="Mestemacher organic sunflower seed bread"
| test$RecipeName=="Morrisons Cod in Parsley Sauce with mash, carrots and peas"
| test$RecipeName=="Morrisons pilau rice "
| test$RecipeName=="Multigrain alphabites "
| test$RecipeName=="Naked coconut water "
| test$RecipeName=="Natures pick oriental stir fry"
| test$RecipeName=="Quaker Oats so simple pot made up with water"
| test$RecipeName=="Riya's Farsi Puri"
| test$RecipeName=="Sainsbury's Indian Pilau"
| test$RecipeName=="Sainsbury's Sweet Potato Fries with a Polenta and Herb Crumb"
|   | test$RecipeName=="Sainsburys Sweet Potato Fries with a Polenta and Herb Crumb"
|   | test$RecipeName=="Sainsbury's Sweet potato, coconut and chilli soup"
|   | test$RecipeName=="Sainsbury's Wensleydale Cheese with Cranberries"
|   | test$RecipeName=="Sainsburys parsley sauce"
|   | test$RecipeName=="Sainsburys tomato, lentil & red pepper soup"
|   | test$RecipeName=="Sainsburys roasted red pepper houmous"
| test$RecipeName=="Tesco golden syrup instant oats"
|   | (test$RecipeName=="Tesco houmous" & test$FoodName!="HUMMUS/HOUMOUS, LOW/REDUCED FAT")
|   | test$RecipeName=="Tesco lentil curls"
|   | test$RecipeName=="Tesco spanish chicken & rice soup"
| test$RecipeName=="The Artisan Bread Company garlic & chilli flatbreads"
| test$RecipeName=="Tropicana orange & mango juice"
| test$RecipeName=="Unearthed spanish potato omelette"
| test$RecipeName=="Uncle Ben Golden Vegetable Rice" | test$RecipeName=="Uncle Ben's Golden Vegetable Rice"
|   | test$RecipeName=="Wholegrain med rice"
| test$RecipeName=="Waitrose essential houmous"
|   | test$RecipeName=="Waitrose wheatberries, lentils & green vegetables"
|   | test$RecipeName=="Waitrose wholesome & herby chickpea, spinach & quinoa"),"3","NA")))))))
```

STEP 4

Classify every other item, according to every NDNS subsidiary food group.

Globally, we tried to keep a conservative approach.

Some global decision

We will deal with the recipe in the next step. Thus, in this step, we will put the item in the “smaller” NOVA group for helping class the item in the next step.

For example: the salt will be classed as 2 in this step. If part of a recipe, it will be classed 3 or 4, accordingly, in the next step.

BOILED: we consider that “fresh” food just boiled (without precision of salt water in the item name) goes into group 1

GRILLED: we consider that “fresh” food just grilled (without precision of added fat in the item name) goes into group 1

PUFA: assumption is that it's not automatically 4 as some oil are naturally PUFA

Classification NOVA for NDNS – May 2023

Subsidiary food group code (SubFoodGroupCode)	Subsidiary food group name (SubFoodGroupDesc)	NOVA group - Adams & White	NOVA group - Rauber	OUR CLASSIFICATION	Why
1C	Pizza	processed ingredient if just base; ultra-processed otherwise	4	<pre> ifelse((test\$SubFoodGroupCode == "1C" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse(test\$SubFoodGroupCode == "1C", "4", </pre>	<p>If "homemade" : 3. Else 4</p> <p>But I think that if the pizza is homemade, already decomposed. Thus, we supposed that all the Pizzas in this group were bought, so 4.</p> <p>For the base, we can suppose that if there were homemade it has been already decomposed right? So the base listed here are bought ready-to-used, so most likely to be 4 (with a lot of additives).</p>
1D	Pasta (manufactured products and ready meals)	ultra-processed	4	4	
1E	Pasta (other, including homemade dishes)	processed ingredient	*	<pre> ifelse((test\$SubFoodGroupCode == "1E" & (str_detect(test\$FoodName, "REDUCED FAT") str_detect(test\$FoodName, "BACON") str_detect(test\$FoodName, "PACKET MIX") str_detect(test\$FoodName, "SAUCE MIXES"))), "4", ifelse((test\$SubFoodGroupCode == "1E" & ((str_detect(test\$FoodName, "BOILED") & </pre>	<p>If "REDUCED FAT", "PACKET MIX", "SAUCE MIXES", "BACON": 4</p> <p>If fried, its 3.</p> <p>If dry or just boiled, its 1.</p> <p>Else is 3</p>

Classification NOVA for NDNS – May 2023

				!str_detect(test\$FoodName, "NOT BOILED")) (str_detect(test\$FoodName, "DRY") & !str_detect(test\$FoodName, "NOT DRY") str_detect(test\$FoodName, "DRIED")))), "1", ifelse(test\$SubFoodGroupCode= ="1E", "3",	
1F	Rice (manufactured products and ready meals)	ultra-processed	4	4	
1G	Rice (other, including homemade dishes)	processed ingredient	*	ifelse((test\$SubFoodGroupCode ="1G" & ((str_detect(test\$FoodName, "FRIED") & !str_detect(test\$FoodName, "NOT FRIED")) str_detect(test\$FoodName, "WITH PUFA OIL") str_detect(test\$FoodName, "RICE AND VEGETABLES") str_detect(test\$FoodName, "VEGETABLE RISOTTO") str_detect(test\$FoodName, "PRAWN RISOTTO") str_detect(test\$FoodName, "GROUND RICE"))), "3", ifelse(test\$SubFoodGroupCode= ="1G", "1",	If fried or "WITH PUFA OIL", "RICE AND VEGETABLES", "VEGETABLE RISOTTO", "PRAWN RISOTTO", "GROUND RICE (WEST AFRICAN DISH)" its 3. If FRIED, its 3. Else 1

1R	Other cereals	processed ingredient	*	<pre> ifelse((test\$SubFoodGroupCode =="1R" & (str_detect(test\$FoodName, "CHEESE") & !str_detect(test\$FoodName, "NOT CHEESE")) (str_detect(test\$FoodName, "MARG") & !str_detect(test\$FoodName, "NOT MARG")) (str_detect(test\$FoodName, "PURCHASED") & !str_detect(test\$FoodName, "NOT PURCHASED")) str_detect(test\$FoodName, "CUSTARD POWDER") str_detect(test\$FoodName, "DUMPLINGS MADE WITH") str_detect(test\$FoodName, "PANCAKES, SERVED WITH DUCK") str_detect(test\$FoodName, "POT NOODLE") str_detect(test\$FoodName, "PRAWN CRACKERS") str_detect(test\$FoodName, "SESAME PRAWN TOASTS") str_detect(test\$FoodName, "YORKSHIRE PUDDING MADE WITH WHOLE MILK AND BEEF DRIPPING") str_detect(test\$FoodName, "PACKET MIX") str_detect(test\$FoodName, "BVO") (str_detect(test\$FoodName, "YORKSHIRE PUDD") & </pre>	<p>If "BATTER WITH", "COUS COUS WITH", "FRIED", "POPPADOMS GRILLED", "SESAME PRAWN TOASTS", "YORKSHIRE PUDD WITH SEMI SKIMMED MILK NO FAT HOMEMADE", "WEST INDIAN DUMPLING" its 3</p> <p>If "CHEESE", "PURCHASED", "MARG", "CUSTARD POWDER", "DUMPLINGS MADE WITH", "PANCAKES, SERVED WITH DUCK", "POT NOODLE", "PRAWN CRACKERS", "SESAME PRAWN TOASTS", "PACKET MIX", "YORKSHIRE PUDDING MADE WITH WHOLE MILK AND BEEF DRIPPING", "BVO", its 4.</p> <p>Else 1</p> <p>DECISIONS TAKE ON 26.10.2021 MEETING</p> <p>1</p> <ul style="list-style-type: none"> CORNMEAL PORRIDGE MADE WITH WATER FLOUR WHITE BREADMAKING FLOUR WHOLEMEAL, BREADMAKING GLUTEN FREE FLOUR MIX OATMEAL WITH COOKING LOSSES OATS WITH LOSSES ON BOILING (LOW SUGAR) FS UPDATE OATS, ROLLED, PLAIN, DRY WEIGHT, NOT QUAKER, READY BREK/ INSTANT OATS (LOW SUGAR) FS UPDATE PLAIN FLOUR AFTER BAKING POLENTA, HYDRATED, GRILLED SR FLOUR AFTER BAKING STRONG BREAD FLOUR WITH COOKING LOSSES WHOLEMEAL FLOUR WITH LOSSES <p>3</p> <ul style="list-style-type: none"> BATTER WITH COOKING LOSSES COUS COUS WITH ADDITIONS COOKED COUS COUS WITH SALAD PAPADUMS/POPPADOMS FRIED IN VEG. GHEE PAPADUMS/POPPADOMS GRILLED OR BAKED SESAME PRAWN TOASTS YORKSHIRE PUDD WITH SEMI SKIMMED MILK NO FAT HOMEMADE
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				<pre> str_detect(test\$FoodName, "FROZEN")))), "4", ifelse((test\$SubFoodGroupCode =="1R" & ((str_detect(test\$FoodName, "BATTER WITH") & !str_detect(test\$FoodName, "NOT BATTER WITH")) (str_detect(test\$FoodName, "FRIED") & !str_detect(test\$FoodName, "NOT FRIED")) str_detect(test\$FoodName, "COUS COUS WITH")) str_detect(test\$FoodName, "POPPADOMS GRILLED") str_detect(test\$FoodName, "SESAME PRAWN TOASTS") str_detect(test\$FoodName, "WEST INDIAN DUMPLING") (str_detect(test\$FoodName, "MILK") & !(str_detect(test\$FoodName, "NO MILK") str_detect(test\$FoodName, "WITHOUT MILK"))) str_detect(test\$FoodName, "YORKSHIRE PUDD")))), "3", ifelse(test\$SubFoodGroupCode= =="1R", "1", </pre>	4 <ul style="list-style-type: none"> • CUSTARD POWDER • DUMPLINGS MADE WITH ANIMAL SUET • DUMPLINGS MADE WITH VEGETABLE • NACHOS CHEESE (CORN CHIPS WITH MELTED CHEESE AND SALSA) • PANCAKES, SERVED WITH DUCK, CRISPY, CHINESE ONLY • POT NOODLE STYLE SNACKS AS SERVED • PRAWN CRACKERS • YORKSHIRE PUDDING MADE UP FROM PACKET MIX WITH EGG AND WATER • YORKSHIRE PUDDING MADE WITH SEMI-SKIMMED MILK AND BVO HOMEMADE • YORKSHIRE PUDDING MADE WITH WHOLE MILK AND BEEF DRIPPING • YORKSHIRE PUDDING PACKET MIX MADE UP • YORKSHIRE PUDDING PURCHASED CHILLED OR FROZEN, BAKED • CHEESE AND ONION PUFFS, MADE WITH PUFF PASTRY • CHOCOLATE FILLED CREPES/PANCAKES PURCHASED • CHEESE & ONION PASTY PURCHASED • DUMPLINGS WITH PLAIN & WHOLEMEAL FLOUR AND MARG • POPPADOMS/PAPPADOMS READY TO EAT PURCHASED OR RETAIL
2R	White bread (not high fibre, not multiseed bread)	ultra-processed	4	<pre> ifelse(test\$SubFoodGroupCode= =="2R" & test\$FoodName=="BREADCUM BS WHITE HOMEMADE DRIED" & (str_detect(test\$RecipeName, </pre>	We assume that in UK, most of the bread are not freshly made unpackaged. So 4. However, check in the recipe if some homemade bread.

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				"homemade") str_detect(test\$RecipeName, "Homemade")), "3", ifelse(test\$SubFoodGroupCode= ="2R", "4",	<ul style="list-style-type: none"> BREADCUMBS WHITE HOMEMADE DRIED & Beetroot falafel homemade BREADCUMBS WHITE HOMEMADE DRIED & Homemade cod fish fingers
3R	Wholemeal bread	ultra-processed	4	4	We assume that in UK, most of the bread are not freshly made unpackaged. So 4. However, check in the recipe if some homemade bread.
4R	Other bread	ultra-processed	4	4	We assume that in UK, most of the bread are not freshly made unpackaged. So 4. However, check in the recipe if some homemade bread.
5R	High fibre breakfast cereals	ultra-processed	4	4	3 <ul style="list-style-type: none"> MUESLI, NO ADDED SUGAR MUESLI, NO ADDED SUGAR WITH EXTRA FRUIT & NUTS OAT AND BRAN FLAKES NO ADDITIONS OWN BRAND EG ASDA OAT AND BRAN FLAKES NO ADDITIONS OWN BRAND EG SAINSBURYS OAT GRANOLA Else 4
6R	Other breakfast cereals (not high fibre)	ultra-processed	4	4	
7A	Biscuits(manufactured/retail)	ultra-processed	4	4	
7B	Biscuits (homemade)	processed ingredient	*	ifelse(test\$SubFoodGroupCode= ="7B" & str_detect(test\$FoodName, "FLAVOURED"), "4", ifelse(test\$SubFoodGroupCode= ="7B", "3",	We consider that the purpose of NOVA being to point out the “UPF” with additives etc., the homemade biscuits are 3. EXCEPT FLAVOURED 4 <ul style="list-style-type: none"> WHOLEMEAL BISCUIT PLAIN OR FLAVOURED
8B	Fruit pies (manufactured)	ultra-processed	4	4	
8C	Fruit pies (homemade)	processed ingredient	*	ifelse(test\$SubFoodGroupCode= ="8C" &	If the pastry is purchased, its 4. If the pasty is homemade, its 3. MARGARINE = 4 so if “MARGARINE” then 4

				(str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "MARGARINE")), "4", ifelse(test\$SubFoodGroupCode="8C", "3",	
8D	Buns cakes and pastries (manufactured)	ultra-processed	4	4	
8E	Buns cakes and pastries (homemade)	processed ingredient	*	ifelse(test\$SubFoodGroupCode="8E" & ((str_detect(test\$FoodName, "CHOCOLATE") & !str_detect(test\$FoodName, "NOT CHOCOLATE")) (str_detect(test\$FoodName, "MARGARINE") & !str_detect(test\$FoodName, "NOT MARGARINE")) (str_detect(test\$FoodName, "MARG") & !str_detect(test\$FoodName, "NOT MARG")) (str_detect(test\$FoodName, "ARTIFICIAL") & !str_detect(test\$FoodName, "NOT ARTIFICIAL")) (str_detect(test\$FoodName, "CHEESE") & !str_detect(test\$FoodName, "NOT CHEESE")) (str_detect(test\$FoodName, "JAM") & !str_detect(test\$FoodName, "NOT JAM"))	<p>We consider that the purpose of NOVA being to point out the “UPF” with additives etc., the homemade buns cakes and pastries are 3.</p> <p>CHOCOLATE = 4 so if “CHOCOLATE” then 4. MARGARINE = 4 so if “MARGARINE” or “MARG” then 4. ARTIFICIAL CREAM = 4 JAM = 4 (DECISIONS MADE ON 26.10.2021 MEETING)</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>3</p> <ul style="list-style-type: none"> • SHORTCRUST PASTRY COOKED <p>4</p> <ul style="list-style-type: none"> • FLAKY PASTRY COOKED • JAM TREACLE TART TWO CRUST • MINCE PIES SWEET INDIVIDUAL W SHORTCRUST • VIC. SPONGEWITH FONDANT ICING & BUTTER CREAM FILL • VICTORIA SANDWICH WITH JAM FILLING & ICING

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				<pre> str_detect(test\$FoodName, "FLAKY PASTRY COOKED") str_detect(test\$FoodName, "MINCE PIES") str_detect(test\$FoodName, "VIC. SPONGEWITH FONDANT ICING")), "4", ifelse(test\$SubFoodGroupCode= ="8E", "3", </pre>	
9C	Cereal based milk puddings (manufactured)	ultra-processed	4	4	
9D	Cereal based milk puddings (homemade)	processed ingredient	*	3	<p>We consider that the purpose of NOVA being to point out the “UPF” with additives etc., the homemade cereal-based milk puddings are 3.</p> <p>However, check in the recipe if some “manufactured” products remains.</p>
9E	Sponge puddings (manufactured)	ultra-processed	4	4	
9F	Sponge puddings (homemade)	processed ingredient	*	<pre> ifelse(test\$SubFoodGroupCode= ="9F" & ((str_detect(test\$FoodName, "CHOCOLATE") & !str_detect(test\$FoodName, "NOT CHOCOLATE"))) Test\$FoodName=="STEAMED SPONGE PUDDING WITH SYRUP OR JAM"), "4", ifelse(test\$SubFoodGroupCode= ="9F", "3", </pre>	<p>We consider that the purpose of NOVA being to point out the “UPF” with additives etc., the homemade sponge puddings are 3.</p> <p>Except if CHOCOLATE, because chocolate = 4 so if “CHOCOLATE” then 4.</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>4</p> <ul style="list-style-type: none"> STEAMED SPONGE PUDDING WITH SYRUP OR JAM <p>However, check in the recipe if some “manufactured” products remains.</p>
9G	Other cereal based puddings (manufactured)	ultra-processed	4	4	

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9H	Other cereal based puddings (homemade)	processed ingredient	*	<pre> ifelse(test\$SubFoodGroupCode= ="9H" & ((str_detect(test\$FoodName, "CHOCOLATE") & !str_detect(test\$FoodName, "NOT CHOCOLATE")) (str_detect(test\$FoodName, "ARTIFICIAL") & !str_detect(test\$FoodName, "NOT ARTIFICIAL")) str_detect(test\$FoodName, "BANOFFEE") str_detect(test\$FoodName, "CHEESECAKE") str_detect(test\$FoodName, "TRIFLE") str_detect(test\$FoodName, "JELLY") str_detect(test\$RecipeName, "cheese") str_detect(test\$RecipeName, "Cheese")), "4", ifelse(test\$SubFoodGroupCode= ="9H", "3", </pre>	<p>We consider that the purpose of NOVA being to point out the “UPF” with additives etc., the homemade other cereal based puddings are 3.</p> <p>CHOCOLATE = 4 so if “CHOCOLATE” then 4. ARTIFICIAL CREAM = 4 BANOFFEE & CHEESECAKE & TRIFLE & JELLY in 4 (because of the biscuits and fingers in it)</p> <p>If the recipe is “cheese” something (like cheese pancake), its 4</p> <p>However, check in the recipe if some “manufactured” products remains.</p>
10R	Whole milk	minimally processed	1	1	
11R	Semi-skimmed milk	minimally processed	1	1	
12R	Skimmed milk	minimally processed	1	<pre> ifelse((test\$SubFoodGroupCode =="12R" & test\$FoodName=="FLORA PRO ACTIV SKIMMED MILK"), "4", ifelse(test\$SubFoodGroupCode= =="12R", "1", </pre>	<p>If “FLORA PRO ACTIV SKIMMED MILK” : 4 Else 1</p>

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13A	Infant formula	ultra-processed	4	4	
13B	Cream (including imitation cream)	ultra-processed if sweetened, imitation; processed ingredient otherwise	*	<pre> ifelse((test\$SubFoodGroupCode =="13B" & (str_detect(test\$FoodName, "DREAM TOPPING") str_detect(test\$FoodName, "AEROSOL") str_detect(test\$FoodName, "ALTERNATIVE") str_detect(test\$FoodName, "EMLEA") str_detect(test\$FoodName, "ELMLEA") str_detect(test\$FoodName, "VERY LOW FAT C"))), "4", ifelse(test\$SubFoodGroupCode= =="13B", "1", </pre>	<p>if DREAM TOPPING or EMLEA or ALTERNATIVE or AEROSOL (added sugar)</p> <p>- 4</p> <p>If "VERY LOW FAT Crème fraiche" : 4 as added sucrose, Starch, & Stabiliser</p> <p>Else 1</p>
13R	Other milk	ultra-processed if sweetened or fortified; processed ingredient if just dried; minimally processed otherwise	*	<pre> ifelse((test\$SubFoodGroupCode =="13R"& (str_detect(test\$FoodName, "FLAVOURED") str_detect(test\$FoodName, "WEETABIX") (str_detect(test\$FoodName, "CHOCOLATE") & !str_detect(test\$FoodName, "NOT CHOCOLATE")) str_detect(test\$FoodName, "MILK SHAKE") str_detect(test\$FoodName, "MILKSHAKE") str_detect(test\$FoodName, "MARS BAR MILK") str_detect(test\$FoodName, "SWEETENED") </pre>	<p>If "FLAVOURED" or "MARS BAR MILK" or ("CHOCOLATE" and pas "NOT CHOCOLATE") or "WEETABIX ", "MILK SHAKE", "MILKSHAKE", "SWEETENED", "ALTERNATIVE", "COFFEE CREAMER", "COFFEE WHITENER", "EVAPORATED", "LACTOFREE", "LACTOSE FREE", "MILK DRINK", "SOYA CUSTARD", "COFFEE MATE POWDER", "PROZERO PROTEIN FREE MILK", "FORTIFIED SOYA DRINK"</p> <p>- 4</p> <p>Else 1</p> <p>1</p> <ul style="list-style-type: none"> BREAST MILK MATURE BUTTERMILK SEMI-SKIMMED DRIED MILK POWDER SEMI-SKIMMED GOATS MILK, PASTEURISED MILK GOATS SUMMER MILK GOATS WINTER MILK DRIED SKIMMED WITH ADDED NON MILK FAT MILK DRIED SKIMMED WITH ADDED VIT

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				str_detect(test\$FoodName, "ALTERNATIVE") str_detect(test\$FoodName, "MILK DRINK") str_detect(test\$FoodName, "COFFEE CREAMER") str_detect(test\$FoodName, "COFFEE WHITENER") str_detect(test\$FoodName, "COFFEE MATE POWDER") str_detect(test\$FoodName, "LACTOFREE") str_detect(test\$FoodName, "LACTOSE FREE") str_detect(test\$FoodName, "EVAPORATED") str_detect(test\$FoodName, "SOYA CUSTARD"))), "4", ifelse(test\$SubFoodGroupCode="13R", "1",	<ul style="list-style-type: none"> DRIED SKIMMED MILK POWDER DECISIONS MADE ON 26.10.2021 MEETING 4 <ul style="list-style-type: none"> MILK CONDENSED SKIMMED SWEETENED MILK CONDENSED WHOLE SWEETENED COFFEE CREAMER, LIQUID (GLUCOSE SYRUP AND VEGETABLE FAT) COFFEE WHITENER, LIQUID (SKIMMED MILK AND NON MILK FAT) EVAPORATED MILK LOW FAT CANNED LACTOFREE FRESH SKIMMED MILK FORTIFIED LACTOSE FREE SEMI SKIMMED MILK MILK DRINK PASTEURISED/STERILISED NOT CHOCOLATE FLAVOUR MILK EVAPORATED SOYA CUSTARD WITH ADDED CALCIUM
14A	Cottage cheese	ultra-processed	3	3	
14B	Cheddar cheese	ultra-processed	3	ifelse((test\$SubFoodGroupCode=="14B" & (str_detect(test\$FoodName, "REDUCED FAT") str_detect(test\$FoodName, "LOW FAT") str_detect(test\$FoodName, "VEGETARIAN") str_detect(test\$FoodName, "HALF FAT"))), "4", ifelse(test\$SubFoodGroupCode=="14B", "3",	"REDUCED FAT", "LOW FAT", "VEGETARIAN", "HALF FAT" = 4 Else 3

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14R	Other cheese	ultra-processed	*	<pre> ifelse((test\$SubFoodGroupCode =="14R" & (str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "PROCESSED") str_detect(test\$FoodName, "REDUCED FAT") str_detect(test\$FoodName, "CHEESE SOFT") str_detect(test\$FoodName, "CHEESE SPREAD") str_detect(test\$FoodName, "DAIRYLEA") str_detect(test\$FoodName, "LAUGHING COW") str_detect(test\$FoodName, "LACTOSE FREE SOFT") str_detect(test\$FoodName, "SMOKED HARD") str_detect(test\$FoodName, "CHEESE CREAM") str_detect(test\$FoodName, "MASCARPONE") str_detect(test\$FoodName, "KERRY FOODS CHEESTRINGS") str_detect(test\$FoodName, "LOW FAT") str_detect(test\$FoodName, "SOYA") str_detect(test\$FoodName, "TOFU"))), "4", ifelse(test\$SubFoodGroupCode= =="14R", "3", </pre>	<p>If "PURCHASED" or "PROCESSED" or "REDUCED FAT" or "CHEESE SOFT" or "CHEESE SPREAD" or "DAIRYLEA" or "LAUGHING COW" or "LACTOSE FREE SOFT" or "SMOKED HARD", "CHEESE CREAM", "TOAST TOPPERS CANNED", "MASCARPONE", "KERRY FOODS CHEESTRINGS", "LOW FAT", "SOYA", "TOFU" → 4 Else 3</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>3</p> <ul style="list-style-type: none"> • BABYBEL ORIGINAL • CHEESE PORT SALUT/ST PAULIN • SNACK HARD CHEESE <p>4</p> <ul style="list-style-type: none"> • CHEDDAR TYPE SMOKED HARD CHEESE • CHEESE CREAM FULLFAT • CHEESE MASCARPONE • KERRY FOODS CHEESTRINGS • LOW FAT MOZZARELLA • SOYA CHEESE • TOFU CHEESE • TOFUTTI SOYA/TOFU BLEND CHEESE PRODUCTS
15B	Yogurt	minimally processed if	*	<pre> ifelse((test\$SubFoodGroupCode =="15B" & </pre>	<p>Need to check in the other Yogurt 1 according to years. If part of the "1" list then 1</p>

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		unsweetened, unfortified, no additions; ultra-processed otherwise		<pre>(test\$FoodName=="YOGURT, GREEK STYLE, COWS, NATURAL, WHOLE MILK" test\$FoodName=="KEFIR" test\$FoodName=="YOGURT , WHOLE MILK, NATURAL, UNSWEETENED" test\$FoodName=="GREEK YOGURT SHEEP" test\$FoodName=="YOGURT GOAT MILK")), "1", ifelse(test\$SubFoodGroupCode=="15B", "4",</pre>	<p>Else 4</p> <p>1</p> <ul style="list-style-type: none"> • YOGURT, GREEK STYLE, COWS, NATURAL, WHOLE MILK • GREEK YOGURT SHEEP • YOGURT , WHOLE MILK, NATURAL, UNSWEETENED • YOGURT GOAT MILK • KEFIR
15C	Fromage frais and other dairy desserts (manufactured)	ultra-processed	4	<pre>ifelse((test\$SubFoodGroupCode=="15C" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade"))) & (test\$FoodName=="FRUIT BASED PANNACOTTA" test\$FoodName=="FRUIT FOOL, FULL FAT" test\$FoodName=="JELLY MADE WITH SEMI-SKIMMED MILK")), "3", ifelse((test\$SubFoodGroupCode=="15C" & (test\$FoodName=="FROMAGE FRAIS, FULL FAT, NATURAL, UNSWEETENED" test\$FoodName=="QUARK")), "3",</pre>	<p>If part of a recipe</p> <ul style="list-style-type: none"> - If “homemade” in the recipe name & “FRUIT BASED PANNACOTTA”, “FRUIT FOOL, FULL FAT”, “JELLY MADE WITH SEMI-SKIMMED MILK”: 3 <p>Else</p> <ul style="list-style-type: none"> - If “FROMAGE FRAIS, FULL FAT, NATURAL, UNSWEETENED” or “QUARK” = 3 - Else 4

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				<pre> ifelse(test\$SubFoodGroupCode= =="15C", "4", </pre>	
15D	Dairy desserts (homemade)	processed ingredient	*	<pre> ifelse((test\$SubFoodGroupCode =="15D" & ((str_detect(test\$FoodName, "FLAVOUR") & !str_detect(test\$FoodName, "NOT FLAVOUR"))) (str_detect(test\$FoodName, "CHOCOLATE") & !str_detect(test\$FoodName, "NOT CHOCOLATE"))) str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "PROCESSED") str_detect(test\$FoodName, "SWEETENED") str_detect(test\$FoodName, "ALTERNATIVE") str_detect(test\$FoodName, "SOYA") str_detect(test\$FoodName, "RASMALAI INDIAN DESSERT MILK CREAM"))), "4", ifelse((test\$SubFoodGroupCode =="15D" & (test\$FoodName=="BAKED EGG CUSTARD (WITH SEMI- SKIMMED MILK)" test\$FoodName=="EGG CUSTARD BAKED" test\$FoodName=="CREME CARMEL HOMEMADE" test\$FoodName=="CREME </pre>	<p>If "FLAVOUR" (and "NOT FLAVOUR"), "CHOCOLATE" (and "NOT CHOCOLATE"), "PURCHASED", "PROCESSED", "SWEETENED", "ALTERNATIVE", "SOJA", "RASMALAI INDIAN DESSERT" (because its contain Rasgulla Balls) = 4</p> <p>If part of a recipe = 3 If not part of a recipe</p> <ul style="list-style-type: none"> - "BAKED EGG CUSTARD (WITH SEMI-SKIMMED MILK)", "EGG CUSTARD BAKED", "CREME BRULEE", "CREME CARMEL HOMEMADE", "CREME CARMEL MADE W S/SKIMMED MILK" = 3 - Else NA

				<p>CARAMEL MADE W S/SKIMMED MILK" test\$FoodName=="CREME BRULEE")), "3",</p> <p>ifelse((test\$SubFoodGroupCode=="15D" & !test\$RecipeName==""), "3",</p> <p>ifelse((test\$SubFoodGroupCode=="15D" & test\$RecipeName==""), "NA",</p>	
16C	Manufactured egg products, including ready meals	ultra-processed	4	4	
16D	Other eggs and egg dishes, including homemade	minimally processed	*	<p>ifelse((test\$SubFoodGroupCode=="16D" & (str_detect(test\$FoodName, "MERINGUES FILLED WITH WHIPPED CREAM") str_detect(test\$FoodName, "HAM") str_detect(test\$FoodName, "SPREADABLE BUTTER") str_detect(test\$FoodName, "REDUCED FAT PUFA SPREAD") str_detect(test\$FoodName, "WITH REDUCED FAT SPREAD"))), "4",</p> <p>ifelse((test\$SubFoodGroupCode=="16D" & (str_detect(test\$RecipeName, "homemade") </p>	<p>If "MERINGUES FILLED WITH WHIPPED CREAM", "SPREADABLE BUTTER", "REDUCED FAT PUFA SPREAD", "WITH REDUCED FAT SPREAD", "HAM" = 4</p> <p>If "FRIED" or "COOKED IN" or ("MILK" AND not "NO MILK" or "WITHOUT MILK") or "EGG NO FAT SEMI SKIMMED MILK" or "SCRAMBLED EGG WITH SEMI", "OMELETTE WITH POTATOES CHEESE AND ONION", "QUICHE", "SOUFFLE", "EGG FU YUNG", "EGG & CRUMB" = 3</p> <p>Else 1</p> <p>1</p> <ul style="list-style-type: none"> • DUCK EGG BOILED • EGG AFTER BAKING/BOILING • EGG FRIED WITHOUT FAT • EGG POACHED • EGG WHITE ONLY BOILED • EGG WHITE RAW • EGG WHOLE DRIED • EGG WHOLE RAW

			<pre> str_detect(test\$RecipeName, "Homemade"))), "3", ifelse((test\$SubFoodGroupCode =="16D" & ((str_detect(test\$FoodName, "FRIED") & !str_detect(test\$FoodName, "WITHOUT FAT")) str_detect(test\$FoodName, "COOKED IN") str_detect(test\$FoodName, "SOUFFLE")) str_detect(test\$FoodName, "OMELETTE WITH POTATOES CHEESE AND ONION")) (str_detect(test\$FoodName, "MILK") & !(str_detect(test\$FoodName, "NO MILK") str_detect(test\$FoodName, "WITHOUT MILK"))) str_detect(test\$FoodName, "SCRAMBLED EGG WITH SEMI") str_detect(test\$FoodName, "QUICHE") str_detect(test\$FoodName, "EGG NO FAT SEMI SKIMMED MILK") str_detect(test\$FoodName, "WITH ADDED FAT") str_detect(test\$FoodName, "WITH OMEGA 3"))), "3", ifelse(test\$SubFoodGroupCode= =="16D", "1", </pre>	<ul style="list-style-type: none"> • EGG YOLK ONLY BOILED • EGG YOLK RAW • EGGS BOILED • SCRAMBLED EGG WITHOUT MILK
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17R	Butter	processed ingredient	2	ifelse(test\$SubFoodGroupCode="17R" & str_detect(test\$FoodName, "SPREAD"), "4", ifelse(test\$SubFoodGroupCode="17R", "2",	If "SPREAD" = 4 Else 2
18A	Polyunsaturated margarine	processed ingredient	4	4	
18B	Polyunsaturated oils	processed ingredient	2	2	
19A	Polyunsaturated low fat spread	processed ingredient	4	4	
19R	Low fat spread not polyunsaturated	processed ingredient	4	4	
20A	Block margarine	processed ingredient	4	4	
20B	Soft margarine not polyunsaturated	processed ingredient	4	4	
20C	Other cooking fats and oils not polyunsaturated	processed ingredient	2	2	
21A	Reduced fat spread (polyunsaturated)	processed ingredient	4	4	
21B	Reduced fat spread (not polyunsaturated)	processed ingredient	4	4	
22A	Ready meals/meal centres based	ultra-processed	4	4	

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	on bacon and ham				
22B	Other bacon and ham (including homemade dishes)	ultra-processed	*	<p>ifelse((test\$SubFoodGroupCode=="22B" & test\$FoodName=="PORK SHOULDER"), "1",</p> <p>ifelse((test\$SubFoodGroupCode=="22B" & str_detect(test\$FoodName,"RASHERS") & str_detect(test\$FoodName,"SMOKED") & str_detect(test\$FoodName,"NOT SMOKED")), "3",</p> <p>ifelse((test\$SubFoodGroupCode=="22B" & str_detect(test\$FoodName,"RASHERS") & !str_detect(test\$FoodName,"SMOKED")), "3",</p>	<p>If PORK SHOULDER = 1</p> <p>DECISION with YANAINA</p> <p>rashers: 3 as it has added salt but assuming it's not reconstituted (except when smoked)</p> <p>smoked: 4</p> <ul style="list-style-type: none"> - BACON RASHERS OTHER CUT SMOKED GRILLED LEAN & FAT - RASHERS BACK SMOKED FRIED L&F - RASHERS BACK SMOKED GRILLED L&F - RASHERS BACON SMOKED FRIED LEAN AND FAT - RASHERS GAMMON SMOKED GRILLED L&F - RASHERS MIDDLE SMOKED FRIED LEAN AND FAT - RASHERS MIDDLE SMOKED GRILLED L&F - RASHERS SMOKED GAMMON GRILLED LEAN ONLY - RASHERS SMOKED STREAKY GRILLED LEAN AND FAT - RASHERS STREAKY SMOKED FRIED LEAN AND FAT - SMOKED BACON BACK XTRA TRIM GRILLED OR DRY FRIED - SMOKED BACON STEAKS/CHOPS - SMOKEBACON BACON GRILLED OR DRY FRIED RED SALT/FAT - SMOKED HAM NO ADDED WATER ANY CUT <p>Else 4</p>
23A	Manufactured beef products (including ready meals)	ultra-processed	4	4	
23B	Other beef & veal (including homemade recipe dishes)	minimally processed	*	<p>ifelse((test\$SubFoodGroupCode=="23B" & (str_detect(test\$FoodName,"BOTTLED PASTA SAUCE") (str_detect(test\$FoodName,"MARG") &</p>	<p>If "BOTTLED PASTA SAUCE", "DOLMIO WHITE SAUCE" "MARG" then 4</p> <p>If "BRAISED", "BOILED", "GRILLED", "ROAST" AND NOT "SALTED", "IN RED WINE", "BEEF TOPSIDE ROAST LEAN AND FAT", "BEEF TOPSIDE ROAST LEAN ONLY", "ROAST BEEF COOKED SLICES", "SILVERSIDE NOT SALTED POT-ROASTED BRAISED LEAN", "SILVERSIDE NOT SALTED POT-ROASTED BRAISED LEAN+FAT" = 1</p>

			<pre> !str_detect(test\$FoodName, "NOT MARG")))), "4", ifelse((test\$SubFoodGroupCode =="23B" & (str_detect(test\$FoodName, "NOT SALT") & (str_detect(test\$FoodName, "BRAISED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "GRILLED") str_detect(test\$FoodName, "ROAST")) & !(str_detect(test\$FoodName, "IN RED WINE") str_detect(test\$FoodName, "BEEF TOPSIDE ROAST LEAN AND FAT") str_detect(test\$FoodName, "BEEF TOPSIDE ROAST LEAN ONLY") str_detect(test\$FoodName, "ROAST BEFF COOKED SLICES") str_detect(test\$FoodName, "SILVERSIDE SALTED BOILED") str_detect(test\$FoodName, "SILVERSIDE NOT SALTED POT- ROASTED BRAISED LEAN") str_detect(test\$FoodName, "SILVERSIDE NOT SALTED POT- ROASTED BRAISED LEAN+FAT")))), "1", ifelse(test\$SubFoodGroupCode= =="23B", "3", </pre>	<p>If “FRIED”, “STEW”, “BEEF MINCE SKIMMED THICK GRAVY”, “LASAGNE HOMEMADE”, “BEEF TOPSIDE ROAST LEAN AND FAT”, “BEEF TOPSIDE ROAST LEAN ONLY”, “ROAST BEFF COOKED SLICES”, “SILVERSIDE NOT SALTED POT-ROASTED BRAISED LEAN”, “SILVERSIDE NOT SALTED POT-ROASTED BRAISED LEAN+FAT” AND NOT “BEEF MINCE LEAN/LOW FAT STEWED 5% FAT ONLY”, “BEEF STEW AND DUMPLINGS”, “STEW STEAK L&F GRAVY & VEG”, “STEW STEAK L&F GRAVY VEG POTA” = 3</p> <p>Else 3</p> <p>Check if some takeaway are listed and if yes, if some “brand”: 4, else 3.</p>
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24A	Manufactured lamb products (including ready meals)	ultra-processed	4	4	
24B	Other lamb (including homemade recipe dishes)	minimally processed	*	<p>ifelse((test\$SubFoodGroupCode == "24B" & (str_detect(test\$FoodName, "LAMB BURGER") str_detect(test\$FoodName, "WITH CANNED CURRY SAUCE"))), "4",</p> <p>ifelse((test\$SubFoodGroupCode == "24B" & (str_detect(test\$FoodName, "BRAISED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "GRILLED") str_detect(test\$FoodName, "ROAST")) & !(str_detect(test\$FoodName, "LAMB LEG CHOPS / STEAKS GRILLED / FRIED LEAN ONLY"))), "1",</p> <p>ifelse((test\$SubFoodGroupCode == "24B" & (str_detect(test\$FoodName, "FRIED") str_detect(test\$FoodName, "STEW") str_detect(test\$FoodName, "HOMEMADE") str_detect(test\$FoodName, "TAKEAWAY")) &</p>	<p>If "LAMB BURGER", "WITH CANNED CURRY SAUCE" then 4</p> <p>If "BRAISED", "BOILED", "GRILLED", "ROAST" AND NOT "SALTED", "IN RED WINE", "LAMB LEG RAW LEAN AND FAT" = 1</p> <p>If "FRIED", "STEW", "HOMEMADE" AND NOT "SHISH KEBAB" = 3</p> <p>If "TAKEAWAY" = 3</p> <p>Else 3</p> <p>Check if some takeaway are listed and if yes, if some "brand":4, else 3.</p>

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				!(str_detect(test\$FoodName, "SHISH KEBAB"))), "3", ifelse(test\$SubFoodGroupCode=="24B", "3",	
25A	Manufactured pork products(including ready meals)	ultra-processed	4	4	
25B	Other pork (including homemade recipe dishes)	minimally processed	*	<p>ifelse((test\$SubFoodGroupCode=="25B" & (str_detect(test\$FoodName, "PORK BURGERS MADE WITH EXTRA LEAN PORK") str_detect(test\$FoodName, "BARBECUE SAUCE") str_detect(test\$FoodName, "BARBECUE STYLE") str_detect(test\$FoodName, "BACON"))), "4",</p> <p>ifelse((test\$SubFoodGroupCode=="25B" & (str_detect(test\$FoodName, "BRAISED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "GRILLED") str_detect(test\$FoodName, "ROAST"))), "1",</p> <p>ifelse((test\$SubFoodGroupCode=="25B" & (str_detect(test\$FoodName, "FRIED") </p>	<p>If "PORK BURGERS MADE WITH EXTRA LEAN PORK", "BARBECUE SAUCE", "BARBECUE STYLE", "BACON" then 4 If no recipe</p> <p>If "BRAISED", "BOILED", "GRILLED", "ROAST" AND NOT "SALTED", "IN RED WINE" = 1</p> <p>If "FRIED", "STEW", "HOMEMADE" = 3</p> <p>Else 3</p> <p>Check if some takeaway are listed and if yes, if some "brand":4, else 3.</p> <p>Decision with Yanaina: "SWEET AND SOUR PORK" = 3</p>

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				str_detect(test\$FoodName, "STEW") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse(test\$SubFoodGroupCode == "25B", "3",	
26A	Manufactured coated chicken/turkey products	ultra-processed	4	4	
27A	Manufactured chicken products (including ready meals)	ultra-processed	4	4	
27B	Other chicken/turkey (including homemade recipe dishes)	minimally processed	*	ifelse((test\$SubFoodGroupCode == "27B" & (str_detect(test\$FoodName, "SAUCE MIX") str_detect(test\$FoodName, "WITH JAR CURRY SAUCE") str_detect(test\$FoodName, "WITH CANNED/BOTTLE SAUCE"))), "4", ifelse((test\$SubFoodGroupCode == "27B" & (str_detect(test\$FoodName, "BRAISED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "GRILL") str_detect(test\$FoodName, "ROAST")) &	If "SAUCE MIX", "WITH JAR CURRY SAUCE", "WITH CANNED/BOTTLE SAUCE" then 4 If "BRAISED", "BOILED", "GRILL", "ROAST" AND NOT "SALTED", "IN RED WINE", "CHICKEN WINGS MARINATED OR BBQ OR GRILLED", "CHICKEN TIKKA, GRILLED, NO BONES INCLUDES TAKEAWAY" = 1 If "FRIED", "STEW", "HOMEMADE" AND NOT "CHICKEN STIR FRIED WITH PEPPERS IN BLACK BEAN SAUCE", = 3 If "TAKEAWAY" = 3 Else 3 Check if some takeaway are listed and if yes, if some "brand":4, else 3.

				<pre>!(str_detect(test\$FoodName, "CHICKEN WINGS MARINATED OR BBQ OR GRILLED") str_detect(test\$FoodName, "CHICKEN TIKKA, GRILLED, NO BONES INCLUDES TAKEAWAY"))), "1", ifelse((test\$SubFoodGroupCode =="27B" & (str_detect(test\$FoodName, "FRIED") str_detect(test\$FoodName, "STEW") str_detect(test\$FoodName, "HOMEMADE") str_detect(test\$FoodName, "TAKEAWAY")) & !(str_detect(test\$FoodName, "CHICKEN STIR FRIED WITH PEPPERS IN BLACK BEAN SAUCE"))), "3", ifelse(test\$SubFoodGroupCode= =="27B", "3",</pre>	
28R	Liver and dishes	ultra-processed if pate/processed; minimally processed otherwise	*	<pre>ifelse((test\$SubFoodGroupCode =="28R" & (str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "LIVER PATE"))), "4", ifelse((test\$SubFoodGroupCode =="28R" & ((str_detect(test\$FoodName, "BRAISED") & !str_detect(test\$FoodName,</pre>	<p>If "PURCHASED", "LIVER PATE" then 4 If "BRAISED", "BOILED", "GRILL", "ROAST", "LIVER OX BAKED IN OVEN NO FAT", "LAMBS LIVER WITH LOSSES" AND NOT "SALTED", "IN RED WINE", = 1</p> <p>If "FRIED", "STEW", "HOMEMADE" = 3</p> <p>Else 3</p>

				"BRAISED IN")) str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "GRILL") str_detect(test\$FoodName, "ROAST") test\$FoodName=="LIVER OX BAKED IN OVEN NO FAT" test\$FoodName=="LAMBS LIVER WITH LOSSES") & !(str_detect(test\$FoodName, " SALTED")) str_detect(test\$FoodName, "IN RED WINE"))), "1", ifelse((test\$SubFoodGroupCode == "28R" & (str_detect(test\$FoodName, "FRIED") str_detect(test\$FoodName, "STEW") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse(test\$SubFoodGroupCode= "28R", "3",	
29R	Burgers and kebabs purchased	ultra-processed	4	4	
30A	Ready meals based on sausages	ultra-processed	4	4	
30B	Other sausages (including	ultra-processed	*	4	

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	homemade dishes)				
31A	Meat pies and pastries (manufactured)	ultra-processed	4	4	
31B	Meat pies and pastries (homemade)	processed ingredient	*	4	<p>All the recipes here were 4, but check before run code.</p> <p>4</p> <ul style="list-style-type: none"> • CHICKEN PIE PASTRY TOP • CHICKEN VOL-AU-VENT • MINCED BEEF PIE PASTRY TOP & BOTTOM • MINCED BEEF PIE TOP PASTRY • SAUSAGE ROLL FLAKY PASTRY • STEAK PIE PASTRY TOP ONLY • STEAK PIE PUFF PASTRY 2 CRUSTS
32A	Other meat products (manufactured including ready meals)	ultra-processed	4	4	
32B	Other meat (including homemade recipe dishes)	minimally processed	*	<pre> ifelse((test\$SubFoodGroupCode == "32B" & (test\$FoodName == "CORNED BEEF HASH" test\$FoodName == "CHOPPED HAM AND PORK WITH EGG" str_detect(test\$FoodName, "SAUSAGE"))), "4", ifelse((test\$SubFoodGroupCode == "32B" & (str_detect(test\$FoodName, "BRAISED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, </pre>	<p>If "CORNED BEEF HASH", "CHOPPED HAM AND PORK WITH EGG", "SAUSAGE", "SPAM FRITTERS" = 4</p> <p>If "BRAISED", "BOILED", "GRILL", "ROAST" AND NOT "SALTED", "IN RED WINE" = 1</p> <p>If "FRIED", "STEW", "HOMEMADE" = 3</p> <p>If recipe</p> <ul style="list-style-type: none"> - If homemade "DUCK, CRISPY CHINESE, MEAT ONLY" = 3 - If "DUCK, CRISPY CHINESE, MEAT ONLY" = 4 (if not homemade 4) <p>Else 3</p> <p>DECISION with Yanaina</p> <ul style="list-style-type: none"> - BLACK PUDDING IN BATTER TAKEAWAY: 3

				"GRILL") str_detect(test\$FoodName, "ROAST"))), "1", ifelse((test\$SubFoodGroupCode =="32B" & (str_detect(test\$FoodName, "FRIED") str_detect(test\$FoodName, "STEW") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse((test\$SubFoodGroupCode =="32B" & test\$FoodName=="DUCK, CRISPY CHINESE, MEAT ONLY" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "HOMEMADE"))), "3", ifelse((test\$SubFoodGroupCode =="32B" & test\$FoodName=="DUCK, CRISPY CHINESE, MEAT ONLY"), "4", ifelse(test\$SubFoodGroupCode= "32B", "3",	
33R	White fish coated or fried	minimally processed if any fish or fillet; ultra-processed if fish finger or fishcake	*	ifelse((test\$SubFoodGroupCode =="33R" & (str_detect(test\$FoodName, "NO COATING") str_detect(test\$FoodName, "NOCOAT") str_detect(test\$FoodName, 	If "NO COATING", "NOCOAT", "COATED IN FLOUR" = 3 If, "HOMEMADE" = 3 Else 4 3 <ul style="list-style-type: none"> COD COATED IN FLOUR FRIED IN OLIVE OIL

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				"COATED IN FLOUR") str_detect(test\$FoodName, "HOMEMADE") str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade"))), "3", ifelse(test\$SubFoodGroupCode= ="33R", "4"	<ul style="list-style-type: none"> • COD FRIED IN PUFA NO COATING • HADDOCK NO COATING FRIED IN PUFA • LEMON SOLE FRIED IN OLIVE OIL • PLAICE NO BONES FLOUR BLENDED
34C	Manufactured white fish products (including ready meals)	ultra-processed	4	4	
34D	Other white fish (including homemade dishes)	ultra-processed if smoked or cured, minimally processed otherwise	*	ifelse(test\$SubFoodGroupCode= ="34D" & str_detect(test\$FoodName, "IN CHEESE SAUCE"), "4", ifelse((test\$SubFoodGroupCode =="34D" & (str_detect(test\$FoodName, "GRILLED WITH BUTTER") str_detect(test\$FoodName, "WITH OLIVE OIL") str_detect(test\$FoodName, "POACHED IN SEMI-SKIMMED MILK") str_detect(test\$FoodName, "POACHED IN MILK") str_detect(test\$FoodName, "POACHED IN WHOLE MILK") str_detect(test\$FoodName, "FROM A RESTAURANT")	If "IN CHEESE SAUCE" = 4 If "GRILLED WITH BUTTER", "POACHED IN SEMI-SKIMMED MILK", "POACHED IN WHOLE MILK", "WITH OLIVE OIL" = 3 If "FROM A RESTAURANT" or "HOMEMADE" = 3 If "NO BUTTER" & ("STEAMED" but no "CHINESE FISH BALLS STEAMED"), "GRILL", "POACHED", "COD HADDOCK WITH LOSSES", "CAVIAR" = 1 Else 3

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				<pre> str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse((test\$SubFoodGroupCode =="34D" & ((str_detect(test\$FoodName, "STEAMED") & test\$FoodName!="CHINESE FISH BALLS STEAMED") test\$FoodName=="CAVIAR" str_detect(test\$FoodName, "GRILL") str_detect(test\$FoodName, "POACHED") str_detect(test\$FoodName, "COD HADDOCK WITH LOSSES"))), "1", ifelse(test\$SubFoodGroupCode= =="34D", "3", </pre>	
34E	Manufactured shellfish products (including ready meals)	ultra-processed	4	<pre> ifelse(test\$SubFoodGroupCode= =="34E" & str_detect(test\$FoodName, "CANNED"), "3", ifelse(test\$SubFoodGroupCode= =="34E", "4", </pre>	<p>If "CANNED" : 3</p> <p>Else 4</p>
34F	Other shellfish (including homemade dishes)	minimally processed	*	<pre> ifelse((test\$SubFoodGroupCode =="34F" & (str_detect(test\$FoodName, "COATED IN BATTER") str_detect(test\$FoodName, "COATED FRIED") str_detect(test\$FoodName, "FISH AND SEAFOOD CHOWDER"))), "4", </pre>	<p>If "FISH AND SEAFOOD CHOWDER" then 4</p> <p>If "FRIED IN" = 3</p> <p>If "TAKEAWAY" or "HOMEMADE" = 3</p> <p>If "BOILED", "STEAMED", "MUSSELS NOT CANNED NO SHELLS" = 1</p> <p>Else 3</p>

				<pre> ifelse((test\$SubFoodGroupCode =="34F" & (str_detect(test\$FoodName, "FRIED IN") str_detect(test\$FoodName, "TAKEAWAY") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse((test\$SubFoodGroupCode =="34F" & (str_detect(test\$FoodName, "STEAMED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "MUSSELS NOT CANNED NO SHELLS"))), "1", ifelse(test\$SubFoodGroupCode= =="34F", "3", </pre>	<p>Decision with Yanaina “COATED IN BATTER”, “COATED FRIED” can be 3 (not 4 mandatory)</p>
34G	Manufactured canned tuna products (including ready meals)	ultra-processed	*	<pre> ifelse((test\$SubFoodGroupCode =="34G" & ((str_detect(test\$FoodName,"C ANNED") & str_detect(test\$FoodName, "ONLY")) str_detect(test\$FoodName, "TUNA IN OIL FISH AND OIL"))), "3", ifelse(test\$SubFoodGroupCode= =="34G" & str_detect(test\$RecipeName, "toastie"), "4", </pre>	<p>If recipe “Tuna and sweetcorn toastie” = 4</p> <p>If “CANNED” & “ONLY” then 3 If “TUNA IN OIL FISH AND OIL” then 3</p> <p>Else 4</p>

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				ifelse(test\$SubFoodGroupCode="34G", "4",	
34H	Other canned tuna(including homemade dishes)	ultra-processed	*	ifelse(test\$SubFoodGroupCode="34H" & str_detect(test\$RecipeName, "Tuna crunch"), "4", ifelse(test\$SubFoodGroupCode="34H" & (str_detect(test\$FoodName, "& SAUCE") test\$FoodName=="TUNA PASTA"), "4", ifelse(test\$SubFoodGroupCode="34H", "3",	If recipe "Tuna crunch" = 4 If in this list, then 4 - TUNA & PASTA BAKE WITH SWEETCORN CHEESE & SAUCE - TUNA PASTA Else 3
35A	Manufactured oily fish products (including ready meals)	ultra-processed	4	ifelse((test\$SubFoodGroupCode=="35A" & (test\$FoodName=="SUSHI, SALMON BASED" test\$FoodName=="SUSHI, TUNA BASED")), "3", ifelse(test\$SubFoodGroupCode="35A", "4",	If sushi = 3 Else 4
35B	Other oily fish (including homemade dishes)	minimally processed	*	ifelse((test\$SubFoodGroupCode=="35B" & (str_detect(test\$RecipeName, "Itsu") str_detect(test\$FoodName, "KIPPER BOIL IN BAG") str_detect(test\$RecipeName, "Trout cooked with vegetables") str_detect(test\$RecipeName, "Tuna steak"))), "4",	If recipe - If "Itsu salmon & avocado baby rolls" = 4 - If homemade or "Salmon fillet", "Salmon cooked", "Salmon baked", "salmon", "Salmon", "Fish fry", "Trout cooked with vegetables", "Tuna steak" = 3 If else - If "FRIED IN", "BAKED BUTTER", "WITH BUTTER", "SAUCE", "CURRIED", "STEWED", "SMOKED", "COATED", "TUNA PASTA" = 3 - If "TAKEAWAY" or "HOMEMADE" = 3

				<pre> ifelse((test\$SubFoodGroupCode =="35B" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "HOMEMADE"))), "3", ifelse((test\$SubFoodGroupCode =="35B" & (str_detect(test\$FoodName, "FRIED IN") str_detect(test\$FoodName, "STEWED") str_detect(test\$FoodName, "BAKED BUTTER") str_detect(test\$FoodName, "WITH BUTTER") str_detect(test\$FoodName, "CURRIED") str_detect(test\$FoodName, "SAUCE") str_detect(test\$FoodName, "SMOKED") str_detect(test\$FoodName, "COATED") str_detect(test\$FoodName, "TAKEAWAY") str_detect(test\$FoodName, "HOMEMADE") test\$FoodName=="TUNA PASTA")), "3", ifelse((test\$SubFoodGroupCode =="35B" & str_detect(test\$FoodName, "FISHCAKES")), "4", </pre>	<p>- If " FISHCAKES" = 4</p> <p>Else 1</p>
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				<pre>ifelse(test\$SubFoodGroupCode= ="35B", "1"</pre>	
36A	Carrots (raw)	minimally processed	1	<pre>ifelse(test\$SubFoodGroupCode= ="36A" & str_detect(test\$RecipeName, "Wagamama Chicken Katsu Curry"), "3", ifelse((test\$SubFoodGroupCode =="36A" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade") str_detect(test\$RecipeName, "Coleslaw"))), "3", ifelse(test\$SubFoodGroupCode= ="36A", "1",</pre>	<p>If recipe</p> <ul style="list-style-type: none"> - If "Wagamama Chicken Katsu Curry" = 3 - If homemade or "Coleslaw" = 3 <p>Else 1</p>
36B	Salad and other raw vegetables	minimally processed	*	<pre>ifelse(test\$SubFoodGroupCode= ="36B" & str_detect(test\$FoodName, "Homemade juice"), "1", ifelse((test\$SubFoodGroupCode =="36B" & (str_detect(test\$FoodName, "PURCHAED") str_detect(test\$FoodName, "PURCHASED"))), "4", ifelse((test\$SubFoodGroupCode =="36B" & (str_detect(test\$FoodName,</pre>	<p>If "Homemade juice" = 1 "PURCHASED" or "PURCHAED" = 4 If "CUCUMBER & YOGURT RAITA", "TZATZIKI" = 3 If recipe homemade or "Coleslaw" or "OIL & VINEGAR DRESSING" = 3 Else 1</p>

				"\"CUCUMBER & YOGURT RAITA\"") str_detect(test\$FoodName, "\"TZATZIKI\"") str_detect(test\$FoodName, "\"COLESLAW\"") str_detect(test\$RecipeName, "\"Coleslaw\"") str_detect(test\$RecipeName, "\"homemade\"") str_detect(test\$RecipeName, "\"Homemade\"))), \"3\", ifelse(test\$SubFoodGroupCode= = \"36B\", \"1\",	
36C	Tomatoes raw	minimally processed	1	ifelse(test\$SubFoodGroupCode= = \"36C\" & (str_detect(test\$RecipeName, "\"toast\"") str_detect(test\$RecipeName, "\"Ham\"") str_detect(test\$RecipeName, "\"burger\"))), \"4\", ifelse((test\$SubFoodGroupCode = \"36C\" & (str_detect(test\$RecipeName, "\"homemade\"") str_detect(test\$RecipeName, "\"Homemade\"))), \"3\", ifelse(test\$SubFoodGroupCode= = \"36C\", \"1\"	If recipe - If \"toast\", \"Ham\", \"burger\" = 4 - If homemade = 3 Else 1
37A	Peas not raw	ultra-processed if canned with addition of salt/sugar;	*	ifelse((test\$SubFoodGroupCode = \"37A\" & (str_detect(test\$FoodName, \" ADDED SUGAR AND/OR SALT\")	If \"ADDED SUGAR AND/OR SALT\" then 4 If recipe - If \"ham\", \"Ham\", \"Corned beef\", \"Bacon\", \"Chorizo\", \"chorizo\" = 4 - If homemade = 3

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		minimally processed otherwise		<pre> str_detect(test\$RecipeName, "Corned beef") str_detect(test\$RecipeName, "ham") str_detect(test\$RecipeName, "Ham") str_detect(test\$RecipeName, "bacon") str_detect(test\$RecipeName, "Bacon") str_detect(test\$RecipeName, "Chorizo") str_detect(test\$RecipeName, "chorizo"))), "4", ifelse((test\$SubFoodGroupCode =="37A" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade"))), "3", ifelse((test\$SubFoodGroupCode =="37A" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="37A" & (str_detect(test\$FoodName, "CANNED") & !str_detect(test\$FoodName, "NOT CANNED"))), "3", ifelse(test\$SubFoodGroupCode= =="37A", "1", </pre>	<p>- Else 3</p> <p>Else if CANNED (BUT NOT "NOT CANNED") then 3</p> <p>Else 1</p>
37B	Green beans not raw	ultra-processed if canned with	*	<pre> ifelse((test\$SubFoodGroupCode =="37B" & </pre>	<p>If "ADDED SUGAR AND/OR SALT" then 4</p> <p>If recipe = 3</p>

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		addition of salt/sugar; minimally processed otherwise		<pre>str_detect(test\$FoodName, "ADDED SUGAR AND/OR SALT")), "4", ifelse((test\$SubFoodGroupCode =="37B" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="37B" & ((str_detect(test\$FoodName, "CANNED") & !str_detect(test\$FoodName, "NOT CANNED"))) str_detect(test\$FoodName, "FRIED IN"))), "3", ifelse(test\$SubFoodGroupCode= =="37B", "1",</pre>	<p>Else if CANNED (BUT NOT "NOT CANNED") then 3 If FRIED IN : 3 Else 1</p>
37C	Baked beans	ultra-processed	4	4	
37D	Leafy green vegetables not raw	ultra-processed if canned with addition of salt/sugar; minimally processed otherwise	*	<pre>ifelse((test\$SubFoodGroupCode =="37D" & test\$RecipeName!=""), "3", ifelse(test\$SubFoodGroupCode= =="37D", "1",</pre>	<p>If recipe = 3 Else if "FRIED IN" or "CANNED" (BUT NOT "NOT CANNED") then 3 Else 1</p>
37E	Carrots not raw	ultra-processed if canned with addition of salt/sugar; minimally processed otherwise	*	<pre>ifelse((test\$SubFoodGroupCode =="37E" & (str_detect(test\$FoodName, "ADDED SUGAR AND/OR SALT")) str_detect(test\$RecipeName, "Corned beef") str_detect(test\$RecipeName, "ham") </pre>	<p>If "ADDED SUGAR AND/OR SALT" then 4 If recipe - If "ham", "Ham", "Corned beef", "Bacon", "Chorizo", "chorizo" = 4 - Else 3 Else if CANNED (BUT NOT "NOT CANNED") then 3 Else if Fried : 3 Else 1</p>

				<pre> str_detect(test\$RecipeName, "Ham") str_detect(test\$RecipeName, "bacon") str_detect(test\$RecipeName, "Bacon") str_detect(test\$RecipeName, "Chorizo") str_detect(test\$RecipeName, "chorizo"))), "4", ifelse((test\$SubFoodGroupCode =="37E" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="37E" & (str_detect(test\$FoodName, "CANNED") & !str_detect(test\$FoodName, "NOT CANNED")) str_detect(test\$FoodName, "FRIED")), "3", ifelse(test\$SubFoodGroupCode= =="37E", "1", " </pre>	
37F	Tomatoes not raw	ultra-processed if preserved in oil; minimally processed otherwise	*	<pre> ifelse((test\$SubFoodGroupCode =="37F" & ((str_detect(test\$FoodName, "ADDED SUGAR AND/OR SALT") & !str_detect(test\$FoodName, "NO ADDED SUGAR AND/OR SALT")) str_detect(test\$RecipeName, "Corned beef") str_detect(test\$RecipeName, "ham") </pre>	<p>If "ADDED SUGAR AND/OR SALT" then 4</p> <p>If recipe</p> <ul style="list-style-type: none"> - If "ham", "Ham", "Corned beef", "Bacon", "Chorizo", "chorizo" = 4 - If homemade or "Vegetables oven cooked" = 3 - Else 3 <p>Else if "GRILLED" then 1</p> <p>Else 3</p>

				<pre> str_detect(test\$RecipeName, "Ham") str_detect(test\$RecipeName, "bacon") str_detect(test\$RecipeName, "Bacon") str_detect(test\$RecipeName, "Chorizo") str_detect(test\$RecipeName, "chorizo"))), "4", ifelse((test\$SubFoodGroupCode =="37F" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade") str_detect(test\$RecipeName, "Vegetables oven cooked"))), "3", ifelse((test\$SubFoodGroupCode =="37F" & test\$RecipeName!=""), "3", ifelse(test\$SubFoodGroupCode= =="37F" & str_detect(test\$FoodName, "GRILLED"), "1", ifelse(test\$SubFoodGroupCode= =="37F", "3", </pre>	
371	Beans and pulses (including ready meal & homemade dishes)	ultra-processed if canned with addition of salt/sugar or branded meal;	*	<pre> ifelse((test\$SubFoodGroupCode =="371" & ((str_detect(test\$FoodName, "ADDED SALT") & !str_detect(test\$FoodName, </pre>	<p>If "ADDED SALT" but not "NO ADDED SALT" = 4</p> <p>If "LOW/REDUCED FAT", "PURCHASED", "BEANS PINTO REFRIED BEANS EG ELPASO", "CHICKPEA AND VEGETABLE CURRY WITH COOK IN SAUCE AND PEPPERS", "BEAN SALAD RETAIL", "BEANBURGER RED KIDNEY BEAN WITH BUN + RELISH" then 4</p>

		processed ingredient if ingredient (flour); minimally processed otherwise	<p>"NO ADDED SALT")) str_detect(test\$FoodName, "LOW/REDUCED FAT") str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "CHICKPEA AND VEGETABLE CURRY WITH COOK IN SAUCE AND PEPPERS") str_detect(test\$FoodName, "BEANS PINTO REFRIED BEANS EG ELPASO") str_detect(test\$RecipeName, "Corned beef") str_detect(test\$RecipeName, "ham") str_detect(test\$RecipeName, "Ham") str_detect(test\$RecipeName, "bacon") str_detect(test\$RecipeName, "Bacon") str_detect(test\$RecipeName, "Chorizo") str_detect(test\$RecipeName, "chorizo") str_detect(test\$FoodName, "BEAN SALAD RETAIL") test\$FoodName=="BEANBURGER RED KIDNEY BEAN WITH BUN + RELISH")), "4",</p> <p>ifelse((test\$SubFoodGroupCode=="371" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName,</p>	<p>If recipe</p> <ul style="list-style-type: none"> - If "ham", "Ham", "Corned beef", "Bacon", "Chorizo", "chorizo" = 4 - If homemade = 3 - Else 3 <p>Else if CANNED (BUT NOT "NOT CANNED") or "HUMMUS, NOT CANNED", "IN SALTED WATER", "BUTTER" (BUT NOT "NO BUTTER" AND NOT "BUTTER BEAN") or "CURRY" then 3 If on this list, 3</p> <ul style="list-style-type: none"> • LENTIL DAHL WITH SUNFLOWER OIL GARLIC AND ONIONS • PLAIN DOSA INDIAN PANCAKE LENTILS RICE FLOUR • SPICY RED KIDNEY BEANS • THREE BEAN SALAD • BEANBURGER RED KIDNEY BEAN COOKED NO BUN <p>Else 1</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>3</p> <ul style="list-style-type: none"> • HUMMUS, NOT CANNED
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				<p>"Homemade") test\$FoodName=="HUMMUS, NOT CANNED" test\$FoodName=="BEANBURGE R RED KIDNEY BEAN COOKED NO BUN")), "3",</p> <p>ifelse((test\$SubFoodGroupCode =="371" & test\$RecipeName!=""), "3",</p> <p>ifelse((test\$SubFoodGroupCode =="371" & ((str_detect(test\$FoodName, "CANNED") & !str_detect(test\$FoodName, "NOT CANNED")) str_detect(test\$FoodName, "IN SALTED WATER") str_detect(test\$FoodName, "CURRY") (str_detect(test\$FoodName, "BUTTER") & & ! (str_detect(test\$FoodName, "NO BUTTER") str_detect(test\$FoodName, "BUTTER BEAN")))), "3",</p> <p>ifelse((test\$SubFoodGroupCode =="371" & (test\$FoodName=="LENTIL DAHL WITH SUNFLOWER OIL GARLIC AND ONIONS" test\$FoodName=="PLAIN DOSA INDIAN PANCAKE LENTILS RICE FLOUR" test\$FoodName=="SPICY RED</p>	
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				KIDNEY BEANS" test\$FoodName=="THREE BEAN SALAD")), "3", ifelse(test\$SubFoodGroupCode= ="37I", "1",	
37K	Meat alternatives (including ready meals and homemade dishes)	ultra-processed	4	4	
37L	Other manufactured vegetable products (including ready meals)	ultra-processed	4	ifelse(test\$SubFoodGroupCode= ="37L" & test\$FoodName=="SUSHI, VEGETARIAN"), "3", ifelse(test\$SubFoodGroupCode= ="37L", "4",	If SUSHI, VEGETARIAN = 3 Else 4
37M	Other vegetables (including homemade dishes)	minimally processed	*	ifelse((test\$SubFoodGroupCode =="37M" & ((str_detect(test\$FoodName, "ADDED SALT") & !str_detect(test\$FoodName, "NO ADDED SALT")) str_detect(test\$FoodName, "LOW/REDUCED FAT") str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "BREADCRUMB") str_detect(test\$FoodName, "MATAR PANEER - PEA AND CHEESE CURRY") str_detect(test\$FoodName, "BEETROOT PICKLED IN	If "ADDED SALT" but not "NO ADDED SALT" = 4 If "LOW/REDUCED FAT", "PURCHASED", "BREADCRUMB", "VEGETARIAN HAGGIS" "MATAR PANEER - PEA AND CHEESE CURRY", "BEETROOT PICKLED IN VINEGAR", "STUFFED & BREADED" then 4 if recipe = 3 Else if CANNED (BUT NOT "NOT CANNED"), "PICKLED" (BUT NOT "NOT PICKLED") or "FRIED" or "FRYING" or "ROAST IN" or "ROASTED IN" or "SAUTEED BLENDED OIL" or "SALTED" or "CASSEROLE" or "HOT SWEETENED PICKLED PEPPERS" or "GHERKINS PICKLED", "HOMEMADE", "TAKEAWAY", "CURRY", "TOMATO SAUCE WITH COURGETTES AND NO OIL", "CHEESE SLICE", "IN A CREAMY TOMATO SAUCE" then 3 if on this list, 3 <ul style="list-style-type: none"> All BHAI / PAKORA AND BIRYANI AND GOULASH dishes ONION RINGS VEGETABLE KIEV All PIE All RISOTTO

			<p>VINEGAR") str_detect(test\$FoodName, "STUFFED & BREADED") test\$FoodName=="VEGETARIAN HAGGIS")), "4",</p> <p>ifelse((test\$SubFoodGroupCode =="37M" & test\$RecipeName!=""), "3",</p> <p>ifelse((test\$SubFoodGroupCode =="37M" & ((str_detect(test\$FoodName, "CANNED") & !str_detect(test\$FoodName, "NOT CANNED")) str_detect(test\$FoodName, "FRIED") str_detect(test\$FoodName, "FRYING") str_detect(test\$FoodName, "ROAST IN") str_detect(test\$FoodName, "ROASTED IN") str_detect(test\$FoodName, "SAUTEED BLENDED OIL") str_detect(test\$FoodName, "SAUTEED IN") (str_detect(test\$FoodName, "SALTED") & !str_detect(test\$FoodName, "UNSALTED")) str_detect(test\$FoodName, "CASSEROLE") str_detect(test\$FoodName, "HOT SWEETENED PICKLED PEPPERS") </p>	<ul style="list-style-type: none"> • All TEMPURA • VINE LEAF STUFFED • CAULIFLOWER CHEESE MADE WITH SEMI SKIMMED MILK • BOMBAY ALOO • LAVERBREAD • SAUERKRAUT • VEGETABLE CHOW MEIN • VEGETABLE STEW • VOL AU VENTS MADE WITH MUSHROOM SAUCE AND PASTRY <p>Else 1</p>
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				<pre> str_detect(test\$FoodName, "GHERKINS PICKLED") str_detect(test\$FoodName, "HOMEMADE") str_detect(test\$FoodName, "TAKEAWAY") str_detect(test\$FoodName, "TOMATO SAUCE WITH COURGETTES AND NO OIL"))), "3", ifelse((test\$SubFoodGroupCode =="37M" & (str_detect(test\$FoodName, "CURRY") str_detect(test\$FoodName, "CURRIED") str_detect(test\$FoodName,"PA KORA") str_detect(test\$FoodName, "BHAJI") str_detect(test\$FoodName, "BHINDI") str_detect(test\$FoodName, "BIRYANI") str_detect(test\$FoodName, "GOULASH") str_detect(test\$FoodName, "VEGETABLE KIEV") test\$FoodName=="VOL AU VENTS MADE WITH MUSHROOM SAUCE AND PASTRY" test\$FoodName=="BOMBAY ALOO" str_detect(test\$FoodName, "LAVERBREAD") </pre>	
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				str_detect(test\$FoodName, "CHEESE SLICE") str_detect(test\$FoodName, "VINE LEAF STUFFED") str_detect(test\$FoodName, "IN A CREAMY TOMATO SAUCE") (str_detect(test\$FoodName, "MILK") & !str_detect(test\$FoodName, "NO MILK")) str_detect(test\$FoodName, "PIE") str_detect(test\$FoodName, "RISOTTO") str_detect(test\$FoodName, "TEMPURA") str_detect(test\$FoodName, "SAUERKRAUT") str_detect(test\$FoodName, "VEGETABLE CHOW MEIN") str_detect(test\$FoodName, "VEGETABLE STEW") str_detect(test\$FoodName, "ONION RINGS"))), "3", ifelse(test\$SubFoodGroupCode="37M", "1",	
38A	Chips purchased including takeaway	ultra-processed	4	4	
38C	Other manufactured potato products fried/baked	ultra-processed	4	4	
38D	Other fried/roast	minimally processed	*	ifelse((test\$SubFoodGroupCode=="38D" &	If "BATTERED", "BACON", "MAR" and not "NO MAR", "TRENCH", "REDUCED FAT SPREAD", "FLORA" : 4

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	potatoes(including homemade dishes)			<pre>(str_detect(test\$FoodName, "BATTERED") str_detect(test\$FoodName, "BACON") (str_detect(test\$FoodName, "MAR") & !str_detect(test\$FoodName, "NO MAR")) str_detect(test\$FoodName, "TRENZ") str_detect(test\$FoodName, "REDUCED FAT SPREAD") str_detect(test\$FoodName, "FLORA"))), "4", ifelse((test\$SubFoodGroupCode=="38D" & (str_detect(test\$FoodName, "FRESH") str_detect(test\$FoodName, "HOMEMADE") str_detect(test\$FoodName, "BHAJI TAKE-AWAY"))), "3", ifelse(test\$SubFoodGroupCode=="38D", "3",</pre>	<p>If "FRESH" or "HOMEMADE" : 3 if "BHAJI TAKE-AWAY" : 3</p> <p>Else 3 (even if not Fresh, we assume that the purchased ones will not be classed in this group)</p>
39A	Other potato products and dishes(manufactured)	ultra-processed	4	<pre>ifelse(test\$SubFoodGroupCode=="39A" & test\$RecipeName=="" & test\$FoodName=="POTATOES NEW, CANNED AND DRAINED, NO ADDED SALT OR SUGAR", "3", ifelse(test\$SubFoodGroupCode=="39A" & test\$RecipeName!="" & test\$FoodName=="POTATOES</pre>	<p>If "POTATOES NEW, CANNED AND DRAINED, NO ADDED SALT OR SUGAR" then 3 Else 4</p>

				NEW, CANNED AND DRAINED, NO ADDED SALT OR SUGAR", "3", ifelse(test\$SubFoodGroupCode= ="39A", "4",	
39B	Other potatoes (including homemade dishes)	minimally processed	*	ifelse((test\$SubFoodGroupCode =="39B" & (str_detect(test\$FoodName, "MARG") & !str_detect(test\$FoodName, "NO MARG")) str_detect(test\$FoodName, "LOW FAT") str_detect(test\$FoodName, "REDUCED FAT") str_detect(test\$FoodName, "LF SPRD P/S") str_detect(test\$FoodName, "LOW OR RED FAT") str_detect(test\$FoodName, "CHEESE ONION POTATO PIE- SHORTCRUST PASTRY") str_detect(test\$FoodName, "BACON"))), "4", ifelse((test\$SubFoodGroupCode =="39B" & test\$RecipeName=="") & (str_detect(test\$FoodName, "WITH BUTTER") str_detect(test\$FoodName, "& BUTTER") str_detect(test\$FoodName, "FRYING") str_detect(test\$FoodName, "POTATO WEDGES BAKED")	If "LOW FAT", "REDUCED FAT", "REDUCE FAT", "LF SPRD P/S", "LOW OR RED FAT", "CHEESE", "MARG" (AND NOT "NO MARG"), "BACON" = 4 If no recipe - If "WITH BUTTER", "& BUTTER", "IN BUTTER", "HOMEMADE", "FRYING", "POTATO WEDGES BAKED", "POTATO CURRY", "POTATO CURRY WITH ONIONS AND TOMATOES", "POTATO SALAD", "POTATO SLICES BATTERED" - If "BAKED", "BOILED", "MICROWAVED" = 1 - Else NA If recipe 3

				<pre> str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse((test\$SubFoodGroupCode =="39B" & test\$RecipeName=="") & (str_detect(test\$FoodName, "BAKED") str_detect(test\$FoodName, "BOILED") str_detect(test\$FoodName, "MICROWAVED"))), "1", ifelse((test\$SubFoodGroupCode =="39B" & test\$RecipeName!=""), "3", </pre>	
40A	Apples and pears not canned	minimally processed	*	<pre> ifelse(test\$SubFoodGroupCode= "40A" & str_detect(test\$RecipeName, "Fresh juice"), "1", ifelse((test\$SubFoodGroupCode =="40A" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="40A" & test\$RecipeName=="") & str_detect(test\$FoodName, "NAS")), "1", ifelse((test\$SubFoodGroupCode =="40A" & test\$RecipeName=="") & (str_detect(test\$FoodName, "WITH SUGAR") str_detect(test\$FoodName, </pre>	<p>If recipe</p> <ul style="list-style-type: none"> - If "Fresh juice" = 1 - Else 3 <p>If no recipe</p> <ul style="list-style-type: none"> - If "NAS" = 1 (no added sugar) = 1 - If "HOMEMADE", "APPLE SAUCE NOT CANNED" = 3 - If "WITH SUGAR" = 3 - Else 1

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				"APPLE SAUCE NOT CANNED") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse(test\$SubFoodGroupCode= ="40A", "1",	
40B	Citrus fruit not canned	minimally processed	*	ifelse(test\$SubFoodGroupCode= ="40B" & str_detect(test\$RecipeName, "Fresh juice"), "1", ifelse((test\$SubFoodGroupCode =="40B" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="40B" & test\$RecipeName=="") & str_detect(test\$FoodName, "NAS")), "1", ifelse((test\$SubFoodGroupCode =="40B" & test\$RecipeName=="") & (str_detect(test\$FoodName, "WITH SUGAR") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse(test\$SubFoodGroupCode= ="40B", "1",	If recipe - If "Fresh juice" = 1 - Else 3 If no recipe - If "NAS" = 1 (no added sugar) = 1 - If "HOMEMADE", "WITH SUGAR" = 3 Else 1
40C	Bananas	minimally processed	*	ifelse(test\$SubFoodGroupCode= ="40C" & str_detect(test\$RecipeName, "Fresh juice"), "1",	If recipe - If "Fresh juice" = 1 - Else 3 If no recipe - If "NAS" = 1 (no added sugar) = 1

				<pre> ifelse((test\$SubFoodGroupCode =="40C" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="40C" & test\$RecipeName=="") & str_detect(test\$FoodName, "NAS")), "1", ifelse((test\$SubFoodGroupCode =="40C" & test\$RecipeName=="") & (str_detect(test\$FoodName, "WITH ADDED") str_detect(test\$FoodName, "BANANA COOKED") str_detect(test\$FoodName, "HOMEMADE"))), "3", ifelse(test\$SubFoodGroupCode= =="40C", "1", </pre>	<pre> - If "HOMEMADE", "WITH ADDED", "BANANA COOKED" = 3 Else 1 </pre>
40D	Canned fruit in juice	minimally processed	*	<pre> ifelse((test\$SubFoodGroupCode =="40D" & (str_detect(test\$RecipeName, "ADDED") & !str_detect(test\$RecipeName, "NO ADDED"))), "4", ifelse(test\$SubFoodGroupCode= =="40D", "3", </pre>	<pre> If "ADDED" but not "NO ADDED" = 4 Else 3 </pre>
40E	Canned fruit in syrup	ultra-processed	3	<pre> ifelse((test\$SubFoodGroupCode =="40E" & (str_detect(test\$RecipeName, "ADDED") & </pre>	<pre> If "ADDED" but not "NO ADDED" = 4 Else 3 </pre>

				!str_detect(test\$RecipeName, "NO ADDED"))), "4", ifelse(test\$SubFoodGroupCode= ="40E", "3",	
40R	Other fruit not canned	ultra-processed if olives in brine or canned fruit filling; minimally processed otherwise	*	ifelse((test\$SubFoodGroupCode =="40R" & (str_detect(test\$FoodName, "FRUIT BARS EG. SCHOOL BARS") str_detect(test\$FoodName, "SUMMERFRUIT COMPOTE (M&S)") str_detect(test\$FoodName, "FRUIT CUP JELLY WITH FRUIT"))), "4", ifelse((test\$SubFoodGroupCode =="40R" & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade"))), "3", ifelse((test\$SubFoodGroupCode =="40R" & str_detect(test\$RecipeName, "Fresh juice")), "1", ifelse((test\$SubFoodGroupCode =="40R" & test\$RecipeName!=""), "3", ifelse((test\$SubFoodGroupCode =="40R" & (str_detect(test\$FoodName, "FRUIT COMPOTE PEACH	If "FRUIT BARS EG. SCHOOL BARS", "FRUIT CUP JELLY WITH FRUIT", "SUMMERFRUIT COMPOTE (M&S)", "FRUIT PIE FILLING" = 4 If recipe - If Fresh juice = 1 - Else 3 Else if "FRUIT COMPOTE PEACH APRICOT PLUM BLUEBERRY PINEAP", "CANNED", "STEWED WITH SUGAR", "IN BRINE", "TAPENADE" = 3 Else 1 DECISIONS MADE ON 26.10.2021 MEETING 4 <ul style="list-style-type: none"> FRUIT CUP JELLY WITH FRUIT SUMMERFRUIT COMPOTE (M&S)

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				APRICOT PLUM") str_detect(test\$FoodName, "CANNED") str_detect(test\$FoodName, "IN BRINE") str_detect(test\$FoodName, "STEWED WITH SUGAR"))), "3", ifelse(test\$SubFoodGroupCode= ="40R", "1",	
41A	Sugar	processed ingredient	*	ifelse((test\$SubFoodGroupCode == "41A" & (test\$FoodName=="SUGAR / SWEETENER MIXES" str_detect(test\$FoodName, "MALTODEXTRIN") test\$FoodName=="CARBOHYDR ATE POWDER (SUCROSE, MALTOSE, GLUCOSE) E.G. HI FIVE" str_detect(test\$FoodName, "GLUCOSE LIQUID") str_detect(test\$FoodName, "GLUCOSE POWDER"))), "4", ifelse((test\$SubFoodGroupCode == "41A" & str_detect(test\$RecipeName, "Sainsburys Red Cabbage")), "4", ifelse(test\$SubFoodGroupCode= ="41A", "2",	If "SUGAR / SWEETENER MIXES", "MALTODEXTRIN", "GLUCOSE LIQUID", "GLUCOSE POWDER", "CARBOHYDRATE POWDER (SUCROSE, MALTOSE, GLUCOSE) E.G. HI FIVE" then 4 Else 2
41B	Preserves	ultra-processed	3	ifelse((test\$SubFoodGroupCode == "41B" & (str_detect(test\$FoodName, "PURCHASED")	If "PURCHASED" or "REDUCED-SUGAR" or "REDUCED SUGAR" or "HONEYCOMB" then 4 Else If "HONEY (IN JARS)" : 2

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				str_detect(test\$FoodName, "HONEYCOMB") str_detect(test\$FoodName, "REDUCED SUGAR") str_detect(test\$FoodName, "REDUCED-SUGAR"))), "4", ifelse(test\$SubFoodGroupCode=="41B" & test\$FoodName=="HONEY (IN JARS)", "2", ifelse(test\$SubFoodGroupCode=="41B", "3",	Else 3 DECISIONS MADE ON 26.10.2021 MEETING 3 <ul style="list-style-type: none"> MARMALADE WITH PEEL MARMALADE WITHOUT PEEL 4 <ul style="list-style-type: none"> HONEYCOMB
41R	Sweet spreads fillings and icing	ultra-processed	4	4	
42R	Crisps and savoury snacks	ultra-processed	4	ifelse(test\$SubFoodGroupCode=="42R" & test\$FoodName=="HOMEMADE POPCORN", "3", ifelse(test\$SubFoodGroupCode=="42R", "4",	Homemade popcorn = 3 Else 4
43R	Sugar confectionery	ultra-processed	4	4	
44R	Chocolate confectionery	ultra-processed	4	4	
45R	Fruit juice	ultra-processed if sweetened or fortified; minimally processed otherwise	*	ifelse((test\$SubFoodGroupCode=="45R" & ((str_detect(test\$FoodName, "CONCENTRATE") & !str_detect(test\$FoodName, "NOT FROM CONCENTRATE")) (str_detect(test\$FoodName, "SWEETENED") &	If "CONCENTRATE" & not "NOT FROM CONCENTRATE" then 4 If SWEETENED and not "UNSWEETENED" then 4 If "SMOOTHIES RED BOTTLED PURCHASED", "VITAFIT MULTIVITAMIN 11 FRUIT JUICE", "LEMON JUICE 50% VIT C LOSS", "GRAPE JUICE CARBONATED GRAPE JUICE NOT CANNED" then 4

			<p>!str_detect(test\$FoodName, "UNSWEETENED")) str_detect(test\$FoodName, "SMOOTHIES RED BOTTLED PURCHASED") str_detect(test\$FoodName, "LEMON JUICE 50% VIT C LOSS") str_detect(test\$FoodName, "VITAFIT MULTIVITAMIN 11 FRUIT JUICE") str_detect(test\$FoodName, "GRAPE JUICE CARBONATED GRAPE JUICE NOT CANNED"))), "4",</p> <p>ifelse((test\$SubFoodGroupCode == "45R" & (str_detect(test\$FoodName, "FRESH") str_detect(test\$FoodName, "LEMONS JUICE ONLY NO PEEL OR FLESH") str_detect(test\$FoodName, "UNSWEETENED") str_detect(test\$FoodName, "MIXED FRUIT JUICE PASTEURISED") str_detect(test\$FoodName, "NOT FROM CONCENTRATE") str_detect(test\$FoodName, "CARROT JUICE CARTONS OR BOTTLES") str_detect(test\$FoodName, "FRUIT JUICE FORTIFIED WITH MULTIVITAMINS") str_detect(test\$FoodName, "POMEGRANATE JUICE</p>	<p>Else If "FRESH" or "LEMONS JUICE ONLY NO PEEL OR FLESH", or "UNSWEETENED", "MIXED FRUIT JUICE PASTEURISED", "NOT FROM CONCENTRATE", "CARROT JUICE CARTONS OR BOTTLES", "FRUIT JUICE FORTIFIED WITH MULTIVITAMINS", "POMEGRANATE JUICE PURCHASED", "TOMATO JUICE CARTONS OR BOTTLES", "VEGETABLE JUICE MIXED" "100% JUICE": 1</p> <p>Else 3</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>1</p> <ul style="list-style-type: none"> • APPLE JUICE UNSWEETENED CANNED • APPLE JUICE UNSWEETENED CARTONS PASTEURISED • APPLE JUICE UNSWEETENED UHT • GRAPEFRUIT JUICE UNSWEETENED PASTEURISED • GRAPEFRUIT JUICE UNSWEETENED UHT • MIXED FRUIT JUICE PASTEURISED • ORANGE JUICE UNSWEETENED AMBIENT / UHT • PINEAPPLE JUICE UNSWEETENED PASTEURISED • PINEAPPLE JUICE UNSWEETENED UHT • ORANGE JUICE UNSWEETENED PASTURISED • APPLE AND BLACKCURRANT FRUIT JUICE, NOT FROM CONCENTRATE • CARROT JUICE CARTONS OR BOTTLES • FRUIT JUICE FORTIFIED WITH MULTIVITAMINS • POMEGRANATE JUICE PURCHASED • TOMATO JUICE CARTONS OR BOTTLES • VEGETABLE JUICE MIXED
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				PURCHASED") str_detect(test\$FoodName, "TOMATO JUICE CARTONS OR BOTTLES") str_detect(test\$FoodName, "VEGETABLE JUICE MIXED")), "1", ifelse((test\$SubFoodGroupCode == "45R" & str_detect(test\$FoodName, "100% JUICE")), "1", ifelse(test\$SubFoodGroupCode= "45R", "3",	
47A	Liqueurs	not coded - alcohol	4	4	
47B	Spirits	not coded - alcohol	4	4	
48A	Wine	not coded - alcohol	3	3	
48B	Fortified wine	not coded - alcohol	4	4	
48C	Low alcohol and alcohol free wine	not coded - alcohol	3	4	
49A	Beers and lagers	not coded - alcohol	3	3	
49B	Low alcohol & alcohol free beer & lager	not coded - alcohol	3	3	
49C	Cider and perry	not coded - alcohol	4	4	
49D	Low alcohol & alcohol free cider & perry	not coded - alcohol	4	4	

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49E	Alcoholic soft drinks (Alcopops)	not coded - alcohol	4	4	
50A	Beverages dry weight	ultra-processed	4	4	
50C	Soup (manufactured/retail)	ultra-processed	4	4	
50D	Soup (homemade)	minimally processed	*	ifelse((test\$SubFoodGroupCode=="50D" & str_detect(test\$FoodName, "WON TON CHINESE SOUP")), "4", ifelse(test\$SubFoodGroupCode=="50D", "3",	If "WON TON CHINESE SOUP", "WITH HAM" then 4 Else 3
50E	Nutrition powders and drinks	ultra-processed	4	4	
50R	Savoury sauces pickles gravies & condiments	ultra-processed	4	ifelse((test\$SubFoodGroupCode=="50R" & str_detect(test\$FoodName, "PURCHASED")), "4", ifelse(test\$SubFoodGroupCode=="50R" & str_detect(test\$FoodName, "HOME"), "3", ifelse((test\$SubFoodGroupCode=="50R" & (test\$FoodName=="BAKING POWDER" test\$FoodName=="VINEGAR" test\$FoodName=="YEAST COMPRESSED"	Note: here, we don't care about the recipe, we just want to class every item to help us make decision in the next step when managing the recipe. If PURCHASED = 4 If "BAKING POWDER", "VINEGAR", "YEAST COMPRESSED", "YEAST DRIED", "GELATIN", "SODIUM BICARBONATE", "SEA SALT", "SALT TABLE" = 2 If HOMEMADE or "CHILLI PICKLE SWEET", "ONION SAUCE WITH SEMI-SKIMMED MILK", "PICKLE SWEET", "GARLIC PUREE", "TOMATO BASED PASTA SAUCE WITH FRESH TOMATOES & ONIONS", "TOMATO PUREE (NOT CANNED)", "TOMATO PUREE WITH COOKING LOSSES", "TOMATO SAUCE MADE WITH OLIVE OIL", "TOMATO SAUCE WITH ONIONS", "WHITE SAUCE SEMI SKIMMED MILK", "WHITE SAUCE SKIMMED MILK" = 3 If "SEEDS", "DRIED", "FRESH", "GROUND", "CAYENNE PEPPER", "CINNAMON", "PAPRIKA", "PEPPER", "SAFFRON", "SEAWEED WAKAME DRIED RAW",

			<p>test\$FoodName=="SALT TABLE" test\$FoodName=="SEA SALT" test\$FoodName=="SODIUM BICARBONATE" test\$FoodName=="YEAST DRIED" test\$FoodName=="GELATIN")), "2",</p> <p>ifelse((test\$SubFoodGroupCode=="50R" & (str_detect(test\$FoodName, "HOMEMADE") test\$FoodName=="CHILLI PICKLE SWEET" test\$FoodName=="ONION SAUCE WITH SEMI-SKIMMED MILK" test\$FoodName=="TOMATO PUREE (NOT CANNED)" test\$FoodName=="PICKLE SWEET" test\$FoodName=="GARLIC PUREE" test\$FoodName=="TOMATO PUREE WITH COOKING LOSSES" test\$FoodName=="TOMATO BASED PASTA SAUCE WITH FRESH TOMATOES & ONIONS" test\$FoodName=="WHITE SAUCE SEMI SKIMMED MILK" test\$FoodName=="WHITE SAUCE SKIMMED MILK" test\$FoodName=="TOMATO SAUCE MADE WITH OLIVE OIL" test\$FoodName=="TOMATO SAUCE WITH ONIONS")), "3",</p>	<p>==" MUSTARD POWDER", == "MEXICAN SPICE MIXES", == "BLACK BEAN", == "CHILLI POWDER", == "CURRY POWDER" = 1</p> <p>-</p> <p>Else 4</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>2</p> <ul style="list-style-type: none"> - BAKING POWDER - VINEGAR - YEAST COMPRESSED - YEAST DRIED - GELATIN - SODIUM BICARBONATE - SEA SALT <p>3</p> <ul style="list-style-type: none"> - ONION SAUCE WITH SEMI-SKIMMED MILK - PICKLE SWEET - TOMATO BASED PASTA SAUCE WITH FRESH TOMATOES & ONIONS - TOMATO PUREE (NOT CANNED) - TOMATO PUREE WITH COOKING LOSSES - TOMATO SAUCE MADE WITH OLIVE OIL - TOMATO SAUCE WITH ONIONS - WHITE SAUCE SEMI SKIMMED MILK - WHITE SAUCE SKIMMED MILK <p>4</p> <ul style="list-style-type: none"> - CHEESE SAUCE MADE WITH S/SKIMMED MILK MADE UP PKT. - CHEESE SAUCE MADE WITH SEMI-SKIMMED MILK, NO FAT - CHEESE SAUCE MADE WITH SKIMMED MILK MADE UP PKT - CHEESE SAUCE MADE WITH WHOLE MILK - CHEESE SAUCE PACKET MIX DRY - CHEESE SAUCE WITH SEMI SKIMMED MILK +EMMENTAL - GRAVY THICKENED NO FAT - GRAVY THICKENED WITH FAT - GRAVY UNTHICKENED NO FAT - GRAVY UNTHICKENED WITH FAT
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				<pre> ifelse((test\$SubFoodGroupCode =="50R" & (str_detect(test\$FoodName, "SEEDS") str_detect(test\$FoodName, "DRIED") str_detect(test\$FoodName, "FRESH") str_detect(test\$FoodName, "GROUND") test\$FoodName=="CAYENNE PEPPER" test\$FoodName=="CINNAMON" test\$FoodName=="SEAWEED WAKAME DRIED RAW" test\$FoodName=="PAPRIKA" test\$FoodName=="PEPPER" test\$FoodName=="SAFFRON" test\$FoodName=="MUSTARD POWDER" test\$FoodName=="BLACK BEAN" test\$FoodName=="CHILLI POWDER" test\$FoodName=="CURRY POWDER")), "1", ifelse(test\$SubFoodGroupCode= =="50R", "4", </pre>	<ul style="list-style-type: none"> - ONION GRAVY - VANILLA EXTRACT, VANILLA ESSENCE (NO ALCOHOL)
51A	Coffee (made up weight)	minimally processed	*	<pre> ifelse((test\$SubFoodGroupCode =="51A" & (str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "VENDING") str_detect(test\$FoodName, </pre>	<p>If "PURCHASED" or "VENDING" or "COFFEE & CHICORY ESSENCE", or "INSTANT, WITH WHITENER" then 4</p> <p>If "TAKEAWAY ONLY" or "CAPPUCCINO MADE WITH ESPRESSO AND SEMI-SKIMMED MILK" then 3</p> <p>Else 1</p>

				"INSTANT, WITH WHITENER") test\$FoodName=="COFFEE & CHICORY ESSENCE")), "4", ifelse((test\$SubFoodGroupCode =="51A" & (str_detect(test\$FoodName, "TAKEAWAY ONLY") str_detect(test\$FoodName, "CAPPUCCINO MADE WITH ESPRESSO AND SEMI-SKIMMED MILK"))), "3", ifelse(test\$SubFoodGroupCode= "51A", "1",	DECISIONS MADE ON 26.10.2021 MEETING 1 <ul style="list-style-type: none"> COFFEE INSTANT (WE SUPPOSED NO ADDED SUGAR IF NOT PRECISED) 3 <ul style="list-style-type: none"> CAPPUCCINO (ESPRESSO AND SKIMMED MILK) TAKEAWAY ONLY CAPPUCCINO (ESPRESSO AND WHOLE MILK) TAKEAWAY ONLY CAPPUCCINO MADE WITH ESPRESSO AND SEMI-SKIMMED MILK DECAFFEINATED CAPPUCCINO (ESPRESSO AND SEMI SKIMMED MILK) TAKEAWAY ONLY 3 DECAFFEINATED LATTE (ESPRESSO AND WHOLE MILK) TAKEAWAY ONLY 3 LATTE (ESPRESSO AND SKIMMED MILK) TAKEAWAY ONLY 3 LATTE (ESPRESSO AND WHOLE MILK) TAKEAWAY ONLY 3 MOCHA (NO CREAM) ESPRESSO AND SEMI-SKIMMED MILK TAKEAWAY ONLY 3 4 <ul style="list-style-type: none"> COFFEE & CHICORY ESSENCE LATTE MADE WITH ESPRESSO AND SEMI-SKIMMED MILK, PURCHASED OR TAKEAWAY LATTE MADE WITH ESPRESSO AND SOYA MILK, PURCHASED OR TAKEAWAY ONLY VENDING COFFEE WHITENER & SUGAR VENDING MACHINE COFFEE & WHITENER
51B	Tea (made up)	minimally processed	*	ifelse((test\$SubFoodGroupCode =="51B" & (str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "VENDING"))), "4", ifelse((test\$SubFoodGroupCode =="51B" & (str_detect(test\$FoodName,	If "PURCHASED" or "VENDING" then 4 If "MILK" and not "NO MILK" = 3 Else 1 DECISIONS MADE ON 26.10.2021 MEETING 4 <ul style="list-style-type: none"> VENDING TEA WHITENER & SUGAR

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				"MILK") & !str_detect(test\$FoodName, "NO MILK"))), "3", ifelse(test\$SubFoodGroupCode= ="51B", "1",	
51C	Herbal tea (made up)	minimally processed	1	ifelse((test\$SubFoodGroupCode =="51C" & (str_detect(test\$FoodName, "PURCHASED") str_detect(test\$FoodName, "VENDING"))), "4", ifelse((test\$SubFoodGroupCode =="51C" & (str_detect(test\$FoodName, "MILK") & !str_detect(test\$FoodName, "NO MILK"))), "3", ifelse(test\$SubFoodGroupCode= ="51C", "1",	If "PURCHASED" or "VENDING" then 4 If "MILK" and not "NO MILK" = 3 Else 1
51D	Bottled water still or carbonated	minimally processed	*	ifelse((test\$SubFoodGroupCode =="51D" & !str_detect(test\$FoodName, "NOT FLAVOURED") & (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "Homemade"))), "3", ifelse((test\$SubFoodGroupCode =="51D" & (str_detect(test\$FoodName, "FLAVOURED") & !str_detect(test\$FoodName,	If NOT "NOT FLAVOURED" - If homemade recipe 3 - Else 4 If "SWEETENER" or "V WATER": 4 Else 1 1 • MINERAL WATER STILL OR CARBONATED NOT FLAVOURED 4 • LAZYTOWN FLAVOURED SPRING WATERS NAS FORTIFIED • MINERAL WATER CARBONATED FLAVOURED NO ADDED SUGAR • WATER, SPRING, WITH SWEETENER, VITAMINS AND MINERALS, GLACEAU BRAND

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				"NOT FLAVOURED")) str_detect(test\$FoodName, "SWEETENER") str_detect(test\$FoodName, "V WATER")), "4", ifelse(test\$SubFoodGroupCode= ="51D", "1",	
51R	Tap water only	minimally processed	1	ifelse(test\$SubFoodGroupCode= ="51R" & test\$FoodName=="WATER AS A DILUENT FOR POWDERED", "4", ifelse(test\$SubFoodGroupCode= ="51R", "1",	If "WATER AS A DILUENT FOR POWDERED" then 4 1 DECISIONS MADE ON 26.10.2021 MEETING 4 <ul style="list-style-type: none"> WATER AS A DILUENT FOR POWDERED
52A	Commercial toddlers drinks	ultra-processed	3	ifelse(test\$SubFoodGroupCode= ="52A" & (str_detect(test\$FoodName, "RTD") str_detect(test\$FoodName, "READY TO DRINK") str_detect(test\$FoodName, "FRUIT JUICE CONCENTRATE")), "4", ifelse(test\$SubFoodGroupCode= ="52A", "NA",	If "FRUIT JUICE CONCENTRATE", "HERBAL INFANT DRINK READY TO DRINK" or "RTD" (stand for Ready to drink= 4 Else NA
52R	Commercial toddlers foods	ultra-processed	3	4	
53R	Ice cream	ultra-processed	4	ifelse(test\$SubFoodGroupCode= ="53R" & str_detect(test\$FoodName, "HOMEMADE"), "3", ifelse(test\$SubFoodGroupCode= ="53R", "4",	If HOMEMADE then 3 Else 4

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54A	Cod liver oil and other fish oils	processed ingredient	**	NOT CODED	
54B	Evening primrose oil and other plant oils	processed ingredient	**	NOT CODED	
54C	Single vitamins/minerals not Folic acid, iron, calcium	ultra-processed	**	NOT CODED	
54D	Folic acid	ultra-processed	**	NOT CODED	
54E	Iron only or with vitamin C	ultra-processed	**	NOT CODED	
54F	Calcium only or with vitamin D	ultra-processed	**	NOT CODED	
54G	Vitamins (two or more including multivitamins) no minerals	ultra-processed	**	NOT CODED	
54H	Minerals (two or more including multiminerals) no vitamins	ultra-processed	**	NOT CODED	
54I	Vitamins and minerals (including multivitamins & minerals)	ultra-processed	**	NOT CODED	
54J	Non-nutrient supplements (including herbal)	ultra-processed	**	NOT CODED	
54K	Other nutrient supplements	ultra-processed	**	NOT CODED	
54L	Vitamin C	ultra-processed	**	NOT CODED	
54M	Single vitamins/minerals not Folic acid,	ultra-processed	**	NOT CODED	

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	iron, calcium or vitamin C				
54N	Cod liver oil and other fish oils (including with vitamins A, D, E)	ultra-processed	**	NOT CODED	
54P	Multivitamins and/or minerals with omega ultra-processed	ultra-processed	**	NOT CODED	
55R	Artificial sweeteners	processed ingredient	4	4	
56R	Nuts and seeds	ultra-processed if sweetened or salted; minimally processed otherwise	*	<p>ifelse((test\$SubFoodGroupCode == "56R" & (str_detect(test\$FoodName, "CHEVDA") str_detect(test\$FoodName, "MILK PURCHASED") str_detect(test\$FoodName, "SWEETENED") str_detect(test\$FoodName, "REDUCED FAT") str_detect(test\$FoodName, "PEANUT BUTTER CRUNCHY") str_detect(test\$FoodName, "PEANUT BUTTER SMOOTH"))), "4",</p> <p>ifelse((test\$SubFoodGroupCode == "56R" & ((str_detect(test\$FoodName, "SALT") & !str_detect(test\$FoodName, "UNSALT")) str_detect(test\$FoodName, "HONEY ROASTED") </p>	<p>If "CHEVDA" or "MILK PURCHASED" or "SWEETENED" or "REDUCED FAT" or "PEANUT BUTTER CRUNCHY", or "PEANUT BUTTER SMOOTH" then 4</p> <p>If "HONEY ROASTED", "SALT" (but not "UNSALT") : 3</p> <p>Else 1</p> <p>DECISIONS MADE ON 26.10.2021 MEETING</p> <p>3</p> <ul style="list-style-type: none"> • PEANUT BUTTER WHOLEGRAIN WHOLENUT NO ADDED SUGAR • TAHINI:SESAME SEED PASTE • PEANUTS & RAISINS (KP) <p>4</p> <ul style="list-style-type: none"> • BOMBAY MIX / CHEVDA • COCONUT MILK PURCHASED • PEANUT BUTTER, REDUCED FAT • COCONUT CREAM IE) PUREED FRESH FLESH SWEETENED • PEANUT BUTTER CRUNCHY NOT WHOLENUT • PEANUT BUTTER SMOOTH NOT WHOLENUT

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				<pre>str_detect(test\$FoodName, "TAHINI") test\$FoodName=="PEANUT BUTTER WHOLEGRAIN WHOLENUT NO ADDED SUGAR")), "3", ifelse(test\$SubFoodGroupCode= ="56R", "1",</pre>	
57A	Soft drinks not low calorieconcentr ated1	ultra-processed	4	4	
57B	Soft drinks not low calorie carbonated	ultra-processed	4	4	
57C	Soft drinks not low calorie, ready to drink, still	ultra-processed	4	4	
58A	Soft drinks low calorieconcentr ated1	ultra-processed	4	4	
58B	Soft drinks low calorie carbonated	ultra-processed	4	4	
58C	Soft drinks low calorie, ready to drink, still	ultra-processed	4	4	
59R	Brown, granary and wheat germ bread	ultra-processed	4	4	
60R	1% Milk	minimally processed	1	1	
61R	Smoothies	minimally processed	1	<pre>ifelse((test\$SubFoodGroupCode =="61R" &</pre>	<p>If recipe - If homemade recipe 1</p>

				<pre> (str_detect(test\$RecipeName, "homemade") str_detect(test\$RecipeName, "HOMEMADE") (test\$RecipeName=="Smoothie") & !str_detect(test\$FoodName, "PURCHASED"))), "1", ifelse(test\$SubFoodGroupCode= ="61R" & test\$RecipeName!="", "NA", ifelse((test\$SubFoodGroupCode =="61R" & str_detect(test\$FoodName, "HOMEMADE")), "1", ifelse((test\$SubFoodGroupCode =="61R" & str_detect(test\$FoodName, "PURCHASED")), "4", ifelse(test\$SubFoodGroupCode= ="61R", "NA", </pre>	<ul style="list-style-type: none"> - If "Smoothie" NOT PURCHASED then 1 - Else NA <p>If no recipe</p> <ul style="list-style-type: none"> - If "HOMEMADE" = 1 - If "PURCHASED" = 4 <p>Else NA</p>
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STEP 5

Now, we are looking at the recipe.

For each recipe, we can have one or more ingredients.

If some recipes are composed of ingredients from different groups, all the ingredients of this recipe will be reassigned as the higher NOVA group found in the recipe

- For example:

Chicken in coke: the higher ingredient will be coke (4) and thus, all the ingredients of this recipe will be in the NOVA Group 4.

If the higher group is 3, the recipe can be 3 or 4 depending on if ready to eat or not.

- For the Recipe labelled as homemade, then we put 3.
NOTE that here, we supposed that "H/M" mean homemade.
- For the Recipe ready-to-eat, then we put 4
- Otherwise, we kept a conservative approach and put 3.

Be careful, for this step, you need to look at the recipe according to the participant, the date and the hour of the food intake of this participant.

```
MonDF1$NOVA12bis <- as.numeric(ifelse(MonDF1$MaxNOVA==1 & MonDF1$MinNOVA==0, 0,
  ifelse(MonDF1$MaxNOVA==1 & MonDF1$MinNOVA==1, 10,
  ifelse(MonDF1$MaxNOVA==1, 1,

  ifelse(MonDF1$MaxNOVA==2 & MonDF1$MinNOVA==2, 2,
  ifelse(MonDF1$MaxNOVA==2 & MonDF1$MinNOVA==0, 0,
  ifelse(MonDF1$MaxNOVA==2 & MonDF1$MinNOVA==1, 10,
  ifelse(MonDF1$MaxNOVA==2, 3,

  ifelse(MonDF1$MaxNOVA==3 & MonDF1$MinNOVA==0, 0,
  ifelse(MonDF1$MaxNOVA==3 & MonDF1$MinNOVA==1, 10,
  ifelse(MonDF1$MaxNOVA==3 & MonDF1$MinNOVA==3, 3,

  ifelse(MonDF1$MaxNOVA==3 & (str_detect(MonDF1$RecipeName, "homemade") | str_detect(MonDF1$RecipeName,
"Homemade"))), 3,
  #we supposed that "H/M" mean homemade
  ifelse((str_detect(MonDF1$RecipeName, "H/M")) & MonDF1$MaxNOVA==3, 3,

  #if RecipeSubFoodGroupDesc precise that it's homemade (and not including homemade), then 3
  ifelse((MonDF1$RecipeSubFoodGroupDesc %in% c("OTHER CEREAL BASED PUDDINGS - HOMEMADE",
    "BUNS CAKES & PASTRIES HOMEMADE", "SOUP HOMEMADE", "HOMEMADE MEAT PIES AND PASTRIES", "DAIRY
DESSERTS HOMEMADE", "CEREAL BASED MILK PUDDINGS - HOMEMADE", "BISCUITS HOMEMADE")) & MonDF1$MaxNOVA==3, 3,

  #food 3 or 4 depending on the recipe.... thus we will do a opti and a pessimist scenario below
  ifelse(MonDF1$MaxNOVA==3 & MonDF1$MinNOVA==1, 0,
  ifelse(MonDF1$MaxNOVA==3 & MonDF1$MinNOVA==2, 0,
  ifelse(MonDF1$MaxNOVA==3 & MonDF1$MinNOVA==3, 0,

  ifelse(MonDF1$MaxNOVA==4, 4,

  ifelse(MonDF1$MaxNOVA==1, 12, 0))))))))))))))
```

STEP 6

Check that everything is well classified.

We checked manually all the food and their classification.

DIABETIC JAM : 4

DIABETIC MARMALADE: 4