Coder User Manual

Food Coding & Editing Instructions

Using DINO

1. Contents

2. Introduction

2.1 Diet Coding

Diet coding is the process of entering information into a database known as DINO (Diet in Nutrients Out). DINO is an all-in-one food composition and dietary intake system.

Each food recorded is assigned two codes, a food number and a portion size. These codes are linked to the National Diet and Nutrition survey (NDNS) nutrient composition database that contains the nutritional information for over 6000 foods (in 2019).

In some cases queries are created when coding, as there is not enough information in the food record to select a code. This could be due to a lack of detail or ambiguous information. There are a number of standardised procedures used to solve queries, a process known as editing. Once food records are coded and edited the food and nutrient intakes can be calculated and the data analysed in a number of different ways, please refer to the Standard Operation procedures (SOPs) 1-6, for more information.

2.2   Extra documents attached to the food record

There may be food labels/packaging included in the food record, which can help with coding.

3. Welcome to DINO

The program for entering the food records is called DINO (Diet in Nutrients Out).
DINO is provided in three different models, Simple, Front-end/Back-end (FEBE) and Front-end/Back-end using user level security (SecFEBE). Please refer to the deployment instructions, which provide a summary of each model.

3.1 Accessing DINO

The simple and Front-end/Back-end (FEBE) model do not require a password. For accessing the SecFEBE model please refer to the deployment instructions.

To open DINO double click the ***Open DINO_S*** shortcut. Wait for the `` `ok` `` icon to darken and then click `` `ok` ``.

You will come to the Main Switchboard screen.
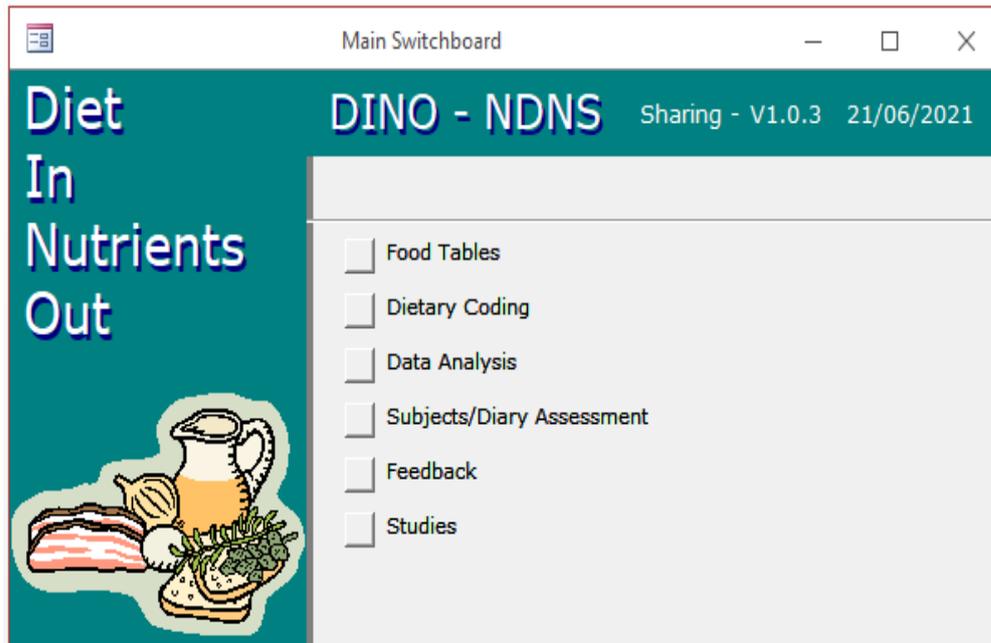
3.2 Coding Database

There are several options on the "Main Switchboard", the ones you will be using for entering the dietary data are:

1. **Dietary coding** – used for entering the Dietary Data.
2. **Subjects/Diary Assessment** – used for logging food record.
3. **Studies** – used for adding in meal time ranges, where food eaten and who food eaten with.
4. **Food Tables** – used for food matching and calculating proportions.

Click on **Dietary Coding**

Once 'Dietary Coding' is selected, the main ones you will be using are:

1. Code Diet Record
2. Review coding
3. Recipe calculator
4. Main Menu

NOTE: There are other functions in DINO. This manual and the SOPs 1-6, cover all the functions that are needed for dietary data entry and nutritional analysis, as used in NDNS. For an explanation on the other menus available in DINO please download the Help File, as explained in the deployment instructions.

3.3 Logging Food records

All food records need to be logged into DINO before they can be coded. There are 2 ways to log food records depending on whether the subject file has been imported.

3.3.1 Logging food records manually

From the main switchboard select '**Subject/Diary Assessment'** then '**subjects'**

Enter the study, subject ID, gender and date of birth (DOB). If you don't have the gender then enter all as female or male. If you don't have the DOB then enter a notional one e.g. 1/1/11.

Make sure you create a new record for each respondent. To move into a new record use the arrow buttons on the bottom of the screen. These buttons can be used to navigate through the subject records entered.

Record: |◄ | ◄ | 2 | ► | ►| | ►✳ | of 2

|◄ | **First record**

| ◄| | **Previous record**

| ► | **Next record**

►| | **Last record**

►✳ | **New record**

3.3.2 If the subject file has been imported

Subjects can be added by importing an excel file, for more information refer to DINO - subjects menu.

You will notice the study, subject ID, gender and date of birth are already populated in the form.

3.4 Additional Study Information

3.4.1 Meal time

Each food record day should cover a 24-hour period.

The default meal time shown in DINO is '1' – with a time range of 00.00 – 23.59. It is possible to add in meal time ranges for your study e.g. breakfast 6.00am – 8.59am
From the main switchboard select **'studies'** then click on Meal Time Ranges.

Add in study title, food menu and study dates. Click on the arrow on the left hand side and add manually. Alternatively you copy and paste from the ones given in the DINO example.

Make sure you create a new record for each study. To move into a new record use the arrow buttons on the bottom of the screen, as explained in section 3.3.1.

3.4.2 Look up - Where food eaten and Look up - who food eaten with

From the main switchboard select **'studies'** then click Lookup – Where food eaten. For examples and more information on 'where' 'with whom' please refer to section **4.2.5.** Select the options relevant to your study and add manually or copy and paste from the ones given in the DINO example.

"Sequence" can be used to manipulate the order in which the options are listed when you code who eaten with (and where).

"More Info required" is used to control whether the more information box is required when coding. For example if the question was "what type

of building do you live in" options might be "House", "Flat", "Other, please describe". In this case "Other, please describe" would be noted as needing more info.

NOTE: This information may not be relevant for all studies. So if this detail is not required then please enter N/A in the lookup values so this option can then be selected when coding.

3.5 Food record questions

NB: Please note this may not be necessary for your study. If the food record does not have a questions section then please ignore this section.

When food records have been logged, they are then ready to be coded. First enter the food record questions. From the main switchboard select **'Subjects/Dietary Assessments'** then select **'Diary Questions'**. Create a new record (⏵∗), then select the respondent ID number from the drop down list found under Subject ID.

Enter the gender and date of birth then click 'search'. Complete the form using the food record questions at the end of each day and the food record evaluation form.

Day 1 enter:

- The date of the first food record day
- Whether the respondent had any dietary supplements
- Whether the respondent ate more or less than usual and the reason
- Whether the respondent drank more than usual, less than usual and the reason why
- Salt use (found at the back of the food record)
- Whether the respondent is on a special diet or not and any corresponding details (found at the back of the food record)

Day 2 to Day 4 (change days using the tabs under the General Comments box):

- The date of each food record day
- Whether the respondent had any dietary supplements
- Whether the respondent ate and drank, more or less than usual

It is easiest to enter the questions from all the food records in a batch in one go.

4. Using DINO to code a food record

From the 'Main Switchboard' click on '**Dietary Coding'**, then click on the '**Code Diet record**' button and then, using the drop down list in the Study Title box, select **the study you will be working on** and click on **open coding form.**
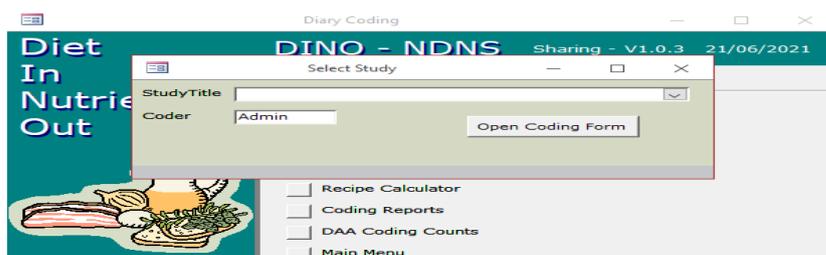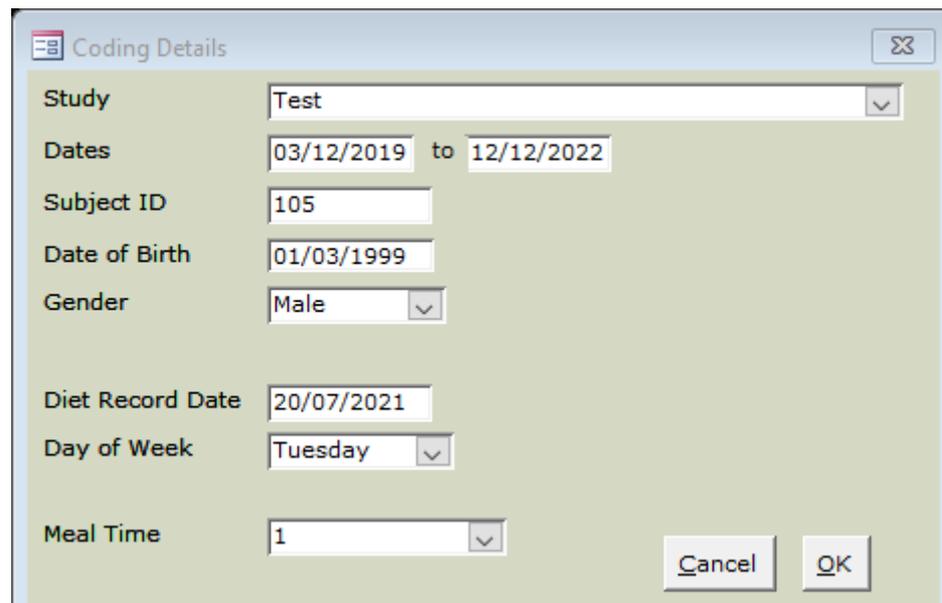
4.1 Coding Details

Enter the subject ID, date of birth and gender as before. Then from the first day of the food record enter the default details i.e. date, day of the week and the Meal Time. Select the meal time -the default meal time is shown as 1- which has a time range of 0.00 − 23.59, unless you have added in the meal time ranges separately.

All fields on this form are mandatory. Once the form has been completed, click OK. The form will then 'look' at the appropriate subject to ensure that the subject ID is valid by checking the corresponding Gender and Date of Birth. If either of these fields do not match, a message is displayed. The form will also check that the Diet Record Date matches the Day of Week. Again a message will be displayed if they do not agree. These tests have been devised to help prevent accidental typing errors.

4.2 Dietary Coding screen

4.2.1 Default data

The top left hand side of the screen displays the default data for the subject. This is the information entered on the previous two forms.
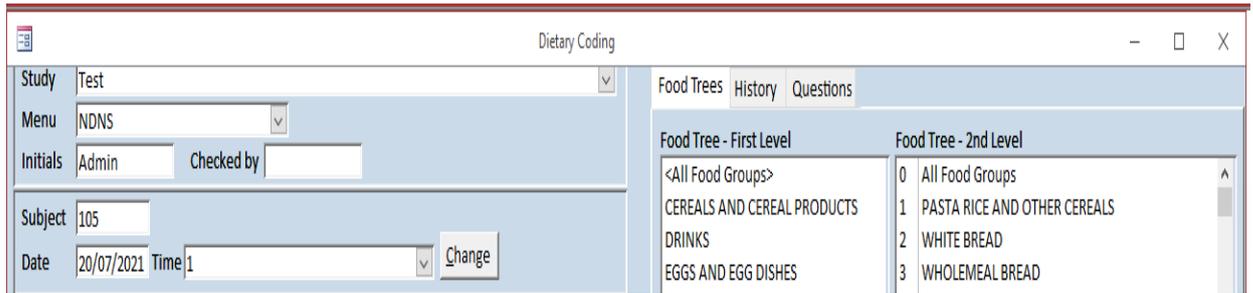
4.2.2 Additional data

The bottom left hand frame contains fields for;

- Food codes and portion sizes
- Consumption time
- Coding type – To save frequently consumed items
- Takeaway item? – To flag food if eaten as part of a takeaway
- Recipe group – For manually entered recipes
- Query type – For classifying queries by type
- Notes – For information on queries
- Flagging icon – Use this to highlight queries
- Food name – This is the name linked to the coding number.

On the right hand side of the screen you will see tabs for **Food trees**, **History**, and **Questions**.

4.2.3 Food trees

Food trees can be used to help find the appropriate food name. When a branch is selected, only foods in that group will appear in the food name list. This function has advantages over using the string when you are not sure which way round words will need to be in the string to find the food you are looking for.
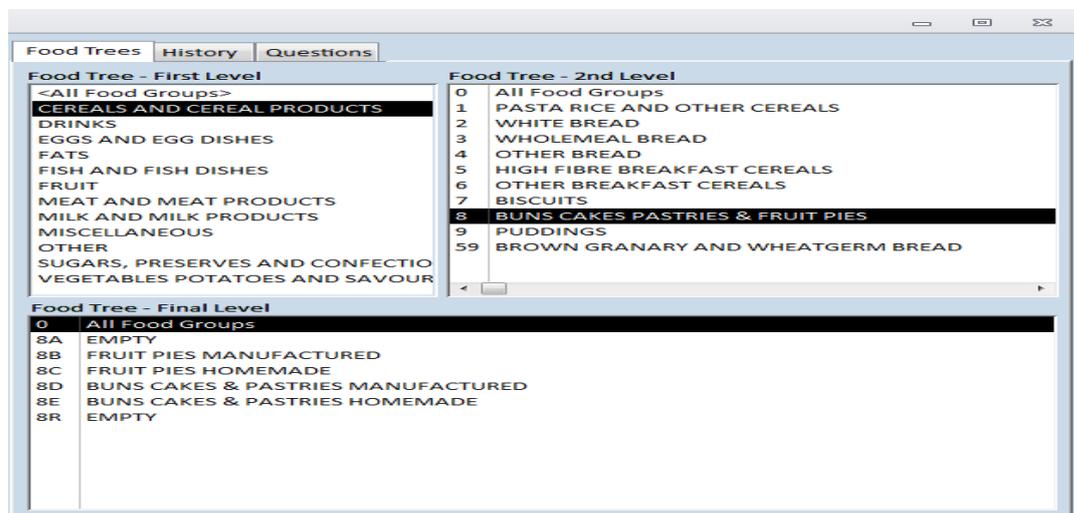
4.2.4 History

Frequently consumed foods such as tea, coffee or breakfast items can be saved and copied into new food records. To save a food, allocate a group from the coding type list e.g. tea/coffee, it will then appear in the history list. Click on **'copy'** to copy this information into the new food record.

As you would do if you were entering foods by string, you will need to open a new record before pressing copy. The same food code and portion code will be entered.

4.2.5 Questions

For each food a code needs to be allocated describing **where** the food was consumed, **with whom**, if the respondent was **watching TV** and whether they were **sitting at a table**.

NOTE: This section may not be relevant for all studies. So if this detail is not required then please enter N/A for each question.

The table below shows examples of the categories that can be used for coding where and with whom. Select the categories that are relevant to your study and enter into DINO.

NOTE: For information on adding these for your study refer to section **3.4.2**

WHERE	WITH WHOM
Home - kitchen	A - Alone
Home - living room	B- Partner
Home - dining room	C- Partner&children
Home - bedroom	D - Child/Children
Home - garden	E- Family (incl relatives)
Home - other	F - Friends
Home - unspecified	
Friend's or Relative's house	G - Family & Friends
Restaurant, pub, night club	H- Parent(s)/Carer
Coffee shop, shop, deli, sandwich bar	I - Siblings
Fast food outlet	J - Parent(s)/Carer&Siblings
School canteen - Food from home	K - Carer & other children
School canteen - Bought food	L - Work colleagues
School canteen - other	M - Flatmate
School playground	N - Other
School classroom	O - Not specified
School other	P - Others - General Public
Work canteen - Food from home	Q - Others - Known to Respondent
Work canteen - Bought food	
Work canteen - other	
Work desk	
Work other	
Nursery/Kindergarten	
Carer's home	
Sports club, Sports leisure venue	
Street	
Bus, car, train	
Other place	
Outside other	
Not at home - unspecified	
Unspecified	
Place of worship	
Holiday accommodation	
Leisure activities, shopping, tourist attractions, cinema, places of interest	
Public Hall/Function Room	
Community Centre/Day Centre/Drop in	

Examples/clarifications:

Where

- You will notice that the **where** code options for school canteen and work canteen distinguish between **food from home** and **bought food**. **Bought food** refers to food purchased at school/work or an alternative venue e.g. the local sandwich shop. **Food from home** refers to homemade foods e.g. homemade salad.
- **Fast food outlets** are distinguished from restaurants by the use of cutlery e.g. Pizza Hut is a restaurant as they provide cutlery whereas KFC is a fast food outlet as they don't.
- The distinction between the **Restaurant, pub, nightclub** option and the **Coffee shop, shop, deli, sandwich bar** option is that in the former alcohol would be available.
- **Leisure activities, shopping, tourist attractions, cinema, places of interest** this would also include Hairdressers, hobbies, car dealers etc. Sports activities should be coded under **Sports club, sports leisure venue**.
- **Other Place** should be used for Hospital, Nursing home, Garage/service station & Parties where the party place is unspecified.
- **Community Centre/Day Centre/Drop in** should be used to capture community meals (more common in older respondents).
- After school club should be coded as **School- Other**
- **Bus, car, train** should only be coded when being used as a mode of transport. If the respondent works as a taxi driver or a trucker, **Work other** should be used.
- **Sports club, sports leisure venue** should only be used if the respondent is participating in a sport/activity – **Outside other** or **Other place** can be used if they are a spectator; **Restaurant...** or Coffee **shop...** can be used if they are eating a meal at, for example, a gym or sports centre.
- If a respondents states that they were sitting at the table at home with their family, but they do not specify which room they were in check the other days to see if the room has been recorded elsewhere.

- If a child respondent's parents live apart, eating in the sampled household only should be coded as **Home**. Eating at the other parent's house should be coded as **Friend's or Relative's house**. The information in the Subject's tab on the coding page may give an indication of whether they live with their mother or father.

- Sitting room should be coded as **Home – Living room**.

- If a respondent states 'front room' or 'back room' you can make a judgement on whether it is their **Living room** or **Dining room** based on whether they have a TV or a table in that room. If no information is given or it is unclear, code as **Home - other**

- If the respondent has not stated where they are but you are confident that they were at home then code as **Home – unspecified.** For example, a toddler having a cup of milk at 8pm and their dinner earlier had been at home. Likewise, if the place has not been stated but you think they were NOT at home then code as **Not at home – unspecified**. For example, an adult is drinking pub measures and says that they drank more because they were 'on a girls' night out', then you can assume that they were not at home even if you are unable to say exactly where they were. If it is unclear either way, code as **Unspecified**.

With whom

- For **with whom**, **E – Family (incl relatives)** refers to unspecified family or wider family e.g. grandparents, aunts.

- For adult respondents who eat with their parents or siblings, with whom should be coded as **E – Family**, rather than H or I; this would be the same for respondents who eat with their grown-up children.

- A 'carer' is defined as an adult who is taking charge of a child (or other adult). 'Carer' would be used for a childminder/babysitter, but not for a teacher or a nursery nurse – for young children at nursery, the place option selected would capture that the child would not be eating unsupervised.

- The code **H – Parent(s)/Carer** or **K – Carer & other children**, however, should not be used if a relative e.g. grandmother or older sibling is taking care of the child – this should be coded as **E – Family** or **I – Sibling**.

- If the respondent is at work, go by their definition of who they eat with, (**Friend** or **Colleague**) for deciding what to code for with whom. Clients should be coded under **Colleague**.
- If a respondent under the age of 18 years states they ate with their girlfriend or boyfriend, this should be coded as **Friend**. For a respondent aged 18 years or over, **Partner** should be coded.

Table/TV

- Respondents should only record information about watching TV/sitting at the table not any other activities like listening to the radio/sitting on the sofa/playing on the computer.
- Do not assume from other details you give that the respondent is or is not watching TV/sitting at the table e.g. just because they are on the sofa does not mean they are not eating with a table pulled up in front of them. If unsure, code as **unspecified**.
- Any table with a primary function for consuming food at (e.g. kitchen table/dining table/restaurant table and breakfast bar) should be coded as **Yes** for at table.
- Any table with a primary use other than consuming food at (e.g. desk/ coffee table) should **not** be coded as at the table.
- If a respondent states they ate at their **Work desk** the option for table should be coded as **No** – the place option selected will capture that they were eating at their desk.

If any of this information is not recorded in the food record please select the relevant **not specified** code. However, people often record less detail towards the end of the food record – you may be able to work out some of the missing information from the first days.

Get into the practice of filling in these questions before searching for a new food name. The last codes selected will remain populated until manually changed or until the **Change** button is clicked.

4.2.6 Navigating through records

To move into a new food record use the arrow buttons on the bottom left hand side. These buttons can be used to navigate through the food records

entered in that one session. If you have made a mistake (e.g. forgotten to change the television code) or wish to delete a record, you can go back to change the records you have entered using the arrow buttons.

Record: |◄◄| |◄| [2   ] |►| |►►| |►*| of 2

|◄◄| **First record**

|◄| **Previous record**

|►| **Next record**

|►►| **Last record**

|►*| **New record**

However, you can only navigate between the records entered in that one session. Exit out of the **Dietary Coding** screen and open it again and you are given a blank sheet. To amend or delete previously coded data, use **review coding**, refer to section 8 for more details.

4.3 Changing default details

Use the **Change** button to move onto a new time slot, day or subject ID. Don't try and change the details within the coding form itself e.g. to select a new meal time always click the ***Change*** button and amend details in the form that appears, <u>do not</u> select from the drop down list.
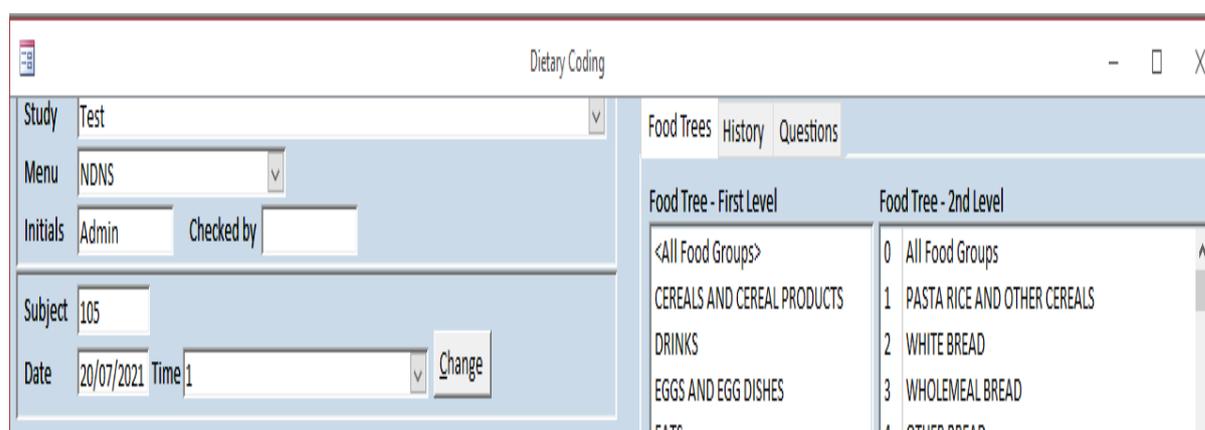
5. Coding Foods

5.1 Food name

If you are familiar with a food name you can enter the text directly into the **food name** field. If you are unsure of a food name use the **string** field and **food trees** to limit the number of foods in the list.

5.2 String

This field is used to limit the foods in the food name field. Type text into this box and only food names containing that text will appear in the food name box e.g. type *bread* and only foods with bread in the name will appear in the food name field.

The text you enter may contain 'wildcards'. Wildcards are used to substitute for unknown characters. '?' will ignore one character e.g. 'coca?cola' will find 'coca cola' and coca-cola'. '*' will ignore any characters e.g. 'corn*flakes' would find 'Cornflakes' and 'Corn Flakes', 'bacon*boiled' would find 'Bacon Collar, Lean only, boiled' and 'Bacon, collar joint, lean and fat, boiled'.

5.3 Coding number and food codes

Each food held within DINO is assigned to a food code and also a coding number, which are different (see below). For example, aubergine fried in blended vegetable oil has a food code of 1659, but the coding number is 1263.
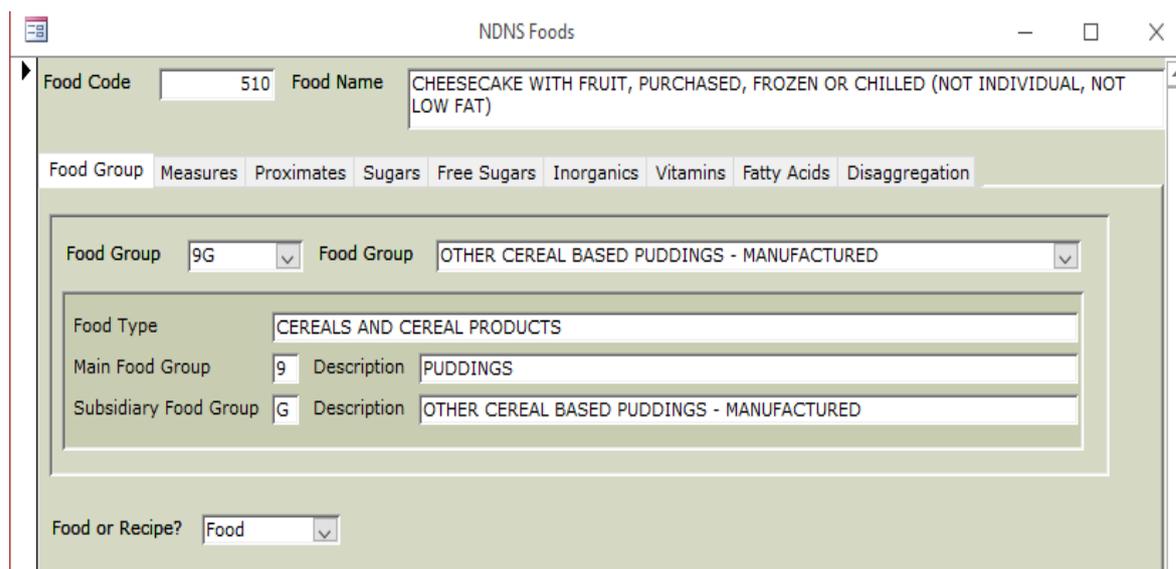

Once you are familiar with some of the more common foods on DINO and know their respective food code, you

can enter this number directly, which will save you needing to search using the string field or food trees.

5.4 Food Trees

See section <u>4.2.3</u>.

If you are unsure which group a food is under, then make sure you are searching under the first level in the food tree, otherwise you can look up the food by going to the main menu and selecting **Food Tables, Foods**.

Place the cursor in the Food Name box and click on (🔍) or Ctrl F and type in the food name or part of the food name, e.g. cheesecake. Make sure you select "Any part of field" under Match. Click `find next` which will then find all the food codes with the name `cheesecake` in the food name.
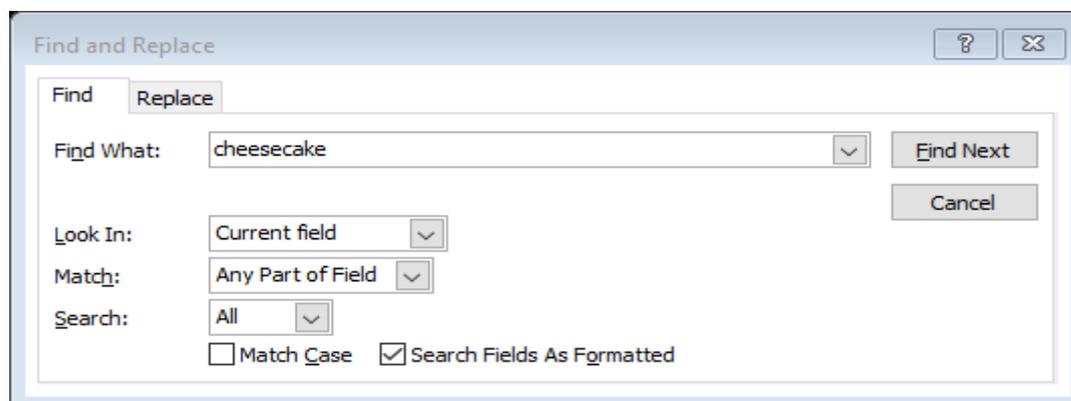
5.5 Portion sizes

Select a portion size from the combo box. The portion sizes shown will only be those applicable to the food selected for Food Name.

X: Enter the number of the portion size selected. For example if the portion size is 100 Grams of pasta, select 'grams' from the portion size and then enter 100 in the X field. If it is 'Slice', then enter the number of slices.
Once X has been entered 'Amount (g)' will be calculated.

Amount (g): This is normally generated from Portion Size and X. If no portion sizes are available (this should not happen) the 'Amount (g)' can be entered manually.

Where foods are recorded in mls, these should be converted to grams before entering into DINO e.g. 20mls mashed banana = 20 x 0.95 = 19g.
NOTE:

For more details on conversion factors refer to the Coding Food rules.xls and use the conversion factors tab.

5.6 Adult Portion Sizes

Portion sizes can also be described as small, medium and large respectively. If the food code does not have a small portion allocated then use 0.75 of an average portion.
If the food code does not have a large portion allocated then use 1.5 times an average portion.

5.7 Children's and Toddler's portion sizes

You will notice that not many foods in the database have a corresponding child or toddler portion size. This is because we encourage respondents to record foods in household measures e.g. 2 tbsp. of mashed potato or 1 tsp of ice cream. However in some cases the respondent will not record a portion size, or may record "small, medium or large".

For more information on coding toddler/children's portion sizes refer to the Children's Portion Sizes.xls (CPS).

The worksheets in this spreadsheet are categorised into age groups 1-3, 4-6, 7-10, 11-14 and 15-18. These sheets provide average portion sizes for a range of commonly consumed foods e.g. an eight year portion of chicken curry is 148g. If small or large portion sizes are recorded DO NOT multiply the children's average portion by 0.75 or 1.5.

If a parent/carer has recorded "small/large plate/bowl/cup" please code the CPS (do not adjust using 0.75 or 1.5). Also if the portion recorded states a fraction or proportion eaten e.g. ¼ or ½ and no other detail provided code the CPS with no adjustments. If the respondent has recorded that more than 1 portion has been consumed then multiply the CPS by this amount (e.g. 2 x bowlfuls of cornflakes, would be coded as 2 age appropriate CPS).

See sections 7.2 and 7.4 for information on how to deal with a portion size query.

5.8 Time

Enter the time of each eating occasion in 24hr or 12hr format e.g. 18.00 or 6pm. Each food record should cover four 24-hour periods. The recording period for a food record day is from 00.00 – 23.59.

NOTE: For more information on entering meal time ranges for your study refer to section **3.4.1**

5.9 Coding Type

To save time searching for foods you can save frequently consumed food and portion size codes by allocating them to a coding type e.g. if a respondent drinks tea throughout the day assign each component i.e. tea, milk and sugar to the tea/coffee coding group and it will appear in the history list. You can then copy each of these items into the food record each time you code the tea saving time searching for the separate ingredients again.

5.10 Takeaways

If a food is eaten as part of a takeaway, you should select 'Yes' for Takeaway Item.

Food eaten in a fast food joint (anywhere you don't get crockery or cutlery!!) is still classed as a takeaway even if it is eaten in the establishment e.g. McDonalds, KFC, Burger King.

5.11 Recipe group

Recipe groups are allocated to homemade dishes, toddler foods and manufactured items. These groups link together the component ingredients of mixed dishes and classify them as a single item. Each ingredient in a homemade recipe should be allocated a homemade recipe group (see section 6.4 for guidance) e.g. when coding ingredients for a homemade Spaghetti Bolognese you would allocate the recipe to the 'other beef and veal – homemade recipe' group.

Individual composite ingredients should be coded as separate items and you will need to allocate each ingredient to the appropriate recipe group e.g. 'commercial toddler foods' or 'manufactured chicken products including ready meals'.

5.12 Flagging a record

There are many reasons for flagging a record: if you are unsure of the food you have selected, have coded an unknown food (when there is no appropriate food match) or the portion size is missing. To flag a record you click the grey sleepy face and a blue question mark will appear. (see section 7 also).
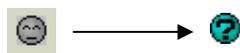
You can monitor the reasons why entries are being flagged so after raising a flag you should select a query type from the adjacent boxes. Multiple types can be selected but only one from each category: Food (query relates to food), Portion (query relates to portion) and Other.

Even if you resolve a query whilst you are in the record and therefore don't need to flag it, it is helpful for monitoring if you still allocate a query type. So raise a flag as you would normally, allocate the query type and then click on the blue question mark to highlight the query as complete.

5.13 Food rules word document

There is a separate document that gives instructions on how to code certain foods such as tea, coffee, squash, bread and other commonly consumed items. Please refer to the appendix for more information.

5.14 Deleting foods

See section 8.2

6. Weight Changes on Cooking and Calculating Recipes

6.1 Weight changes on cooking

Occasionally respondents' record portion sizes in uncooked measurements e.g. 25g dry white rice (boiled) or 8oz rump steak (grilled). The cooked weights of these foods need calculating before the food can be coded. Refer to McCance and Widdowson 7th Edition for estimated weight changes on cooking. e.g.

25g dry white rice

% weight change boiled = +177

(25 X 1.77) + 25 = **69.25g white rice boiled**

Or

8oz steak (227g)

% weight change grilled = -28

(0.28 X 227) = 64g

227g (raw) − 64g (cooking loss) = **163g rump steak grilled**

When coding recipes the cooked weight of the meat is always used, but there may be an occasion when you need to work out what the raw weight of the meat should be. An example where this may be useful is if you need to use M&W as a guide for other ingredient/s weights in a recipe that have not been provided by the respondent. These calculations are also used to deduce the raw weight of a cooked ingredient e.g. chicken used in a recipe. The FSA 'Food portion sizes' book only provides the weight of cooked chicken breasts so the raw weight would need calculating to enter chicken breasts in a recipe e.g.

4 medium sized chicken breasts cooked = (130g x 4 = 520)

% weight change casseroled = -25 (so cooked weight is 75% of raw)

130g= 0.75x raw weight, or raw weight = (cooked weight /percent remaining after cooking) x100.

(130g/75) x 100=173.3g.   173.3g x4 =693g

=693g raw chicken breast (173.3g per breast)

6.2 Calculating recipes

When homemade dishes are eaten, respondents are asked to record the recipes in the space provided after each food record day. If sufficient details are recorded (including a full list of ingredients, each with an amount) ,you can calculate the proportion of the recipe that the

respondent ate and enter the individual ingredients into DINO using the recipe function as described in Appendix 2 and 3.

6.3 Cooked food codes

When entering recipes in DINO always select codes for cooked ingredients. The following list gives examples of some cooked codes in the database:

Egg after baking/boiling

Flour, self-raising after baking

Milk, semi-skimmed after boiling

Potatoes, old with frying losses

6.4 Recipe grouping - Rules

Each food in the recipe should be assigned to the appropriate recipe group. All homemade dishes will fall into the homemade categories. Recipes are generally grouped according to the main ingredient providing the most protein e.g. Chicken risotto is a meat dish although the main component would be rice, but chicken contains the highest protein value. Cottage pie is also likely to contain more potato than beef mince but it is classified as a meat dish. This has been based on recipe classifications in M&W.

Remember that the same recipe group must also be assigned to each ingredient in the recipe as you enter it into DINO, if you are not using the New Recipe Function.

7. Queries

Most queries can be classified into one of four categories;

- Missing food code in DINO
- Missing portion code in DINO
- Insufficient information to code food
- Insufficient information to code portion size

7.1 Missing food code in DINO

Foods may appear in food records that don't have a corresponding food code in DINO. They may be new products, or existing foods that you haven't

come across before. Enter coding number 9489 (Food number 99999) 'unknown food' and flag this entry.

7.2 Missing Portion codes in DINO

Occasionally respondents will record portion sizes in the diaries that are not in DINO. Before you raise a query, it is worth checking to see if you will find it in the 'FSA portion sizes' book or on the dropdown of a similar product on DINO. If you can't find the portion size here, enter 1 gram as the weight and flag this entry. The portion size can be added at a later date. Refer to review coding, section 8 for more details.

7.3 Insufficient information to code a food

Sometimes you will not have sufficient detail on the food record page to be able to code a food accurately. The first thing to do is see if the food features on another dietary day and whether relevant information has been recorded there. If not, other sources of information are:

- **Food labels/wrappers –** Respondents may be asked to collect wrappers from unusual foods and ready meals.
- **Default foods** - Default codes are available for frequently consumed foods. They should only be selected when a food is recorded without enough detail to pick an alternative code e.g. someone may record gravy without stating whether the gravy is thickened, or has had the fat skimmed off. You should only use a default if there is nothing else in the food record that can help inform a more accurate decision and in conjunction with the points made in the rest of this section.
- **Coding Food rules spreadsheet –** Food rules are created when new foods can't be entered into the database. If a food is not in the database, or you are unsure how to code it, it is worth checking the coding foods rules spreadsheet for further information. Food rules are often created for composite foods such as ready meals and sandwiches.

   NOTE: For more information refer to the Coding Food rules.xls

   For more information on coding sandwiches refer to the Coding Sandwiches.xls.

7.4 Insufficient information to code portion size

If a portion size is missing in the food record and packaging has not been sent in, an estimate can be made using the following methods (in order of preference of use):

Adults:
- If item consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if the respondent tends to have small portions, code a small portion
- Use medium portion size from DINO

Children:
- If item consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if the respondent tends to have small portions, code a small portion.
- Refer to Children's portion sizes.xls and use an average portion for their age group.

Toddlers:
- If item is consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if respondent tends to have small portions, code a small portion
- Refer to Children's portion sizes.xls worksheet ages 1-3

School meals:
- If item is consumed on another day base on this size
- For primary school children (4-11) use the infant and junior school meals spreadsheet in Children's portion sizes.xls depending on the age.
- For secondary school children (11-18) use the secondary school meals spreadsheet in Children's portion sizes.xls

7.5 Proportions calculator

Proportions are completed when a manufactured food product does not match the nutritional values of an existing compatible food code or if there is no existing suitable food code in DINO. Therefore to complete proportions, multiple existing food codes are incorporated in order to match the composition of a food.

From the **main switchboard** in DINO select **'Food Tables'** then **'Nutrient Profile Calculator'.**

In the new food number box the subject number will need to be entered. **Note:** If you have more than 1 proportion for the same subject number add 1, 2 or 3 to the end of the subject number depending on how many proportions you have to do (e.g. 1031, 1032, etc.).

To input the ingredients, either use the ingredients list or ingredients input tab. If you know the food number of the foods you would like to include, then enter this in the food number column on the ingredients list tab. Alternatively, use the ingredients input tab and then use the string field to search for items the same as you would when coding. Use the arrows to insert another ingredient ⟨Record: ◄ ◄ 1 of 4 ► ►I ►⋇⟩ . Add in the amount of
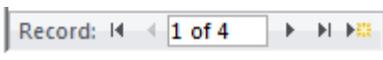
each ingredient required based on percentages. The total amount of ingredients should add up to 100.

If you wish to amend the percentage of an ingredient you can do this by either directly entering it in the amount box on the ingredients list tab or on the ingredients input tab.

If you now click on the calculated nutrients tab, you can then enter the nutritional values of the product using the **Label Values** column.

When entering in the nutritional information of the product, enter the carbohydrates as monosaccharide equivalents;

- Sugar value x 1.05 – enter into sugar column

- Starch value x 1.1 (starch = CHO – Sugar values)

- Total CHO as monosaccharide = the sum of converted sugar value and converted starch value – enter into CHO column.

Convert Fibre to NSP. Label data for fibre is assumed to be AOAC.
- Multiply fibre by 0.75.

Salt must be entered as sodium in mg
- (Salt x 0.3934) x 1000

You can compare the ingredient values per 100g against the product nutritional information and adjust the ingredients as required.

The % difference must be within the 25% threshold[1].
Note: On the calculated nutrients tab you will notice there are 2 show ingredients food nutrient boxes. If you click on the **Nutrient values per 100g of new food** box this will bring up a table that will show you how much and which foods are providing which nutrients for the new food you are creating. If you click on **Nutrient values per 100g of ingredient** box this will bring up a table that shows you the nutrient values per 100g of each ingredient entered into the nutrient profile calculater.

7.6 Food Matching

When trying to match a food or drink item to an existing code on DINO there is a food matching tool.

In DINO select **'Food Tables'** then **'Food Matching'** then `**Food Matching**`again.

You can search for items based on food number, product name, main food group, sub food group or by individual nutrients. For example, type in the food name you require e.g. ice*cream and press enter. This will bring up a list of items containing this food name.

---

[1] Threshold based on traffic light labelling system using a 25% threshold

Food Match

Field	Value		Field		
Food Number					
Food Name (contains)	ice*cream				Clear Parameters
Main Food Group					
Sub Food Group					
Energy (kcal)		% Variation	Sodium (mg)		% Variation
Energy (kJ)		% Variation	Vitamin C (mg)		% Variation
Protein (g)		% Variation	Vitamin D (µg)		% Variation
Fat (g)	10	% Variation 25	Vitamin E (mg)		% Variation
Carbohydrate (g)	20	% Variation 25	Folate (µg)		% Variation
Saturated Fatty Acids (g)		% Variation	Vitamin A (µg)		% Variation
Sugars (g)		% Variation	Calcium (mg)		% Variation
Englyst Fibre (g)		% Variation	Iron (mg)		% Variation

List All Nutrients

⊙ Tabulation ○ To Excel

Food Number	Food Name	Food Group	Energy (kcal)	Energy (kJ)	Protein (g)	Fat (g)	CHO (g)	Sat Fat (g)	Sugars (g)	Englyst Fibre (g)	Sodium (mg)	Vit C (mg)
720	ICE CREAM, STANDARD DAIRY (MADE WITH MILK/CREAM) , VANILL/	53R - ICE CREAM	201	841	3.5	11.4	22.4	7.32	20.8	0.3	41	1
724	ICE CREAM, STANDARD DAIRY, (MADE WITH MILK/CREAM) NOT CH(	53R - ICE CREAM	177	741	3.6	9.8	19.8	6.18	19.8	0	60	1
5252	ICE CREAM, LUXURY,DAIRY (MADE WITH MILK/CREAM), NOT CHOCC	53R - ICE CREAM	200	840	3.1	10.7	24.5	7.1	24.5	0.2	30	1
6969	ICE CREAM, STANDARD, NON DAIRY (MADE WITH WHEY PROTEINS),	53R - ICE CREAM	165	694	3.5	8.1	20.9	4.99	20.7	0	76	1
6970	ICE CREAM, STANDARD, NON DAIRY (MADE WITH WHEY PROTEINS),	53R - ICE CREAM	178	746	3.1	8.1	24.6	4.99	24.4	0	76	1
8009	ICE CREAM, STANDARD, NON-DAIRY (MADE WITH WHEY PROTEINS)	53R - ICE CREAM	165	695	1.8	7.7	23.6	6.07	18.8	0.4	44	0.9
8663	ICE CREAM STANDARD DAIRY (MADE WITH MILK/ CREAM) WITH CH	53R - ICE CREAM	198	830	3.5	10.4	24.1	6.42	24.1	0	85	0.9

Each nutrient value of interest can be entered individually and a percentage variable can also be added to include a greater range of products in which to match enabling you to find the best match on DINO.

When entering carbohydrate and sugar values remember to enter the monosaccharide equivalents, convert fibre to NSP and salt to sodium. The equations for this can be found in section 7.5.
To clear the screen click **'clear parameters'**.

Select the food number you require, from the left hand column and a new screen will open. This will show the variance food to packet %. Enter the portion size eaten in the right hand box and it will also show the variance food to packet for the portion size eaten.

If the match is not within the 25% threshold for all nutrients of an existing code the item in question will need to be queried[1].

8. Editing – Review Coding

This is the option to review and edit previously entered data. You will need to go back in to DINO and clear the flagged entry. To re-visit these queries, from the main switchboard select **'Dietary Coding'**, then select **'Review coding'**.

Select the study title to be reviewed. If you are looking at one particular respondent then enter the subject ID and click `open review form`. If you want to look at all the participants then just enter study title and click `open review form`

The Review Coding form is then displayed.

The top part of this form shows the study, current subject ID and Record status.

Study: For information only. It cannot be changed using this form.

Subject ID: This shows the current Subject ID. All diet records for the subject are shown in the sub form, which makes up the rest of the form. Use the normal navigation buttons to move between subjects.

Select Record Status: This combo box allows the user to filter the records for different statuses.

- **'All'**: Lists all records coded.
- **'Entered'**: Lists all records, which are not marked as a question or happy.
- **'Question'**: Lists all records, which have a question against them. Queries are shown in red.
- '**Happy**': Lists all records marked as happy- highlighted green

Note that changing the Record Status field may reduce the number of subjects. This is because only those subjects with at least one record with the selected status will be shown.

8.1 Dealing with resolved queries – amending records

To re-visit flagged queries, from the main switchboard select **'Dietary Coding'**, then select **'Review coding'.** Any queries that have been flagged will appear in red as shown below.

You can see two queries on this form, croissant and an unknown food described as a McVities chocolate digestive. Click on '**amend record'** to amend the query and the dietary coding screen will open.

Select the appropriate food and portion size code to complete the query then click the blue question mark to highlight the query as complete. Select the '**check and close'** feature located in the top right hand side of the window.

The query becomes highlighted in green; to indicate it has been completed.

8.2 Deleting records

Review coding can be used to delete any records entered in error. Click on the record you would like to delete and then select the **'*delete'*** tab from the toolbar at the top of the screen to permanently delete the entry.

For more information to help with coding please refer to:
- The Appendix below.
- The following spreadsheets - Coding Food Rules, Children's Portion Sizes, Coding Sandwiches.xls

For more information to help with adding New food codes, missing nutrient values, Data checking and dataset production please refer to:
- SOP 1. The use of DINO for Dietary Recording and Analysis
- SOP 2. Processing Food Queries, adding new food codes to DINO
- SOP 3. Obtaining nutrient data for missing values in the DINO nutrient database
- SOP 4. Disaggregation details for mixed dishes
- SOP 5. Checks to be carried out on Dietary Datasets before producing tables
- SOP 6. Dataset production using DINO

Appendix 1: Coding Food Rules

Note: The default codes stated in these food rules would have been relevant in 2019, for studies taking place after 2019 the default food codes suggested may no longer be relevant. For example the default cooking oil recommended in 2019/2020 was blended vegetable oil. The default cooking oil for studies completed after 2020 is now rapeseed oil.

<u>Bread</u>

Brown and wholemeal bread may be used interchangeably – in cases like this, if brand name is stated, please check they do actually make brown bread. Please refer to Coding Food Rules.xls as this lists some common brands of brown and wholemeal breads.

Points to consider:
- There are two slices in one round of sandwiches.
- There is one slice in one round of toast.
- If respondent has left the crusts, deduct 30% from each slice of bread coded.

- If they have eaten the end crust, add 10g per slice weight.

Butter/fat spreads

Butter and margarine often get used as generic terms to describe a variety of fat spreads. Please ensure the code selected matches the description.

If a respondent has bread/toast with fat spread, record the same number of portions of fat spreads as there are slices of bread/toast.

If a respondent has not eaten the crust of a sandwich, you do **not** need to make a reduction in the amount of spread coded.

Canned/non-canned foods

There are different food codes for the canned and non-canned varieties of some foods and beverages. Remember that some canned foods contain water or oil that will be drained before eating. You will notice some portion weights are for the drained contents e.g. sweetcorn – large can (325g) drained weighs 260g.

Default time of eating if not specified in the food record

Check previous entries in the food record: if days 1 to 3 the respondent always has breakfast at 8am it would be feasible that on day 4 breakfast was also consumed at 8am. Like-wise if a 4 year old was at school and on a previous day they consumed lunch at 12pm then then use this time.

If no time of eating occasion is specified within a time slot and there is no indication in the food record when these items were consumed then default to the time mid-way on the time slot e.g. 12-2pm code the items consumed at 1pm.

Drinks consumed throughout the day

Some respondents will record large volumes of a drink and state they drank it throughout the day. If no indication of time given you should split the drink into six equal portions and code them at 6am, 9am, 12pm, 2pm, 5pm and 8pm.

Similarly when one time given for multiple drinks, separate them across the time slot given e.g. respondent writes, 4 pints in a pub at 9pm. This should be split into 2 pints at 9pm and a further 2 pints at 10pm.

Drinks – unspecified

Where a drink is recorded and no further details are provided, code use the default code number 9825 Double concentrate fruit drink/squash, no added sugar (NAS), any flavour NOT blackcurrant. Code water separately and dilute the squash accordingly based on the age of the respondent.

If brand or type is unspecified, but blackcurrant is specified then code as coding number 10365 Double concentrate fruit drink/squash, no added sugar (NAS), contains blackcurrant.

In the incidences when single concentrated is specified but no flavour or brand code as coding number 1874 Fruit Drink Concentrate (e.g. Squash) Low Calorie/NAS NOT Blackcurrant and if single strength blackcurrant is specified but no brand provided code as coding number 6105 Fruit drink concentrate (Squash), blackcurrant, low calorie/NAS (No Added Sugar).

Drinks – toddlers

If the type of squash is not specified default to the NAS variety for all drinks at and away from the home. If the type of squash is not specified in the food record code as coding number 9825 Double concentrate fruit drink/squash, no added sugar (NAS), any flavour NOT blackcurrant. If Blackcurrant is stated and nothing else code as coding number 10365 Double concentrate fruit drink/squash, no added sugar (NAS), contains blackcurrant.

Concentrated drinks e.g. squash

The concentrate and the water need to be coded *separately*. Remember to select the food codes 5101 and 5102 for water. In the food record the amount will usually be given for the total amount of squash e.g. large glass or 300ml, so you need to split this up. In child and adult food records, the respondents may provide a ratio, which you can use to code squash and water; however in some cases this will not be provided or they have drank squash outside of the home – in which case the tables in this section can guide you on how much squash and water to code.

For adults and children aged 8 and over

For children aged 8 and over and adults, for single strength squash, the portion size will be 1/5th of the total amount for concentrate and 4/5th's of the total amount for the water, unless the food record states otherwise. So if the amount is given as 300ml, you will need to allocate 60ml to the concentrate and 240ml to water. For double strength squash, the amount of concentrate is half that of a single strength so 1/10th of the total amount for concentrate and 9/10th's of the total amount for the water. So if the amount is given as 300ml, you will need to allocate 30ml to the concentrate and 270ml to water.

See the table below for a list of dilutions for different volumes for single strength concentrate. *If it is double strength then half the squash volume and make up the total with water.*

	Glass (ml)	Water	Squash
	1000	800	200
Pint	568	454	114
	500	400	100
	450	360	90
	400	320	80
	350	280	70
Large	300	240	60
	290	232	58
	280	224	56
	270	216	54
	260	208	52
	250	200	50
	240	192	48
	230	184	46
	220	176	44
	210	168	42
Medium	200	160	40
	190	152	38
	180	144	36
	170	136	34
	160	128	32
Small	150	120	30
	140	112	28
	130	104	26
	120	96	24
	110	88	22
	100	80	20

For children aged 4 to 7 years

If the food record has not stated how much squash to water they have had, or when they are drinking squash not prepared at home (e.g. at a friend's house), the portion size will be 1/8th of the total amount for single strength concentrate and 7/8th of the total amount for the water. *If it is double strength then half the squash volume and make up the total with water.*

	Glass (ml)	Water	Squash
	1000	875	125
Pint	568	497	71
	500	438	63
	450	394	56
	400	350	50
	350	306	44
Large	300	262	38
	290	254	36
	280	245	35
	270	236	34
	260	228	33
	250	219	31
	240	210	30
	230	201	29
	220	193	28
	210	184	26
Medium	200	175	25
	190	166	24
	180	158	23
	170	149	21
	160	140	20
Small	150	131	19
	140	123	18
	130	114	16
	120	105	15
	110	96	14
	100	88	13

For children aged 1.5 to 3 years

If the food record has not stated how much squash to water they have had, or when they are drinking squash not prepared at home (e.g. in nursery), the portion size will be 1/11th of the total amount for single strength concentrate and 10/11th of the total amount for the water. *If it is double strength then half the squash volume and make up the total with water.*

	Glass (ml)	Water	Squash
	1000	909	91
Pint	568	516	52
	500	455	45
	450	409	41
	400	364	36
	350	318	32
Large	300	273	27
	290	264	26
	280	255	25
	270	245	25
	260	236	24
	250	227	23
	240	218	22
	230	209	21
	220	200	20
	210	191	19
Medium	200	182	18
	190	173	17
	180	164	16
	170	155	15
	160	145	15
Small	150	136	14
	140	127	13
	130	118	12
	120	109	11
	110	110	10
	100	91	9

Foods cooked in oil or butter/margarine

Foods that are commonly cooked in oil, butter or margarine often have food codes that incorporate the oil/fat used in cooking.

Oils classified as polyunsaturated oils include sunflower oil, soya oil, corn oil, sesame oil, and safflower oil. They are sometimes referred to as PUFA (**P**oly**u**nsaturated **F**atty **A**cids) in the food codes. Therefore, if a respondent had turkey burgers fried in sunflower oil, the appropriate code for that food would be 1156 (turkey burgers coated in crumb and *fried in polyunsaturated oil).* You may also see food codes where the foods are cooked in MUFA. This stands for **M**ono**u**nsaturated **F**atty **A**cids and includes rapeseed oil and groundnut oil. Olive oil is a monounsaturated fatty acid and some foods are labelled as *fried in olive oil.* If there is not a code for fried in olive oil you

may choose the MUFA option. Other types of fats you may see in the food codes are: *fried in lard, dripping, butter, ghee and blended vegetable oil*.

For fried foods, if a code exists that includes the oil/fat that was used for cooking then select that code. You DO NOT need to enter the oil separately. If a code is not available for the type of oil/fat used then you will need to select the boiled/grilled code for that food and then code the oil separately and link them together as one food by using the recipe group. In the Coding Food Rules.xls you will find a worksheet with the amounts of fat absorbed by various foods during frying (e.g. 1.3g per slice of bacon). For example, if a respondent had two slices of back bacon fried in olive oil you would code 2 slices of back bacon, grilled or dry fried, 2.6g of olive oil and link them both to the recipe group 'Other bacon and ham'.

NOTE: The current default oil in DINO is blended vegetable oil. We recommend from 2021 that the default oil used is rapeseed oil.

Hot drinks made up with water e.g. hot chocolate

For hot drinks such as hot chocolate or Ovaltine that are made up with water, it is necessary to code the dry powder and water *separately,* as for coffee (see section 7.27). All the codes for dry beverages (except tea and coffee) can be found under Miscellaneous in the Food Tree – First Level. Water added to instant beverages should be food code 5106.

Ready meals

When a ready meal is recorded in the food record make sure you select the code that states 'ready meal' or 'purchased'. These codes are specifically for the brands listed in the food name e.g. food coding number 9245 (Chicken Korma with rice ready meals any purchased e.g. Morrison's, Asda, Tesco) can only be used for Chicken Korma ready meals purchased from Morrison's, Asda or Tesco.

Takeaways

There are also some takeaway dishes e.g. code 6991 is chicken biryani, with rice, takeaway. Only those codes that specifically state 'from takeaway' or 'takeaway only' in the description can be used for these foods.

All foods that are eaten as a 'takeaway' need to be identified as such. So if a respondent eats basmati rice as part of a Indian takeaway, then ensure that 'Yes' is selected in the Takeaway box. In general, any food eaten in a restaurant is not a takeaway. See section 5.10.

Mashed potato

If a respondent has clearly stated the type and amount of milk and spread stated code as stated. If milk stated and not quantified ignore milk in mashed potato. If a respondent had mashed potato made with milk and butter, use the code for mash with butter. If the respondent doesn't mention any milk or spread code as *boiled or mashed potatoes, No added butter or margarine*.

Milk

There are different codes for milk depending on the season – Summer (May to October) or Winter (November-April). Please select based on the dates of the food record NOT the dates you are coding. There are coding foods for milk on cereal, which will allow us to take the absorbative capacity of the cereal into account when coding the milk. These codes will begin with "CEREAL MILK".

Milk on cereal:

Code the cereal as you normally would do. All cereals will have a cereal type after the food name, to indicate which type of cereal it is (Flaky, muesli, bran or Weetabix). When coding the cereal, please select "milk/cereal" from the coding type box

When coding the milk for cereal, remember to search for "CEREAL MILK". There are codes for different milk types, so select the appropriate code from the drop down list. For the portion size, select the appropriate option from the portion drop down and enter the GRAM WEIGHT OF THE CEREAL

First panel:

Coding No.   174
Food Name   Kelloggs Fruit 'n' Fibre ONLY (FLAKY)
Portion Size   Gram   X   70
PS Amount (g)   70
Atlas Used   Atlas Usage
Atlas Amount
Time   06:00
Coding Type   Cereal/Milk
Recipe Group

Second panel:

Coding No.   11531
Food Name   CEREAL MILK - Milk, skimmed, pasteurised (fresh), winter (Nov-A
Portion Size   FLAKY - Average   X   70
PS Amount (g)   255
Atlas Used   Atlas Usage
Atlas Amount
Time   06:00
Coding Type   Cereal/Milk   TakeAway item   No

Potatoes

Respondents usually record portion sizes for potatoes as either the number of potatoes, or the number of pieces of potato they ate. It isn't always clear which they are referring to. For old potatoes the weights provided on the drop down should be used e.g.

- Individual small - 88g
- Individual medium - 160g
- Individual Large – 195g

    If there is no portion size for a piece of potato use 50g.

If using the above weights means the respondent is consuming a large amount of potato in these circumstances use your judgement to decide e.g. a 12 yr old records boiled potatoes - 5 medium, this could be 800g (5 individual medium potatoes) or 250g (5 x 50g pieces of potato). Look at the other portion sizes in their food record before deciding which one to use (although it is very likely they were referring to 5 pieces)

Sandwiches

To code a sandwich you need to know the exact amount of each ingredient e.g. bread, spread and fillings. When shop-bought sandwiches are recorded in diaries check the manufacturers' details.

When a respondent makes a sandwich at home they should record the exact quantities of each ingredient in the food record.
If this information is missing you can use the Sandwich Spreadsheet.xls to calculate the portion sizes of bread, spread and fillings. Use defaults for bread and spread when no other information is provided.
Note: Refer to the Sandwich spreadsheet.xls for more information.

Split coding of composite foods e.g. sandwiches and salads

For foods that are <u>not</u> cooked, such as sandwiches and salads (composite foods), each of the components needs to be coded separately (i.e. for

sandwiches separate codes are needed for the bread, spread, filling, lettuce, tomato etc.).

Bought and homemade salads that contain an ingredient to bind them e.g. coleslaw or beetroot salad should be grouped under SALAD AND OTHER RAW VEGETABLES. Other items included within this recipe group are items such as guacamole and tzatziki.

Supplements

Code in the 6am to 8:59am time slot unless this is not appropriate, e.g. the respondent is asleep during this time or the time of consumption is given in the main food record page.

Salt/Pepper

Salt and pepper in recipes and added to food SHOULD be coded. If the amount used within a recipe is not stated, then code 0.01g within the recipe. If added after cooking and the quantity used is unspecified code as 0.01g per portion of the recipe or meal.

Unknown quantities in a recipe

For salt, pepper and spices these can be entered in the recipe as 0.01g

Tea and coffee

When coding beverages such as tea and coffee it is necessary to code the tea or coffee, milk and sugar separately.

For instant coffee (or instant tea), it is necessary to find separate codes for the coffee powder and the water (as well as the milk and sugar). Tea and filter coffee are classed as infusions with the water already accounted for so you do not need to code the water separately.

Below is an example of how a cup of instant coffee with a little milk and 2 teaspoons of sugar should be coded:

Food name	Food code	Portion size	X
Instant coffee powder	2308	Level teaspoon	1*
Water in coffee	5103	Cup – with a dash/little milk	1
Milk, skimmed, fresh, winter	8544	In a cup – a dash	1
Added to drinks: Sugar, white;granulated,caster,icing	2205 (coding number 1757)	Teaspoon	2

*The default for amount of instant coffee, unless specified in the food record, is 1 teaspoon.

The database assumes standard sized mugs and cups are used which are 260ml and 190ml. The respondent may also state the volume of their mug or cup and it will be not be a standard size. Use the table below to enter a portion size for these respondents. The standard cup and mug sizes are highlighted in grey

		Tea/Coffee			Milk		
		Dash	Normal	Lots/Milky	Dash	Normal	Lots/Milky
Cup size	150	138	126	114	12	24	36
	160	147	135	122	13	25	38
	170	156	143	130	14	27	40
	180	166	152	137	14	28	43
	190	175	160	145	15	30	45
	200	184	169	153	16	31	47
	210	193	177	160	17	33	50
	220	202	185	168	18	35	52
	230	212	194	175	18	36	55
	240	221	202	183	19	38	57
	250	230	211	191	20	39	59
	260	239	219	198	21	41	62
	270	248	228	206	22	42	64
	280	258	236	214	22	44	66
	284	262	240	218	22	44	66
	290	267	244	221	23	46	69
	300	276	253	229	24	47	71
	500	460	422	382	40	78	118
	568	524	481	437	44	87	131

Select FC 5103 for the water, so the correct portion sizes are shown.

These portion sizes have taken into account the volume of water minus the volume of milk. You should also select the correct portion size for milk based on the amount recorded in the food record.

Amount in food record	Portion size in DINO
A little	In a cup/mug – dash
Some	In a cup/mug
A lot	In a cup/mug – lots

Vegetables

Code all steamed vegetables as steamed/microwaved only. In some cases you will only be able to find the raw weight of a vegetable when you want the cooked, and vice versa. Raw and cooked weights of vegetables are interchangeable as they do not lose or gain much weight on cooking.

Water

Code all water recorded in respondents' diaries. There are several codes for tap water, depending on what it has been used for e.g. tap water not used for diluting is food code 5000, whereas tap water used to make up instant coffee should be food code 5103.

When water is recorded as drank 'throughout the day', you need to code equal proportions in each time slot where food is consumed e.g. 1 litre of water drank through the day would be coded as 250mls at 6am, 9am, 2pm and 5pm for a respondent who has eaten between 6am-9am, 9am-12am, 2pm-5pm and 5pm-8pm.

Weight changes on preparation

As mentioned in the recipe section many dry foods gain weight on cooking such as rice, pasta, lentils etc. Use your judgement to decide whether the amount recorded is the dry or cooked weight, use the Food Portion Size book for guidance. If the dry weight has been recorded use McCance and Widdowson 7th Edition to estimate the cooked weight and enter this amount.

50

Meat and fish lose weight on cooking. Use M&W 7th Edition to make sure you are using the most appropriate weight loss for the cooking method specified. For example - Chilli con carne cooked on the hob: if you were recording a percentage of the recipe an 18% (mince stewed) weight loss would be added to your mince, not 28% (mince microwaved). Grilled chicken breast has a 25% weight loss, but if the chicken was cut into strips and stir-fried the appropriate cooking loss would be 21%.

NOTE: Always apply cooking loss to meat and fish in meat and fish recipes.
If it is portion of a recipe enter into the system cooked weight of meat. Note the raw weight into the notes section to keep a record. And apply a weight loss to the whole recipe. For more details please refer to the Coding User Manual section 6.2 Calculating recipes.

Applying conversion factors (CF)

Conversion factors need to be applied to measures stated in mls where possible. For example: If a ½ cup of olive oil is used in a recipe the conversion factor of 0.91 will need to be applied (95 x 0.91 = 86.45g). There are some exceptions to this rule; no conversion factors need to be added to any squashes, fruit juice or ready to drink juices. Conversion factors can be found in the Coding food rules.xls or the FAO website if there is not an available CF on the food rules: http://www.fao.org/3/a-ap815e.pdf. Refer to the food rules in the first instance.

For milk added to tea/ coffee, used to make hot chocolate or just had as a glass does not require a conversion factor.

Recipe Linkage

Recipes are generally linked by the appropriate recipe group based on the principle that they are cooked together. There is an exception to this rule; cake with icing; although all of the ingredients are not cooked

51

together they should be linked. Items such as mash with butter and milk should not be linked as they are not cooked together. Pasta and sauce should also only be linked if they are cooked together e.g. Tuna pasta bake.

Double cooked recipes

When a recipe has been double cooked, make sure you use both weight losses e.g. Cottage pie – the savoury mince has a cooking loss of 17% and then the whole cottage pie has a further cooking loss of 11%.

Appendix 2: Recipe Function

Calculating ingredient weight losses and gains

If a raw weight is given for meat or fish then a weight loss must always be applied using the values given in McCance and Widdowson (M&W) 7th Edition section 4.3.1 weight changes on preparation of foods. For example, 500g of raw minced beef in a stew would have a cooking loss of 18% applied to it and be entered into the recipe function as 410g of stewed mince.

If a dry weight is given for ingredients that absorb water during cooking such as cereals, beans or pulses then a weight gain must be applied to the dry ingredient and the water uptake subtracted from liquids in the recipe. These values should also be taken from McCance and Widdowson 7th Edition section 4.3.1. For example, if a recipe contains 300g of dry white rice and 600g of stock, the water uptake of 172% would be applied to the rice and this entered as 816g cooked rice in the recipe function. The water uptake of the rice in this case is 516g, so this would be subtracted from the 600g stock, leaving an additional 84g to be entered as an ingredient in the recipe function.

Water and stock are the most common types of liquids used in recipes so deduct water absorbed on cooking dry ingredients from these. If tinned tomatoes are the only form of liquid used in a recipe do not deduct any amount absorbed on cooking.

Liquid stated in ml used in a recipe will require the use of a conversion factor to calculate the weight of this volume in grams. Do this by multiplying the volume with the specific gravity from the Coding foods ruls.xls, FSA 'food portion sizes book' or the FAO / INFOODS Databases (found at *http://www .fao.org/3/a-ap815e.pdf*) e.g. 200mls condensed milk = 232g (specific gravity 1.16).

When to apply a weight loss to the recipe as a whole

If the respondent has given their **portion as a proportion of the recipe** such as the whole recipe or ¼ of the recipe, we know exactly what proportion of the recipe was eaten so individual weight losses and gains are applied to any meats/fish and dry ingredients, but **no weight loss is applied to the recipe as a whole**. See appendix 3 for coding instructions.

If the respondent describes the **amount of the recipe eaten as a weight or as a portion in tablespoons** we do not know what proportion of the dish they ate. On this occasion you would apply weight losses to any meats and weight gains to any dry ingredients as usual, and then **apply a weight loss to the recipe as a whole**. This enables the recipe function to compare the weight of a cooked portion of the recipe with the weight of the cooked recipe as a whole and calculate the proportion of each ingredient that was consumed.

NOTE: The method described above results in an overestimation of the total weight (g) of food consumed. However it gives us a 'best fit' in terms of nutrient content and is more reliable for disaggregating vegetables, meat etc.

Coding recipes using the recipe function

All recipes will need to be entered into DINO through the Recipe Function. Before coding any recipes make sure the eating environment questions are filled in. In *Dietary Coding* press the [Recipes] button at the bottom of the window and the *Recipe List* window will appear.
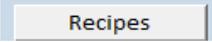
To enter a recipe click on the **New Recipe** button. Enter the **Recipe Name**, and then allocate an appropriate **Recipe Group** (see section 6.4 of the coder user manual). Add details of the recipe source to the **Recipe Notes** box, for example whether it is from the food record, based on a recipe in a McCance & Widdowson book, or from a website.
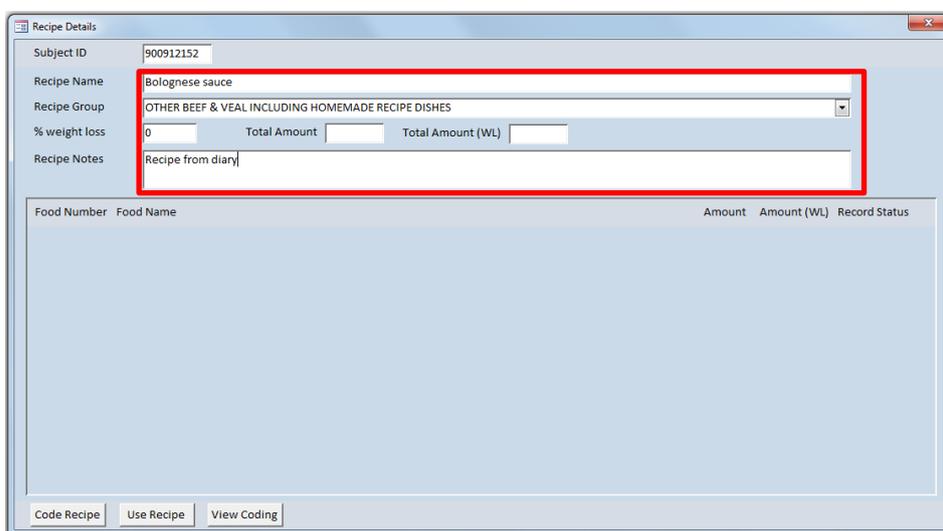
Coding a recipe where the portion is given as a proportion of the recipe

For this method no weight loss is applied to the recipe as a whole, so leave the **% weight loss** box set at 0 as in the screenshot above.

Click on **Code Recipe** at the bottom of the window.

Enter the recipe ingredients and amounts stated in the recipe. You can search for foods in the Recipe function in the same way you do as when you are coding by using the String, Food Trees, or if you know the Food Code or Coding Number these can also be entered in the appropriate boxes.

Select the appropriate **Food name**, **Portion size** and enter the multiples required in the **Multiples** box, e.g. Gram, 100 or Tablespoon, 2. The weight of this ingredient is shown in the **Amount (g)** box.

Always enter the cooked weight of any meats or dry ingredients into the **Multiples** box and note the raw weight and weight loss/gain applied in the **Notes** box. Do not amend the **Amount with Weight Loss** box.

Click **Next Record,** click on the arrows at the bottom of the window or type in Alt+N to add in the next record and continue until all the recipe ingredients have been entered. Make sure to read the cooking method

given in the food record in full to check for any additional ingredients such as oil or water that may have been missed from the ingredients list given.

Once you have coded all of the recipe items click on the red **X** box in the corner of the *Recipe Coding* window to return to the *Recipe Details* window. You can now see all of the recipe ingredients and amounts that have been entered.

Check that all recipe ingredients and weights entered are correct then click on **Use Recipe**. If you had forgotten to fill in the eating environment before you started coding your recipe you will need to enter this now.

Add in the **Time** at which the recipe was consumed. The portion eaten then needs to be calculated as a percentage of the whole dish and entered into the **Percentage of Recipe box**. For example, if the respondent has eaten the whole dish then 100 would be entered. If ¼ of the recipe was eaten then 25 (100/4) would be entered into the **Percentage of Recipe box**.

The PS Amount (g) box then displays the calculated weight of this portion. Do not amend this box. For children if they have stated a quarter

of the recipe, check the portion total to see if this seems reasonable.

Click on **View Recipe Proportions** to view the portions that are going to be coded for each ingredient in the *Recipe Preview* window. Click the red **X** box to exit out of this window once you have checked that the ingredient weights seem reasonable.

When you are happy with the portions you are going to code click on **Add Record**. A pop up window will appear notifying you of the number of records you are about to add.

Make sure to click OK on this window to add the records. If you click the red **X** box at the top of the window these records will not actually be added.

It is also important to make sure that you only go through the process of clicking **Add Records** and **OK** once per eating occasion for the recipe as it is easy to accidentally code the recipe multiple times at the click of a button.
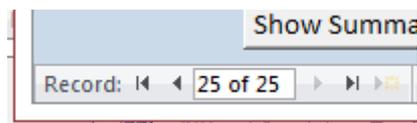
Once you have clicked **OK**, click on the red **X** box at the top of the *Apply Recipe* window to return to the Recipe Details window. From here you can click **View Coding** to check that the recipe has been coded and that it has only been coded once. Once you have checked that the recipe has been coded correctly, click on the red **X** boxes on all windows to return to *Dietary Coding*.

You can also check that the correct number of records were added by taking note of the number displayed in the **Record** box in the bottom left corner of the *Dietary Coding* window before exiting the Recipe Function. When you close the *Recipe List* window, the number displayed in the **Record** will flash and update to reflect the new number of records.

Coding a recipe where the portion is given as a weight

As described on page 58, click on the **New Recipe** button and enter the **Recipe Name** and **Recipe Group**. This method requires a weight loss for the recipe as a whole to be entered into the **% weight loss box.**
Refer to McCance and Widdowson for a relevant weight loss. Make sure you read the cooking instructions to find the most appropriate weight loss and check that all ingredients including water and oil are included in the recipe list.

Be mindful that if the recipe you are coding only states 10 minutes cooking time and the M&W recipe has a 45 minute cooking time the weight loss will need to be adjusted to reflect this. Also for recipes that have high weight losses in M&W such as 44% for lentil soup; it is advised that instead of using the 44% weight loss from lentil soup use the 17% weight loss for pea and ham soup for similar recipes as the cooking time stated in M&W is probably longer than today's common cooking practices.
Add details of the recipe and weight loss sources to the **Recipe Notes** box, for example whether it the recipe is from the food record, based on a recipe in a McCance & Widdowson book, or from a website, and which recipe in M&W the weight loss was taken from.

Next click on **Code Recipe**.

Enter the recipe ingredients and amounts stated in the recipe. You can search for foods in the Recipe function in the same way you do as when

you are coding by using the String, Food Trees, or if you know the Food Code or Coding Number these can also be entered in the appropriate boxes.

Select the appropriate **Food name**, **Portion size** and enter the multiples required in the **Multiples** box, e.g. Gram, 100 or Tablespoon, 2. The weight of this ingredient is shown in the **Amount (g)** box.

Always enter the cooked weight of any meats or dry ingredients into the **Multiples** box and note the raw weight and cooking loss/gain applied in the **Notes** box.

In the example below the meat in the recipe had a raw weight of 500g, a cooking loss of 18% was applied and this entered as a portion of 410g. This recipe had a cooking loss of 17% applied to the whole recipe, so DINO has then applied a 17% cooking loss to 410g resulting in the portion of 340.3g being displayed in the **Amount with Weight Loss** box. This is the weight required by DINO to calculate the proportion of the recipe consumed, **do not amend this box**.

Click **Next Record,** click on the arrows at the bottom of the window or type in Alt+N to add in the next record and continue until all the recipe ingredients have been entered. Make sure to read the cooking method given in the food record in full to check for any additional ingredients such as oil or water that may have been missed from the ingredients list given.

Once you have coded all of the recipe items click on the red **X** box in the corner of the *Recipe Coding* window return to the *Recipe Details* window. You can now see all of the recipe ingredients and amounts that have been entered (see below).

Check that all recipe ingredients and weights entered are correct then click on **Use Recipe**. If you had forgotten to fill in the eating

environment before you started coding your recipe you will need to enter this now.

Add in the **Time** at which the recipe was consumed. Add the portion eaten directly into the **PS Amount (g)** box.

Click on **View Recipe Portions** to view the portions that are going to be coded for each ingredient. Click the red **X** box to exit out of this window once you have checked that the ingredient weights seem reasonable.

NB. The ingredient weights displayed in this window are the proportion eaten of the original recipe before the overall weight loss was applied, and so will total more than the specified portion weight. In this case the 65.14g meat plus 79.44g sauce adds up to 144.58g. If you then manually apply the 17% cooking loss you get 120g, the specified portion amount.

When you are happy with the portions you are going to code click on **Add Record**. A pop up window will appear notifying you of the number of records you are about to add.

62

Make sure to click OK on this window to add the records. If you click the red **X** box at the top of the window these records will not actually be added.

It is also important to make sure that you only go through the process of clicking **Add Records** and **OK** once per eating occasion for the recipe as it is easy to accidentally code the recipe multiple times at the click of a button.

Once you have clicked **OK**, click on the red **X** box at the top of the *Apply Recipe* window to return to the Recipe Details window. From here you can click **View Coding** to check that the recipe has been coded and that it

63

has only been coded once. Once you have checked that the recipe has been coded correctly, click on the red **X** boxes on all windows to return to *Dietary Coding*.

You can also check that the correct number of records were added by taking note of the number displayed in the **Record** box in the bottom left corner of the *Dietary Coding* window before exiting the Recipe Function. When you close the *Recipe List* window, the number displayed in the **Record** will flash and update to reflect the new number of records.

Unknown quantities in a recipe

Missing ingredient weights

When coding recipes if you are using M&W for missing ingredient amounts make sure you take into account the amount of other ingredients. If you are using M&W for the amount of water to add in a recipe make sure you include all liquids to obtain that amount. For example if a recipe contains stock, wine and cream, use all of these items to calculate the amount of water needed for your recipe. Also check the ratio of meat to sauce. M&W recipe may only have 500g of meat whereas the recipe in the food record might contain 1kg, meaning that twice as much liquid would need to been added to the recipe than stated in M&W. Also if you have to use online recipes stick to the basic recipes with the least amount of ingredients possible to make the particular dish. The two recommended recipe sites are BBC Good Food and the Good Food Channel.

Ingredients in very small quantities

For salt, pepper, herbs and spices used in a recipe, if the quantity used is unspecified these should be coded as 0.01g per ingredient.
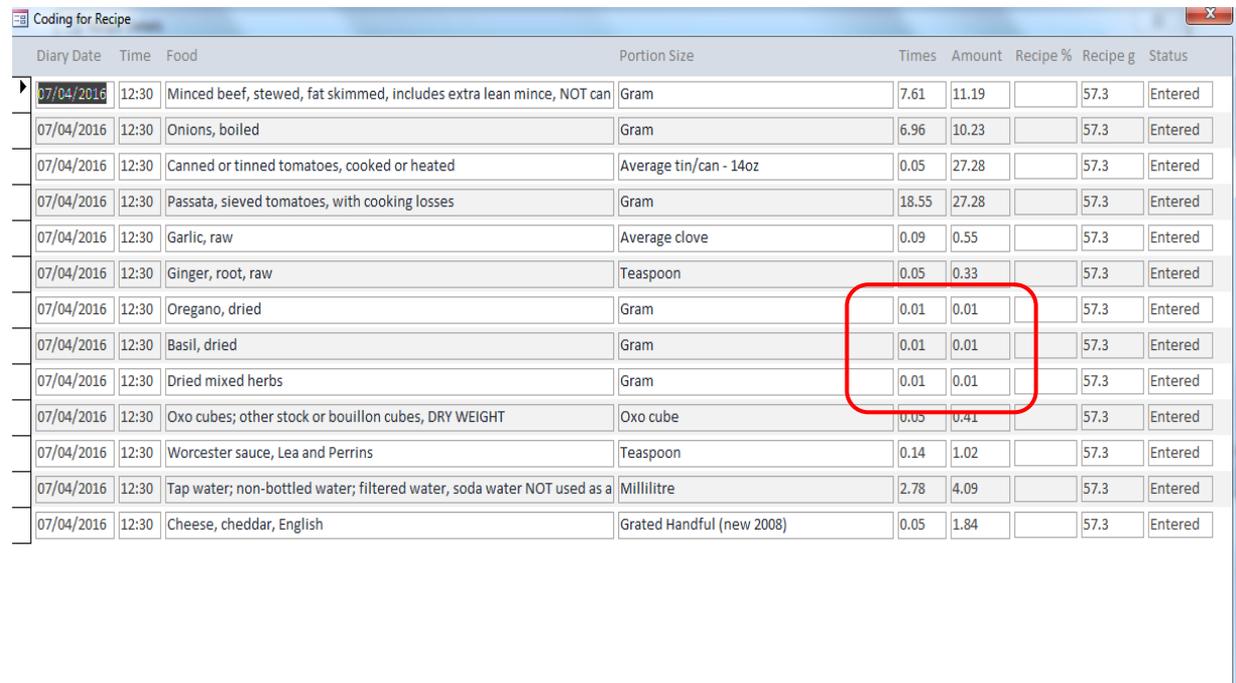
Diary Date	Time	Food	Portion Size	Times	Amount	Recipe %	Recipe g	Status
07/04/2016	12:30	Minced beef, stewed, fat skimmed, includes extra lean mince, NOT can	Gram	7.61	11.19		57.3	Entered
07/04/2016	12:30	Onions, boiled	Gram	6.96	10.23		57.3	Entered
07/04/2016	12:30	Canned or tinned tomatoes, cooked or heated	Average tin/can - 14oz	0.05	27.28		57.3	Entered
07/04/2016	12:30	Passata, sieved tomatoes, with cooking losses	Gram	18.55	27.28		57.3	Entered
07/04/2016	12:30	Garlic, raw	Average clove	0.09	0.55		57.3	Entered
07/04/2016	12:30	Ginger, root, raw	Teaspoon	0.05	0.33		57.3	Entered
07/04/2016	12:30	Oregano, dried	Gram	0.01	0.01		57.3	Entered
07/04/2016	12:30	Basil, dried	Gram	0.01	0.01		57.3	Entered
07/04/2016	12:30	Dried mixed herbs	Gram	0.01	0.01		57.3	Entered
07/04/2016	12:30	Oxo cubes; other stock or bouillon cubes, DRY WEIGHT	Oxo cube	0.05	0.41		57.3	Entered
07/04/2016	12:30	Worcester sauce, Lea and Perrins	Teaspoon	0.14	1.02		57.3	Entered
07/04/2016	12:30	Tap water; non-bottled water; filtered water, soda water NOT used as a	Millilitre	2.78	4.09		57.3	Entered
07/04/2016	12:30	Cheese, cheddar, English	Grated Handful (new 2008)	0.05	1.84		57.3	Entered

Editing or deleting ingredients and weight changes in recipes

Ingredients entered into the Recipe Function can be amended and deleted, however changing anything in a recipe will not amend any existing coding. Any existing coding must be deleted (see section 8.2) and the recipe re-entered through Use Recipe.

Editing a recipe ingredient

If you need to change an ingredient in a recipe, for example changing it to a different code or amending the ingredient weight, from *Dietary Coding* click the **Recipes** button at the bottom of the window to access the *Recipe List* window and find the recipe you need to amend, then click on the **Show** button to access the *Recipe Details* window.

Next click on **Code Recipe.** If the recipe has already been used, a warning message will appear to remind you that existing coding is not updated when a recipe is amended.

Coder User Manual –July 2021
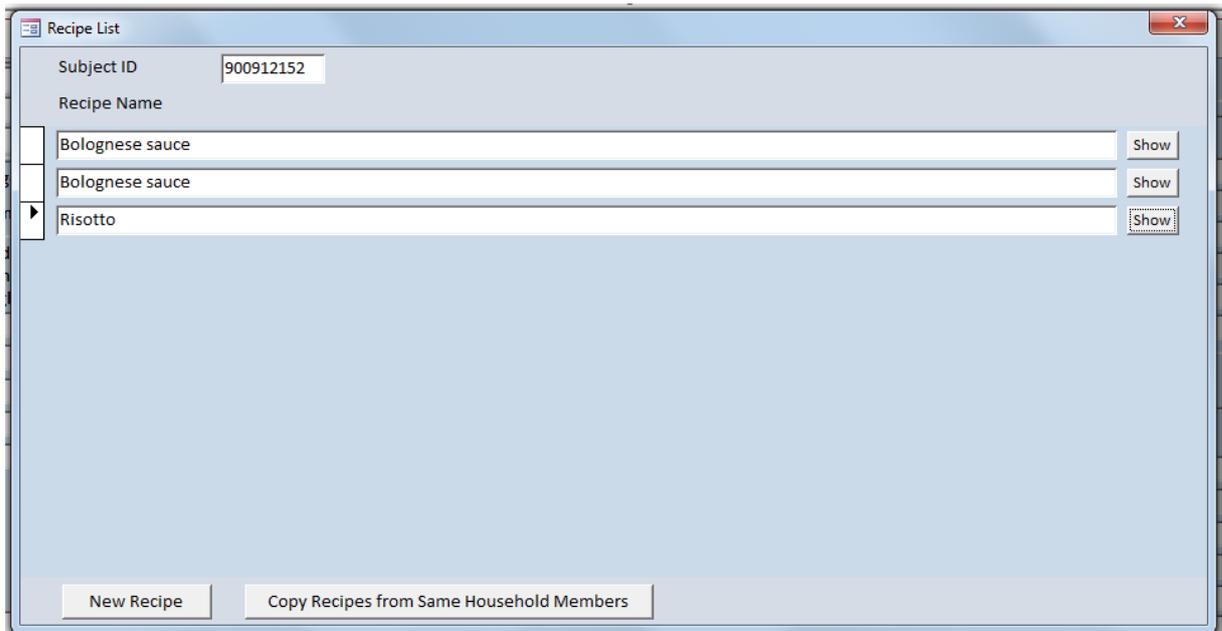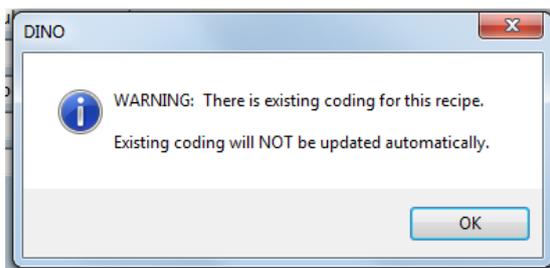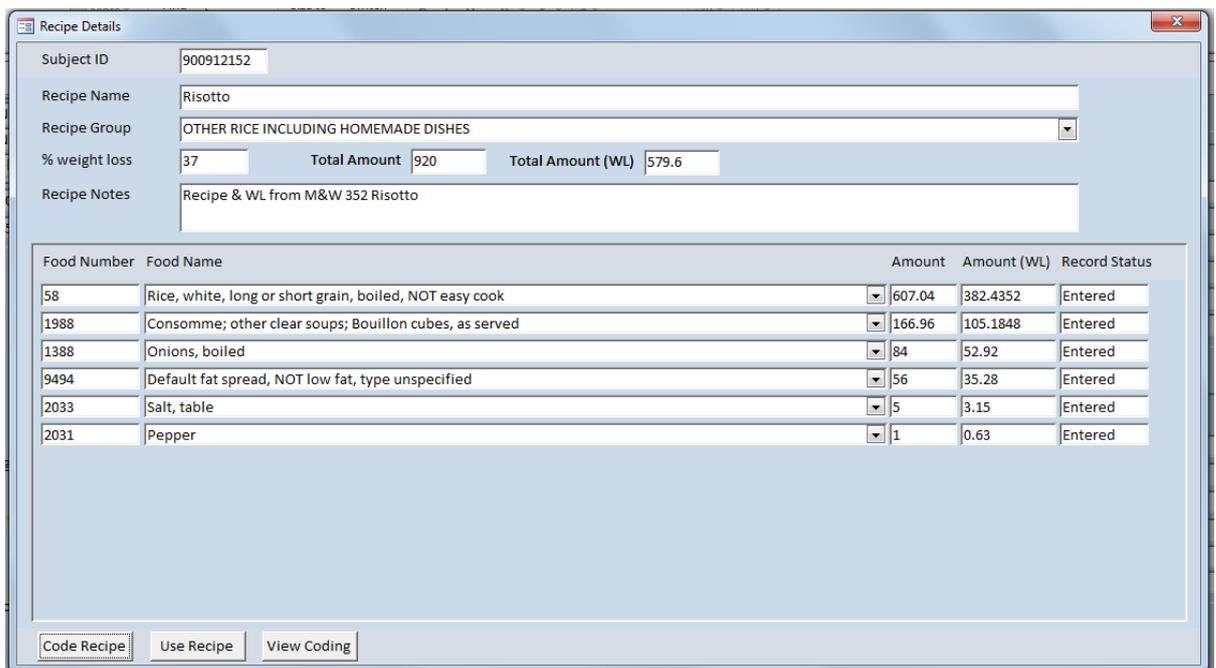
Navigate to the record that you wish to amend by click **Next Record,** clicking on the arrows at the bottom of the window or typing in Alt+N and then amend the necessary details as you would when coding a new recipe.
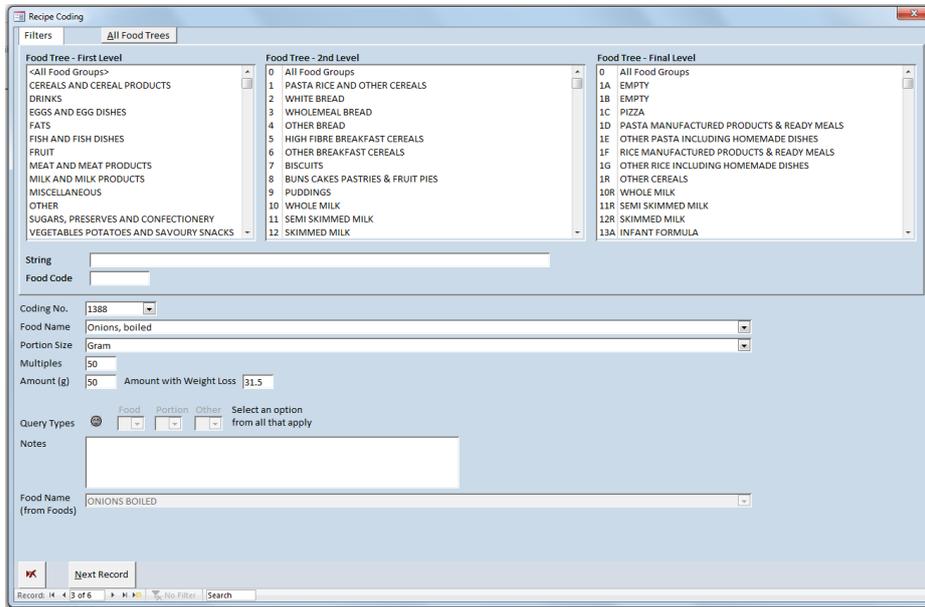
Deleting a recipe ingredient

If you need to delete an ingredient from a recipe, from dietary coding click the **Recipes** button at the bottom of the window to access the *Recipe List* window and find the recipe you need to amend, then click on the **Show** button to access the *Recipe Details* window.

Next click on **Code Recipe.** If the recipe has already been used, a warning message will appear to remind you that existing coding is not updated when a recipe is amended.

Use the arrows at the bottom of the window to navigate to the record that you wish to delete then click on [button] the button.

A warning message will be displayed to check that you really want to delete this ingredient. Click **Yes** and the ingredient is deleted from the recipe.
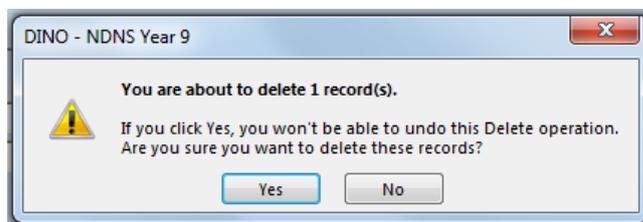
Amending the weight loss applied to a recipe

As can be seen in the example below, if you amend the **% weight loss** box after coding recipe ingredients, this change is not automatically applied to the recipe ingredients by DINO.

In order to update the ingredient weights to reflect the new weight loss, it is necessary to click on **Code Recipe** and then re-select the **Portion Size** for each ingredient in turn.

Deleting existing coding from Dietary Coding

Coded recipe entries can be deleted directly from *Dietary Coding*. In the coding window, press the **Recipes** button at the bottom of the window to access the *Recipe List* window and find the recipe for which you need to delete entries, then click on the **Show** button to access the *Recipe Details* window.

69

Next click on **View Coding.**

This will bring up the *Coding for Recipe* window, in which you can view all ingredients coded. To delete existing coding, select the ingredients to be deleted by clicking on the arrow boxes to the left of the ingredients and then press the **Delete** button on your keyboard. You can select multiple ingredients at the same time by holding down your mouse button and dragging the cursor over the other boxes.

A warning message will appear telling you that you are about to delete one or more records. If you are sure you need to delete these records then click **Yes**. If you have selected any by mistake and do not wish to delete all of the records selected click **No**.

Deleting a recipe

In the *Dietary Coding* window, press the **Recipes** button at the bottom of the window to access the *Recipe List* window and find the recipe you need to delete by clicking on the arrow box to the left of the recipe name. Then press the **Delete** button on your keyboard.
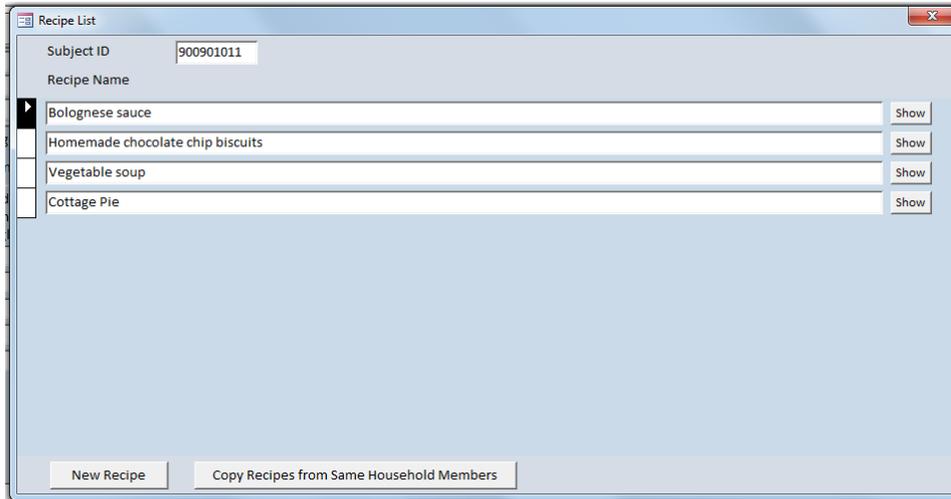
A warning message will appear telling you that you are about to delete one or more records. Make sure that only the recipe you wish to delete is selected with a black arrow box. If you are sure you need to delete this recipe then click **Yes** and the recipe will be deleted. If you have selected any by mistake and do not wish to delete all of the records selected click **No**.
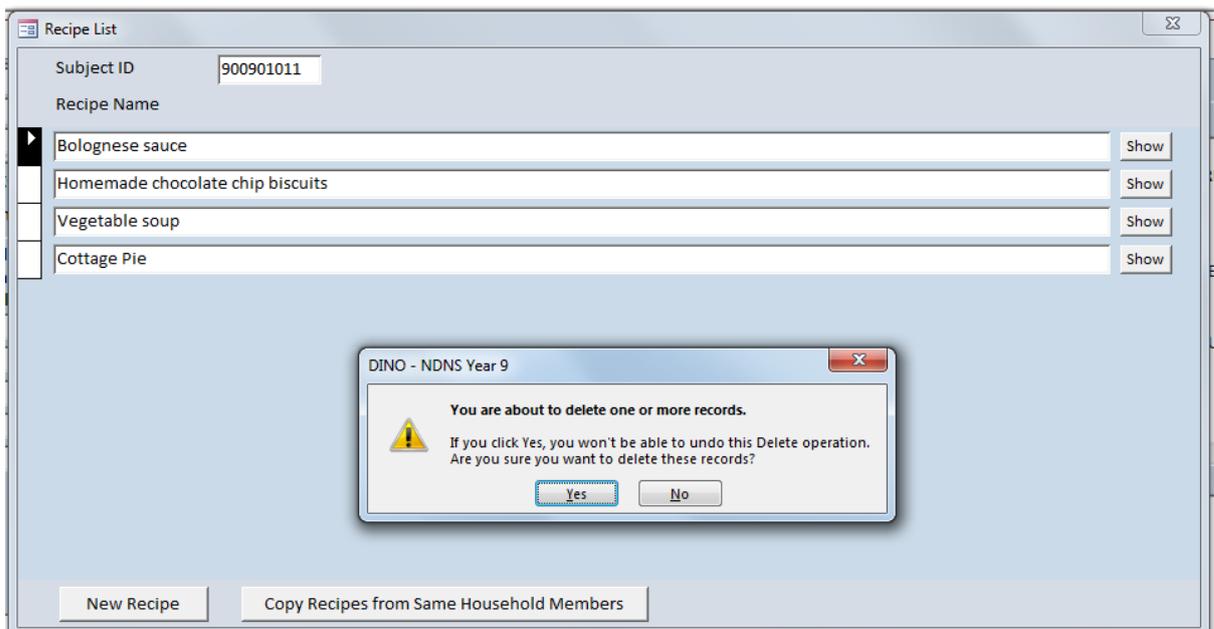
If the recipe has been used and there is existing coding, you will be unable to delete the recipe and the following warning message will appear. If you definitely need to delete this recipe, you will first need to go into *View Coding* and delete all coded entries of the recipe (see pages 73-75).
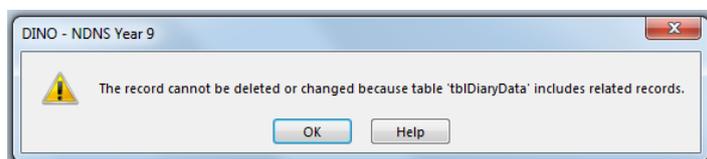
Coding proportions using the recipe function

For proportions that require a recipe linkage these will also need to be coded through the Recipe Function. Using the method outlined on page 58, enter the ingredients into the Recipe Function using the values from the **Amount (g)** column in the **Nutrient Profile Calculator** as the weight for each ingredient. Make sure that the **Total Amount** box displays 100g and do not apply any weight losses. Then click **Use Recipe**, and on the *Apply Recipe* window, the required portion should be entered into the **Amount (g)** box.

For example:

Coding proportions as part of a larger recipe

For proportions that are a part of a recipe, follow the methods outlined on page 58 and pages 78-80 if the portion is given as a proportion of the overall recipe, or the method outlined below if the portion is to be entered as a weight in grams. The ingredient weights from the proportions will need to be entered into the Recipe Function based on the weight of the product that you are adding in.

In the example below, 500g (410g when 18% weight loss applied) of minced beef was cooked with a 440g jar of pasta sauce. As the pasta sauce contained 42% tomato puree, this has been entered as 42% of 440g = 184.8g in the Recipe Function. The **Total Amount** for this recipe is then correctly displayed as 850g (410g cooked weight of mince + 440g

sauce). As the respondent has eaten ¼ of the recipe, no overall weight loss has been applied.

Using the same recipe, if the respondent has eaten for example 2 tablespoons of the resultant Bolognese sauce, the portion is then a weight in grams and requires the use of a weight loss on the overall recipe. In *Recipe Details*, the **Total Amount** is still displayed as 850g, but the **Total Amount (WL)** now reflects the use of the weight loss and shows the cooked weight of the whole recipe.

New Food Number 80303012

New Food Name Aldi everyday essentials tomato and herb sauce 440g

Author evansc

Total Weight of Ingredients 100

Ingredients List | Ingredients Input | Calculated Nutrients

Search Recipes for Ingredients

Food Number	Food Name	Amount (g)
2683 ▾	TOMATO PUREE WITH COOKING LOSSES ▾	42
1935 ▾	TOMATOES GRILLED ▾	29
5000 ▾	WATER NOT AS A DILUENT ▾	27.9
2522 ▾	SALT TABLE ▾	0.6
7990 ▾	RAPESEED OIL ▾	0.5
*		

Recipe Details

Subject ID 900912152

Recipe Name Bolognese sauce

Recipe Group OTHER BEEF & VEAL INCLUDING HOMEMADE RECIPE DISHES ▾

% weight loss 17   Total Amount 850   Total Amount (WL) 705.5

Recipe Notes Recipe from diary and Aldi sauce proportions. WL m&w 252, pasta with meat & tomato sauce

Food Number	Food Name	Amount	Amount (WL)	Record Status
667	Minced beef, stewed, fat skimmed, includes extra lean mince, NOT canned ▾	410	340.3	Entered
2108	Tomato puree, with cooking losses ▾	184.8	153.384	Entered
1538	Tomatoes, fresh, grilled or baked, NO fat ▾	127.6	105.908	Entered
3446	Tap water; non-bottled water; filtered water, soda water NOT used as a diluent ▾	122.76	101.8908	Entered
2033	Salt, table ▾	2.64	2.1912	Entered
5769	Rapeseed oil ▾	2.2	1.826	Entered

Code Recipe   Use Recipe   View Coding

Apply Recipe

Recipe Name Bolognese sauce   Total Recipe Weight 850   After Weight Loss 705.5

Subject ID 900912152   Age 10   Where Home - Kitchen ▾
Diary Date 25/01/2017   Where - Other
Time Slot 5pm to 7:59pm ▾   With Whom? A - Alone ▾
Time 17:30   With Whom - Other
      Watching T.V.? No ▾
Percentage of Recipe   Sitting at table? Yes ▾
PS Amount (g) 80
Atlas Used No ▾   Atlas Usage A - Correct - Not Used ▾
Atlas Amount

View Recipe Proportions   Add Records

Proportions and recipes that do not require a recipe link

Proportions and recipes that do not require a recipe linkage can also be entered into the Recipe Function. When you click **Code Recipe**, a message will appear to make sure you wish to code the recipe with no recipe linkage. Click **Yes** to continue, and then code the recipe following the appropriate method as outlined on pages 58 - 59.

This message then displays again when you click **Use Recipe**. Click **Yes** again to continue.

Coding double cooked recipes

When coding recipes that are double cooked e.g. cottage pie, a slightly different method will need to be used in order to factor in both cooking losses. The recipe will need to be entered into the *Recipe Calculator*. From the **'*Dietary Coding*'** menu click on **Recipe Calculator**.

Move onto a new recipe record in the same way you would a new food record by clicking on the arrow on the bottom left side. Enter the **Recipe Name and Subject ID.** Enter the ingredient names into the **Raw Ingredients** column and amounts into the **Weight (g)** column in grams. Always enter cooked weights for any meat, fish, and dry ingredients such as rice, pasta and pulses. Remember to subtract the water uptake of dry ingredients from liquids in the recipe where appropriate. Enter the **Percentage weight loss** of the stewed mince (17% from M&W Meat products and Dishes supplement recipe 242) into the recipe calculator as shown below. Enter the source details of the recipe and weight loss into the **Source Notes** box.

Take note of the **Total Weight (g) – Cooked** at the bottom of the window.

Go into a new record on the recipe calculator. Now enter the cooked stewed mince weight and the other ingredients, plus the second weight loss of the recipe and the portion eaten into the recipe calculator. Look at the **Portion Size % of Cooked Weight** box and take note of this. In the example below this is 14.79%.

Now open the Recipe function. Following the method from page 58, apply the weight loss from the second part of the recipe (11% in this example) into the Recipe Function and enter the weight of all the ingredients using the cooked codes.

Click **Use Recipe**, and enter the **Portion Size % Cooked Weight** value from the *Recipe Calculator* into the **Percentage of Recipe Eaten** box in the Recipe Function. Then click **Add Records** to code the recipe.

Coding portions of a recipe where the portion stated includes items not all cooked together

Sometimes respondents will state a portion for a whole dish that was not cooked all together for example in pasta and sauce; the sauce is often cooked separately with the pasta added to the sauce just before serving.

To code these types of recipes, in the *Dietary Coding* window click on **Recipes,** then **New Recipe.** Enter the part of the recipe that is cooked together according to the method on page 58, entering the weight loss for

this recipe into the **% Weight Loss** box and remembering to apply any necessary weight losses or gains to any meats or dried ingredients. Make a note of the total cooked weight of this recipe shown in the **Total Amount (WL)** box, which in this example is 542.4g

Click out of the *Recipe Details* and the *Recipe List* windows by clicking the red **X** box at the top right hand of the window. Then return to the '*Dietary Coding*' menu and click on **Recipe Calculator**.

Move onto a new recipe record in the same way you would a new food record by clicking on the arrow on the bottom left side.

Enter the **Recipe Name**, **Subject ID**, **Portion Size** eaten and enter the source of the recipe into the **Source Notes** box. **No weight loss is needed** as the pasta and sauce are not cooked together. Enter the value that you noted from the **Total Amount (WL)** box in the Recipe Function for the sauce, and the cooked pasta weights into the **Weight (g)** column. The recipe calculator then calculates the portions of the pasta and sauce that were consumed.

Return to *Dietary Coding,* click back into **Recipes** and click **Show** for the sauce recipe, then click **Use Recipe.**

Enter the pasta sauce portion from the *Recipe Calculator* into the **PS Amount (g)** box and click **Add Records.** The pasta portion can then be coded in **Dietary Coding** in the usual way, using the portion weight given by the *Recipe Calculator*.

Checking coded recipes from review coding

From the '**Dietary Coding'** Menu select *Review Coding* and find the relevant respondent.

In *Review Coding*, the recipe name and portion size from the Recipe Function are displayed in the **Notes** box.

If a percentage of the recipe was coded, *Review coding* shows the percentage of the recipe that was coded and the weight in grams that this corresponds to.

If the portion was entered as a weight in grams, *Review coding* shows the weight of the portion that was coded.

If any details were entered into the **Notes** box for individual ingredients in the Recipe Function, for example weight loss on meat or water uptake on pasta, these are also displayed in the **Notes** box in *Review Coding*.

To check the recipe details, click **Amend Record** for any recipe ingredient to bring up the '**Dietary Coding'** window. In the left column you can see

82

if the recipe was coded as a percentage of the recipe or as a weight in grams by looking at the **Recipe (%)** and **Recipe PS Amount** boxes. Then click **View Recipe**.

Once you have clicked **View Recipe**, the *Recipe Details* window will appear, from where you can check that all the recipe details such as ingredients and weight losses were entered correctly.

Next click on **View Coding.** From here you can check all times and dates for which the recipe has been used. It is not possible to amend recipes from *Review Coding*, so if there are any errors in the recipe, day or time, you will need to click and highlight the arrow boxes next to any affected entries and press the **Delete** button on your keyboard. A warning

83

message will show telling you that you are about to delete one or more records. If you are sure you need to delete these records then click **Yes**. If you have selected any by mistake and do not wish to delete all of the records selected click **No**.

To re-code the recipe you will need to go back to the main menu and select **Code Diet Record**, enter the respondent details and the time and date for which the recipe needs to be coded. Complete the eating environment questions in the *Dietary Coding* window then press the **Recipes** button at the bottom of the window to access the *Recipe List* window. Click **Show** for the relevant recipe and this will take you to the *Recipe Details* window. Click on **Code Recipe** and amend any ingredients as necessary. Once amended, click on **Use Recipe**, enter the additional information and click **Add records**.

Note: This will not amend the recipe(s) previously coded. If any changes are made to ingredients or weight losses, all entries of these recipes will need to be deleted and re-coded to ensure that the change is reflected in all entries of the recipe.

Appendix 3: Recipe Function Help sheet

Portion Size in Grams (e.g. average portion = 355g)

enter cooking loss for recipe as a whole

enter cooked weight of meat

don't change this box

note raw weight and cooking loss applied to meat

Coder User Manual –July 2021

Portion Size as a proportion of recipe (e.g. ¼ of whole recipe)

Recipe Details

Subject ID	900403091
Recipe Name	Lasagne
Recipe Group	OTHER BEEF & VEAL INCLUDING HOMEMADE RECIPE DISHES
% weight loss	0 Total Amount Total Amount (WL)

Food Number   Food Name   Amount   Amount (WL)   Record Status

no cooking loss is applied to the dish as a whole - Leave this as zero

Code Recipe   Use Recipe   View Coding

Recipe Coding

Coding No.	666
Food Name	Minced beef, stewed, fat NOT skimmed, NOT extra lean mince, NOT canned
Portion Size	Gram
Multiples	410 **enter cooked weight of meat**
Amount (g)	410 Amount with Weight Loss 410 **don't change this box**
Notes	500g -18% **note raw weight and cooking loss applied to meat**
Food Name (from Foods)	BEEF MINCED STEWED LEAN & FAT

String: mince*stew

Coding No.	34
Food Name	Any white pasta, boiled, incl. spaghetti, tagliatelli, NOT macaroni, egg pasta or fresh pasta
Portion Size	Gram
Multiples	555 **enter cooked weight of any cereals, lentils, etc**
Amount (g)	555 Amount with Weight Loss 555 **don't change this box**
Notes	250g +122% **note dried weight and water uptake applied**

NOTE: For more information on weight changes on cooking and recipe calculations refer to the Coder user manual section 6.