

SOP 2. Processing Food Queries, adding new Food codes to DINO

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1. What

A SOP for handling and processing food queries raised during dietary assessment surveys, including foods not previously coded and foods not on DINO.

2. When

This SOP is to use when;

- Food queries are raised
- Matching unknown or new foods to existing foods in DINO
- Entering new food codes and coding foods onto DINO

3. Who

To be used by anyone who is involved in using DINO for diet coding and data analysis.

4. Why

This SOP is to ensure that all unknown foods raised during the coding stages are appropriately handled in terms of matching to existing foods or generating new food codes.

5. Procedure/Method

This section details how to match queried foods and all the related procedures.

6. Food Matching

- a. If the participants food record details a food that is not already listed as a coding food in **DINO** then enter as FC 99999 - unknown food/recipe and then flag this food as a **query**.
- b. A search is carried out for the nutritional information and ingredients of the unknown food. This is done by searching the Internet or shopping for the product.
- c. Once the nutritional information and ingredients have been found then the following steps must be carried out. The following conversion factors must be applied and entered onto the food label/printout.
 - Enter carbohydrates (CHO) as monosaccharide equivalents;
 - Sugars value x 1.05 – enter into sugar column
 - Starch value x 1.1 (starch = CHO – Sugar values). Total CHO as monosaccharides = the sum of converted sugar value and converted starch value. This value is entered onto matching sheet.
 - Asterisk (*) values to indicate monosaccharide equivalents.
 - Label data for fibre is assumed to be AOAC.
 - Note sodium values must be entered as mg.
 - Energy (kcal) should be calculated as follows; (Protein x 4) + (Fat x 9) + (CHO x 3.75).
- d. All similar existing food codes are searched on DINO and appropriate matches made in terms of nutrient content.

For more information on food matching please refer to the Coder User Manual section 7.6 – Food Matching.


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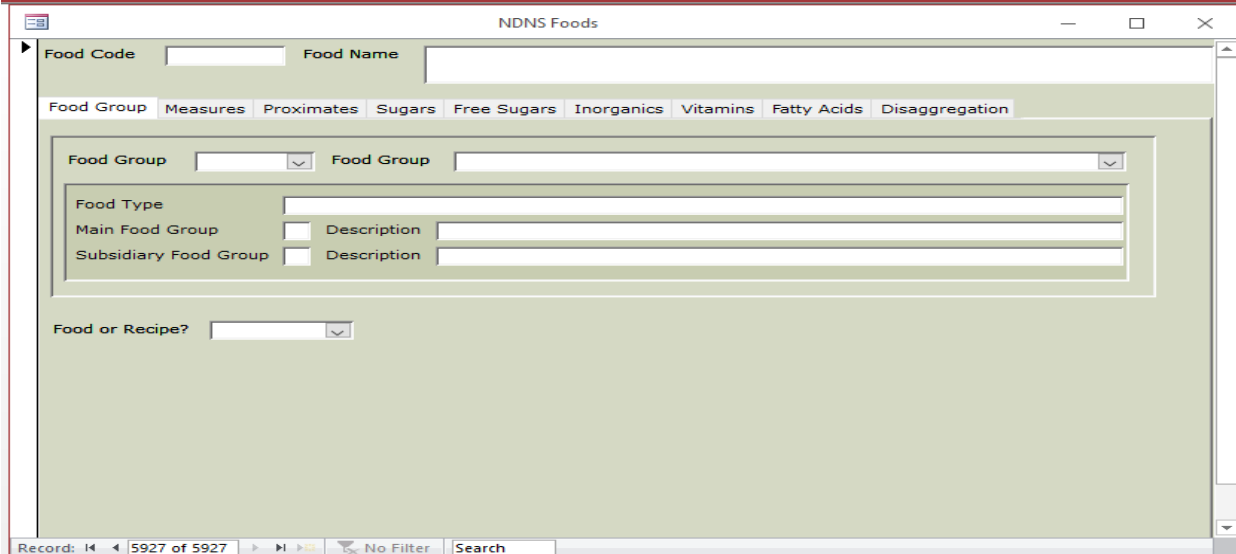
- e. The following points should be taken into consideration at this stage;
- Where the best matches are unclear it may be beneficial to calculate which macronutrient accounts for the highest proportion of energy and match accordingly.
 - Is the unknown food likely to have high consumption rates? If not then a new code may not be necessary.
 - Could the existing food code be out of date? In which case matching to this code is not appropriate.
 - If the new product is fortified, micronutrients will also need to be matched. Levels of fortification will determine whether a new food code is needed or not.
- f. Once you have the relevant information there are three possible outcomes;
- **Match approved; new food rule** – A food rule is created for a new food if the match is made by using proportions of different codes, i.e. when the proportions of the individual ingredients are known or if two or more codes create a better match than one code alone.
 - **Match approved; Substitute food created** – A substitute coding food is created when the consumption of the new product needs to be monitored or if the product is expected to be popular. (See section 8) for details on creating coding foods.
Monitored food codes – add a comment in the notes box in coding foods to say `monitor` and give a reason why. These coding foods can then be checked at the end of the study to see how popular they have been as they may warrant adding in a new food code.
 - **Match not approved; new code needed** – If there is not an appropriate match a new food code has to be created. (Refer to Section 7)

NOTE: refer to the Coder user manual, section 7.6 for more information on Food matching

7. Creating new foods in DINO

- a) From the main menu in **DINO** select **Food Tables** and then **Foods**.

Create a new blank record for each new food. To move into a new record use the arrow buttons on the bottom of the screen. Select **New (blank) record** () , which will give a blank screen as shown below.



The screenshot shows the 'NDNS Foods' application window. At the top, there are tabs for 'Food Code', 'Food Name', 'Food Group', 'Measures', 'Proximates', 'Sugars', 'Free Sugars', 'Inorganics', 'Vitamins', 'Fatty Acids', and 'Disaggregation'. Below these tabs, there are several input fields and dropdown menus. The 'Food Code' field is empty. The 'Food Name' field is empty. The 'Food Group' dropdown menu is open, showing a list of food groups. Below the 'Food Group' dropdown, there are two rows of input fields: 'Food Type' and 'Main Food Group', each with a corresponding 'Description' field. At the bottom of the window, there is a status bar that reads 'Record: 14 | 5927 of 5927' and a search bar.

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- b) Enter a new food code number, food name and select the appropriate food groups. If you are not sure what food groups to use then search for similar food codes in DINO.
- c) **Measures** tab - In the **Base** box enter 100, in the **units** box enter grams (the nutrients are then entered per 100g). For supplements enter a '1' and 'capsule/tsp'), the nutrients are then entered per capsule, tsp etc. The **Maxima** is the maximum weight in grams for that food group.
- d) Fill in the nutrients in the remaining tabs with the converted values (entering nutrients per 100g or per capsule/tsp depending on what you entered in the base and units box.)
- e) Disaggregation – for more information on disaggregation refer to SOP 4- Disaggregation procedure for mixed dishes and the following paper
<https://www.nature.com/articles/ejcn2010207.pdf>

Note: Make sure you enter a new food code for each new food entered. To double check, search to make sure the food code has not been used before. Clicking on a new record will save the details entered.

8. Creating Coding foods/substitute foods

To enable the new food code to be selected for coding then a new coding food must be created.

- a) From the main menu in **DINO** select; **Dietary Coding, Coding Foods.**

Create a new blank record for each coding food. To move into a new record use the arrow buttons on the bottom of the screen. Select **New (blank) record** (▶*) to give a blank screen as shown below


The screenshot displays the 'Coding Foods' interface. At the top, there's a title bar 'Coding Foods'. Below it, a form with several input fields: 'Coding Number' (with a '(New)' button), 'Description', 'Food Code' (with a '<Refresh' button), 'Food Group', 'Substitute Coding' (set to 'No'), and 'Notes'. Below these fields are three tabs: 'Portion Sizes', 'Menus', and 'Miscellaneous'. The 'Menus' tab is selected, showing a 'Menu' dropdown and a large text area with instructions: 'This part of the form shows the menus for which this food is available. The food can be added to or removed from any menu.' A 'Show Food' button is located in the top right of the 'Menus' section. At the bottom, a status bar shows 'Record: 14', '96 of 96', 'Filtered', and a search bar.

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- b) Enter the new food code in the **Food Code** field that you have created; click **Refresh** and this will display the food name that you have just entered on the previous screen. Enter an appropriate coding name description (this is the phrase seen when coding a food and can therefore be altered from the food name for ease of coding). The coding number will automatically be generated by **DINO**. Select the appropriate food group.
- c) **Substitute coding** - If a substitute food is being entered enter the existing food code that the new food has been matched to and select YES in the **Substitute Coding** field.
- d) **Notes box** – free text to add in any relevant comments
- e) **Menu tab** – ensure the appropriate study is elected from the dropdown list.
- f) **Portion sizes** – Enter all appropriate portion sizes, maximum weight and click on the create gram/ounce which automatically generates the gram/ounce weights
- g) **Miscellaneous**
 - Change food code for all diary data for this coding food – clicking this icon will update all dietary coding for this coding food. A global update will run, changing the food code to the new food code. This is useful if you want to relink a coding food to a new food code and will update all the coding automatically.
 - Show coding food coding – clicking this icon will show you all the records that have used this particular food code.
- h) **Max weight** – This is the max weight suggest for this food. If unsure what weight to add look at similar foods in DINO.
- i) **Show food** – clicking this icon will take you to the foods menu.

Notes: If you are unsure on what details to add here then refer to a similar coding food/food code for guidance.

In DINO select **main menu** and **coding foods**

Place the cursor in the Food description 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.

9. Related Documentation

| Doc Number | Title |
|------------|--|
| SOP 3 | Obtaining nutrient data for missing values in the DINO nutrient database |
| SOP 4 | Disaggregation procedure for mixed dishes |