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Introduction

Calculating the nutrient content of school lunch recipes will provide important information needed in the process of deciding whether a school meets the nutrient-based standards for school lunches.

The purpose of this guide is to enable caterers and support staff in the school catering environment to facilitate the process of calculating the nutrient content of an average school lunch. Every caterer in every school will be able to use this guide to gather the essential information needed.

This guide complements the Step-by-step guide to calculating the nutrient content of school lunch recipes¹ commissioned by the School Food Trust in January 2008 is mostly intended for dietitians and registered nutritionists involved in school meals along with caterers who have knowledge and experience of nutritional databases.

It is recommended that a dietitian and/or registered nutritionist with experience in nutrient analysis will undertake or closely supervise the process of calculating the nutrient content of the lunches provided in each school, although some schools may be in a position to do this in-house.

The guide is intended to enhance the caterer's understanding of the significance of their role in the process of ensuring accuracy in the school lunch recipe calculation.



What do I need to know?



Why do I need to do this?

You will be aware that school lunches are required to meet nutrient-based standards by September 2008 in primary schools and September 2009 in secondary and special schools.

The new nutrient-based standards were developed following research showing that children were not making healthy food choices at lunchtime and that school meals on average did not meet their nutritional needs. The ultimate responsibility for ensuring that the standards are being met lies either with the Local Authority (LA) or, if the budget for school meals has been delegated, with the School Governing Body. It is important for everyone involved in school lunches to understand the need for compliance with the standards.

Under the Ofsted inspection framework schools are expected to present evidence about their general approach to food and healthy eating as well as more specifically about the standard of school lunches.

Ofsted will comment on the school's success in promoting healthy eating and drinking and will report on any issues which arise out of the self-assessment or as a result of their inspection report.

What does this mean to me?

The school food standards cover all food and drinks provided in schools: breakfast, mid-morning break, tuck shop's, vending, after school clubs/meals and lunch. These standards are mandatory, which means that schools have a legal responsibility to comply. The first phase, the food-based standards that stipulate which foods can and cannot be included during the school day, are already in place and every school should already be complying with these when planning their food provision.

The second phase is the introduction of the nutrient-based standards.



The guide has been written to help school-based catering staff manage the responsibility of meeting the nutrient-based standards for school lunches.

How will this affect me?

If you are an employee of a private sector catering organisation or a LA in-house catering service, then it is probable that your employer has a team of specialists who will manage compliance with the nutrient-based standards. You will need to check this with your employer before you proceed any further.

However, if you manage a school in-house operation, unless you contract in support from your LA or others which includes provision of nutritionally analysed menus, then it is likely that you will need to set-up your own systems for calculating nutrient content. Again, if you are unsure, check with your LA regarding your individual position. As a general principle, if you plan your own menus, develop your own recipes and have relative freedom to determine what foods are provided during the school day, then it is likely that you, together with the Governing Body, will need to take responsibility for the subsequent calculation of the nutrient content of an average school lunch.

How is 'A caterer's guide' going to help me?

The guide has been written to help school-based catering staff manage the responsibility of meeting the nutrient-based standards for school lunches. It is intended to give you some insight into the process and explain what you can do to make this as straightforward as possible. The work you will need to undertake initially involves assessing your current situation in order for you to be able to establish where you need to target your resources. This will be explained as you go through the guide.



What do I need to do?



Before the practical task of calculating the nutrient content of the average school lunch can be carried out, there are a number of processes that need to be reviewed in order to establish how ready you are to proceed to that final stage.

So, where do I start?

Before the practical task of calculating the nutrient content of the average school lunch can be carried out, there are a number of processes that need to be reviewed in order to establish how ready you are to proceed to that final stage. Some of you will find that the systems are already in place to facilitate the final analysis. Others, however, will need to do some quite detailed work in order to get to this stage.

Firstly, take a look at what resources might already be available within your catering unit.

Questions under the following headings are designed to help you think about what currently happens and to ensure you have all the necessary information to proceed. The more information you gather now the easier the process will be.

Once you have done this, refer to the Checklist – Preparation for calculating the nutrient content of recipes – review of current position in Appendix 1 to decide on any further action you may need to take.

Menu plan

Think about how you plan your menus:

- Do you have a menu cycle that runs for a pre-determined length of time?
- How often do you introduce a new menu cycle?
- Are there daily specials that you might serve on an occasional basis if you have foods to use up or wish to try out a new dish?
- Do you have last-minute menu changes, perhaps caused by supply problems or equipment failure?

Each food/drink used in school lunch recipes should be supported by a full nutrient specification. There are 14 nutrients that you need to be aware of as school caterers.

Example

If you order a kilogram of minced beef, does your supplier provide what he thinks is most suitable for you, what you can afford or what you have already agreed in advance, you will need to specify what the kilogram of mince will comprise of, that is the lean/fat ratio and obtain the price.

Recipes

- How do you file your recipes?
- Are they in a standard format in a single place?
- Are there photographs?
- Are they taken from a variety of sources – websites, books, files, memory, loose sheets of paper or perhaps supplied with your catering software?
- Do you know how many portion sizes it yields for the age range of your customers? Has this been reviewed lately and is it accurate?
- Does the recipe detail all ingredients, provide a detailed production method, and advise how to serve a correctly sized portion?
- Does the recipe indicate the presence of allergens?
- Does the serving suggestion include garnishes?
- Does the weight of each portion meet any requirements in the catering contract specification?
- Do you understand the guidance – are the recommended servings based on raw weights or on the weight of the cooked portion as served?

Suppliers

- Do you select your own suppliers (perhaps from the local area) or use recommendations from other sources?
- Does the LA require you to use only suppliers authorised by them?
- What do you do if you are short of a key ingredient? Do you buy locally as a cash purchase or maybe change the menu/dish accordingly?
- Do all of your suppliers have a full product nutrient specification for the products they supply?
- Do you have a copy of the specification for each product that you purchase?

Each food/drink used in school lunch recipes should be supported by a full nutrient specification. There are 14 nutrients that you need to be aware of as school caterers. This does not mean that you need to know exactly what each one is and its role in the diet. What you will need to know, however, is where this information can be found. It should be available from your supplier or you may find some limited details on the product's label/packaging.





Equipment

Do you have appropriate equipment for accurately producing your recipe?

This might include:

- weighing scales for both large and small quantities
- a small set of digital scales may be useful for small amounts
- weights
 - in sufficient denominations and preferably metric
- measuring spoons
 - for measures such as a teaspoon or tablespoon
- service/cooking tins and trays
 - it does not matter really what type or size of container is used as long as you have sufficient quantities and can refer to these on your recipe
- service equipment
 - ladles, scoops etc. that you are able to refer to on your recipe and which give the required yield that you have determined

Staff

Which member/s of your team have responsibility for

- selecting suppliers
- determining product specifications
- placing orders
- receiving deliveries
- weighing-up
- food preparation and production
- service and portion control?

Administration

- How much time is currently spent on administration?
- Do you have a set period each day when you deal with bookwork, placing orders etc.?
- Is there a shared responsibility for some tasks between kitchen-based staff and school/office staff?
- Do you currently have any spare capacity for dealing with additional administration?

Go to the Checklist – Preparation for calculating the nutrient content of recipes – Review of current position in Appendix 1 and answer each of the questions.

Where to next?

Ok, so you have started to think about what may or may not happen at the moment. Do not be alarmed if, at this stage, you feel there are numerous questions to which you do not have the answer or to which you may have answered 'no'. This is intended to get a feel for where you are at the moment.

Spend a bit of time thinking about some of the questions raised. The following page provides additional information to help you summarise your current situation. You may also wish to add other points that you have thought of during this process.

Review your current position

Go to the Checklist – Preparation for calculating the nutrient content of recipes – Review of current position in Appendix 1 and answer each of the questions.

Do I require any further resources?

Resources might include expenditure on equipment, help to write/organise your recipes, additional support to organise your staff or any number of missing resources flagged up by your completed checklist.

Go back to the Checklist and start to complete the right-hand column. This is a tool for you to plan what needs to be done so write down anything that you feel may help you. Before you start to deal with what needs to be done, read through the next few pages on things to look out for.



What do I need to look out for?



Description of ingredients needs to be specific to your recipe in order for the dietitian or registered nutritionist to interpret this correctly when inputting the data.

Example

If using cooking apples in a recipe, you may want to refer to whole fresh fruit (i.e. with peel and core intact) or to canned, prepared apple and note the required weight accordingly.

A good nutrient calculation relies on input of accurate data and an ability to interpret the results correctly. To calculate the nutrient content of a school lunch recipe that is only loosely based on the rough approximation of the actual amounts and processes, is clearly not a good use of resources.

Once you have determined how you are going to manage this process it is important that this is monitored and reviewed regularly.

Let's look at some systems and processes, which could affect the process of calculating the nutrient content.

Every element of producing a dish impacts upon the nutrient content of that dish. Whether you use a computer programme and/or seek the help of a dietitian or registered nutritionist, the nutrient profile of each commodity will be referenced to a food composition database. It is important that your standard recipe is accurate in order that the correct reference data is used in your analysis. (See Appendix 2 for how to develop a standard recipe.)

Description of ingredients needs to be specific to your recipe in order for the dietitian or registered nutritionist to interpret this correctly when inputting the data. Refer to either raw or cooked weight, and whether the raw weight is before or after preparation.



Example

Assume that you have written a recipe for Fisherman's Pie. Your original recipe might include fresh, boneless Pollack fillets, a homemade white sauce and is topped with fresh, creamed potatoes. For a yield of 20 primary portions the dietitian can generate a specific calculation of nutrient content. If you then decide to change your recipe to include instant mashed potato and a powdered sauce mix, this will change some of the key elements of the analysis. It is vital therefore that you have the mechanisms in place to be able to adjust the data held quickly and accurately.

Any variation from your standard recipe may have an impact upon the final nutrient content of a dish. These changes may include:

Changing an ingredient

There are occasions when ingredients change and you need to look out for these and take the appropriate action.

Examples include:

- A change in supplier could mean that although it would appear that the same product is being delivered e.g. white, medium sliced bread, the nutrient content of the new product may be different.
- Using a canned item rather than a frozen equivalent in your recipe.

- Producing a dish and finding that a quantity of an ingredient used needs to be adjusted, for example to improve flavour or consistency.
- Substitution of ingredients e.g. you swap minced lamb for minced pork or replace white rice with brown.

You will need to develop a method for recording any such changes in order that your standard recipe is kept up to date. The simplest way would be to pull the standard recipe from your file when any lasting changes are made and ensure that it is not replaced until it has been amended and the nutrient calculation updated and recorded.



If you change the way in which you cook a dish, or any component of it, this may affect the nutrient calculation.

Example

Deep-frying chips rather than oven-baking, or steaming rice instead of boiling in lightly salted water.

Cooking process

The method of preparation/production will be included on your standard recipe. If you change the way in which you cook a dish, or any component of it, this may affect the nutrient calculation.

Equipment breakdown may generate a need to change a preparation/production method. If this is an isolated event and requires you to make a change on a single occasion then it is not necessary to make a permanent change to your recipe profile. However, if a breakdown means a new piece of equipment or a permanent change to production you may need to review your original standard recipe.

Hot holding

Keeping food hot prior to service is often a necessary stage at lunchtime.

The manner and the length of time in which you do this can affect the nutritional values of some foods due to vitamin loss. Loss of moisture may also occur which additionally affects the appearance of some foods. It is important that you try to keep times between cooking and serving as short as possible.

Portion size

Any change to the portion size from that shown on the original standard recipe must be taken into account when calculating the nutrient content.



It is important that all staff are aware of the need to follow the recipes as precisely as possible.

Example

You may produce a fresh fruit salad and find that by selling it at X price that you are not generating the profit margin required. You have several alternatives here – to increase the selling price, maintain the same price but reduce the portion size or change the ingredients used.

In the primary sector particularly, portion sizes may differ according to the age of the child. Your recipe will need to account for this and your card may need to show that the yield is e.g. 20 'junior' portions or 30 'infant' portions.

If portion sizes are reviewed due to cost or profit generation, again make sure that this is adjusted.

Staff awareness

It is important that all staff are aware of the need to follow the recipes as precisely as possible. You will need to explain the reasons for this in order that they will understand the importance of their role in ensuring an accurate calculation of nutrient content. In the event of absences within the kitchen, make sure that all temporary/relief staff involved in any of the production or service stages are also aware of these requirements.



How can I help?



All aspects of the data used for recipe analysis should be routinely reviewed and monitored. The frequency of the review will depend on your operation – it may be each term, or at each change in the menu cycle.

The actual recipe calculation should be undertaken by a suitably trained and experienced person to ensure the results are consistent and reliable.

This should be an experienced dietitian or registered nutritionist or someone who has been trained on the nutrient analysis programme, that has a sound knowledge of food and is supervised by a dietitian or registered nutritionist.

It is possible that this assistance will be commissioned externally. So, if you are not carrying out the analysis yourself, your role will be to gather as much of the information as possible to ensure that the results produced are reliable and an accurate reflection of the recipe.

It is advisable to appoint either an individual or a team within the unit who will have an understanding of the process, although the responsibility for ensuring that the analysis is done satisfactorily will rest with the school. You will need to decide how the tasks (see points 1-10 opposite) are shared and consider incorporating the roles and responsibilities into a job description(s).

All aspects of the data used for recipe analysis should be routinely reviewed and monitored. The frequency of the review will depend on your operation – it may be each term, or at each change in the menu cycle. If you change suppliers you will need to obtain new product specifications.

Remember that manufacturers are constantly modifying products (e.g. to reduce salt content) so make sure that you are using the most up to date information.

The Step-by-step guide's 8-step process

In the Trust's Step-by-step guide to calculating the nutrient content of school lunch recipes¹ the process of calculating the nutrient content of recipes is divided into 8 steps. Each step requires a certain amount of information to be gathered, entered and checked. In A caterer's guide, there are 10-points relating to information needed for the data entry. For further information on these points, see Appendix 2. Enter this information on the Caterer's Template in Appendix 3. Where a standard recipe is available, attach to the template, and complete points 1,2 and 7 only.

Information needed for data entry of recipes

Point 1

Record a descriptive and unique number or code for the recipe.

Point 2

Record the list of ingredients, including brand names and supplier if available.

Point 3

Record the quantity of each ingredient used.

Point 4

If any of the ingredients require further preparation before they are added to the dish, make a note of this. This will highlight any preparation waste.

Point 5

If any of the ingredients (e.g. rice, macaroni, lentils, beans) require cooking before they are added to the dish, make a note of this. Alternatively, record the cooked weight. This will highlight any weight gain of dry ingredients when prepared separately.

Point 6

If any of the fruits and vegetables are to be cooked, make a note of this too. This will highlight any vitamin losses or retention of vitamin C and folate at data entry.

Point 7

If any new or unusual ingredients are used in the recipe, make a note of this. Check whether nutrient information for these ingredients is available and attach it to the recipe. This will highlight any missing nutrient information that needs to be identified and added to the nutrient database. Non-milk extrinsic sugars (NMES) and fibre (non-starch polysaccharide) will also be calculated at data entry.

Point 8

Check that all the ingredients, together with correct weights, are recorded.

Point 9

Enter the total weight of the ingredients and the weight of the cooked dish
Or
Enter additional information about the method of cooking used. This will enable the percentage weight loss/gain to be calculated at the point of data entry.

Point 10

Enter number of portions and/or serving size. This will enable the nutrient content per portion to be calculated where necessary.

If any of the ingredients (e.g. rice, macaroni, lentils, beans) require cooking before they are added to the dish, make a note of this. Alternatively, record the cooked weight.

Getting help



The support of an experienced dietitian or registered nutritionist is advised to help you complete the nutrient analysis.

Where can I get more help?

The support of an experienced dietitian or registered nutritionist is advised to help you complete the nutrient analysis. S/he will understand the limitations of nutrient databases, how the cooking process might alter the nutrient profile of each food, and when vitamin losses might occur. S/he will also be able to advise you on possible recipe/menu changes if the analysis does not meet the standards. You can find details of suitably qualified registered professionals in your area by contacting www.dietitiansunlimited.co.uk or www.nutritionistsociety.org.uk/membership/register

There are a number of computer programmes available that will provide an analysis for you. Details of some of them are found on the Trust's website, see menu Planning and Nutrient Analysis Software – An Independent Review². In addition a report on different models of support for nutrient analysis will be available on the Trust's website.

There are advantages and disadvantages to using a programme yourself, particularly if you do not have some background in nutrition. Be sure to research the options carefully before you commit to purchasing a programme.



From April 2008 the Government has made additional funding available for schools to increase school lunch take-up by helping to keep down the direct costs of a school lunch.

From April 2008 the Government has made additional funding available for schools to increase school lunch take-up by helping to keep down the direct costs of a school lunch. This is known as the School Lunch Grant and has been ring-fenced so that the money can only be spent on four specific areas.

Local authorities and schools can use the funding to:

- pay for ingredients for school lunch;
- pay additional labour costs of catering staff to provide healthier meals;
- buy small pieces of kitchen equipment, for example, microwaves, ovens, combi-ovens, mixers etc.;
- pay for the nutrient analysis software required to assess whether a menu meets the nutrient-based standards for school lunches and the expertise to operate the software.

The conditions of the grant requires all local authorities to consult, and agree with, local school forums on how the funding should be shared out locally. Local authorities are not required to devolve all of the funding to schools. The funding should be allocated on a fair and equitable basis to all those that provide school lunches, whether it is the local authority (through its own service or a central contract), or a school who is providing its own lunches or using a contractor.

Appendix 1

Checklist

Preparation for calculating the nutrient content of recipes: Review of current position

Date:

Completed by:

	Yes	No	Further action required/ comments
Menus			
Do I have a menu plan/s?			
Frequency of menu cycle			
Does the menu plan cover all foods produced on site, including daily specials and last-minute changes ?			
Recipes			
Are all my recipes in a standard format?			
Does each recipe include:			
Descriptive and unique title of dish?			
Recipe number or code?			
Cooked portion/serving size, number of portions?			
Age group?			
Allergens?			
Ingredient list including: correct ingredient name and description, quantity, detailed instructions for preparation/production?			

Date:

Completed by:

	Yes	No	Further action required/ comments
Does each recipe include:			
Detailed instruction for service including serving tools required?			
Do raw ingredients meet food-based standards where applicable?			
Do I have a method for reviewing recipe content easily?			
Suppliers			
Do I have a regular supplier for every commodity?			
Do I have a specification for every product purchased from each supplier?			
Do I purchase occasionally from a supplier not included on my authorised list?			

Date:**Completed by:**

	Yes	No	Further action required/ comments
Equipment			
Do I have the following equipment?			
weighing scales			
full set of weights (metric)			
measuring spoons			
sufficient cooking/service tins			
sufficient service equipment e.g. spoons, ladles, scoops			
graduated measuring jug			
Administration			
Have I allocated the following tasks?			
Selecting and approving suppliers			
Determining product specifications			
Placing orders			
Receiving/checking deliveries			
Weighing-up			
Food preparation/production			
Service and portion control			

Date:**Completed by:**

	Yes	No	Further action required/ comments
Resources			
Do I have the experience to gather all information required myself?			
What additional help do I need?			
Who can I share this responsibility with in school?			
Who will carry out the nutrient calculation of recipes?			
What are the potential cost implications of any of the above?			
Do I have access to a computer and printer?			



Appendix 2



Standard recipes are written instructions for making sure that each time a recipe is followed, using the same methods and ingredients, it produces the same product.

Developing a standard recipe

Standard recipes play an important part in meeting the nutrient-based standards for school lunches. They are tried, tested, costed and acceptable to pupils. A file of standard recipes is really just a cookbook, but with more detail than cookbooks sold in bookshops.

Ideally the recipes currently used for school lunches are, or will become, standard recipes. These can be favourite recipes that are written down in a standard way for future use. See checklist for caterer's template on page 6.13.

What is a standard recipe?

Standard recipes are written instructions for making sure that each time a recipe is followed, using the same methods and ingredients, it produces the same product.

What are the benefits of developing and using standard recipes?

- Food will generally look the same, taste the same and make the same number of portions each time, regardless of who prepares or cooks it.
- The nutrient content will be the same (or very similar) each time it is cooked.
- Ordering ingredients and stock control will be easier.
- Managing the budget will be easier if each recipe has a calculated production cost.



Include any unexpected ingredients in the name of the dish i.e. if almonds are used in the dish, include them in the title e.g. Apple and raisin wholemeal almond crumble.

Developing standard recipes

The following list describes each step in developing a standard recipe in a catering environment.

Descriptive and unique name of dish

- Decide on a name that describes each recipe in detail e.g. Apple and raisin wholemeal crumble. Naming this dish 'Crumble' will become confusing if other crumble-style dishes are included in the menu cycle.
- Include any unexpected ingredients in the name of the dish i.e. if almonds are used in the dish, include them in the title e.g. Apple and raisin wholemeal almond crumble.

Recipe number or code

- A simple coding system will make filing and finding recipes easier, especially when stored within computer files or databases. It will also help to avoid repeating the same or similar dishes.

- To start a number or coding system, decide how each group of dishes on the menu will be coded. Record the code and title of the dish each time a recipe is added to the standard recipe file. For example, abbreviate puddings to Pud
 - Crumbles = PudCr
 - Pear and cinnamon oatmeal crumble = PudCr001
 - Apple and apricot crumble = PudCr002
 - Apple and raisin wholemeal almond crumble = PudCr003

Weight change of final product

The weight of the recipe once it is prepared or cooked and ready to be portioned and served is a useful measure for two reasons:

- A more accurate portion size can be calculated.
- The recipe can be used in both primary and secondary schools, with a simple change in portion size.

In the kitchen

Weight change = weight of all ingredients before cooking (gross weight) minus weight of final product (net weight)

Steps in practice e.g. apple pie

1. Weigh empty tin before assembling pie
2. Weigh cooked pie in tin when it comes out of the oven
3. Subtract the weight of tin = weight of pie

Remember weight may be gained if water or liquid is added to cook any ingredients, for example pasta or rice



The amount of each ingredient in a recipe can be measured in different ways, but the important thing is that an exact quantity of each ingredient, including garnishes, is written down in the order it is used.

Number of portions (yield) and serving size

Record the number of portions that each recipe makes and the serving size of each portion.

- For current recipes, record the known portion size.
- For new recipes, deciding the serving size and therefore how many portions each recipe makes, will depend on the age group of pupils, that is, whether the recipe is for primary or secondary school.

Check that the portion sizes are suitable for your school. The Education (Nutritional Standards and Requirements for School Food) (England) Regulations 2007³ do not specify portion sizes but information on portion sizes produced for the Scottish Executive's 'Hungry for Success' programme is given in "Turning the Tables – Transforming School Food"⁴ may be used as a guide.

Allergens

Allergens are ingredients in foods that may cause an allergic reaction when eaten. Good practice recommends recording the presence of allergens on the standard recipe. (See list of common food allergens in Appendix 4.)

Preparation and cooking time

Record the approximate preparation and cooking times.

Quantity and description of each ingredient

The amount of each ingredient in a recipe can be measured in different ways, but the important thing is that an exact quantity of each ingredient, including garnishes, is written down in the order it is used.

Avoid 'Season to taste' and similar phrases. Instead, record exact quantities for each type of seasoning used e.g. salt, herbs or spices.

In the kitchen

Every cook's taste is different, so if one cook adds 1 teaspoon of salt, and the next adds no salt to a dish that serves 10, this will mean a difference of 0.5 g of salt per portion.

Record all liquids, including water. Liquids are generally listed as volumes; that is, teaspoons, tablespoons, cups, pints, millilitres (ml), litres (L) etc. Wherever possible write these in standard metric measures. (See standard conversion tables in Appendix 5.)

Quality is as important as quantity and can make a big impact on the nutrient content of the recipe.

Most nutrient analysis software packages need ingredients listed in grams. If oil is used, the weight may not equal the volume, so these figures will be adjusted where necessary at the point of data entry.

If it is not possible to record ingredients in metric measures, record an accurate description of each ingredient. In fact, when creating standard recipes from favourite recipes for the first time, this may be the only information available. Again wherever possible convert these to standard metric measures. (See standard conversion tables in Appendix 5.)

For example:
5 medium eggs = 275g eggs (5x55g), 15 medium basil leaves = 5g basil, fresh leaves, 1oz butter = 28.35g butter

Specify weights of ingredients that are sold in units such as bread rolls, wraps and eggs. For example:
small eggs = 53g or less,
medium eggs = 53g – 63g;
large eggs = 63g to 73g;
very large eggs = 73g+.

Check your contract for what you are being supplied with and use these weights in your recipes.

Quality/ingredient name and description

Quality is as important as quantity and can make a big impact on the nutrient content of the recipe. The correct ingredient name and description will make all the difference when entering the data for the analysis.



Include an identifying nutrient such as percentage fat to increase accuracy.

Ingredient name

Use the correct ingredient name. For example,

- if peaches are used, are they 'tinned peaches' or 'fresh peaches';
- if the weight of whole bananas are used, record as 'bananas with skin';
- if a fat is used in a recipe, be clear about which type of fat it is.

In the kitchen

If one cook uses 200g margarine in a recipe, yet another uses 200g 55% fat spread, there may be a difference of up to 50g fat in the finished product.

Ingredient description

Describe each ingredient clearly. For example,

- peaches canned in juice or syrup;
- mayonnaise, reduced calorie;
- red lentils, dried, split;
- milk, semi-skimmed;
- sun dried tomatoes, in oil.

Include an identifying nutrient such as percentage fat to increase accuracy. For example,

- yoghurt, plain 1g fat/100g (1% fat);
- beef mince, raw 10g fat/100g (10% fat),
- polyunsaturated fat spread (55% fat).
- this information will be written on the ingredient packaging or specification.

In the kitchen

If one cook uses 1kg peaches in juice, and another uses 1kg peaches in syrup, the peaches syrup will have about 40g more sugar and 150kcal more energy.

Detailed instructions for preparation/production

A clear and unambiguous method will mean that if someone else uses the recipe, the end product will generally look the same, taste the same and make the same number of portions.

Include cooking temperatures, methods, and size, shape, depth of any dishes/trays used.

With increasing costs of ingredients, identifying savings may become necessary.

Detailed instructions for service

Include a description of how a dish should be portioned and be served, including use of serving tools, garnishes and suggested accompaniments. Wherever possible, include a photograph.

Costing of recipes

Having costed recipes will mean that any adjustments to spending on ingredients can be managed in a systematic fashion. With increasing costs of ingredients, identifying savings may become necessary.

- Price per ingredient unit; include the cost of the ingredient for the unit size that is purchased.
- Price of ingredient for quantity used in recipe; the ingredient price relates to the ingredient before preparation or as purchased.

- Total cost; the sum of all ingredients used within the recipe and any garnishes for serving.
- Cost per portion; the total cost divided by the number of portions.
- Date of costing; update the date of costing periodically, perhaps seasonally, to reflect changes in ingredient costs.

Standard recipes follow a standard format and should have most, if not all, of the information needed to start calculating the nutrient content of school lunch recipes.



Standard Recipe EXAMPLE ONLY

Name of dish: Roasted butternut squash and onion penne pasta with crème fraiche		Recipe number/code: MCPasta005
Portions and age range: 50 primary or 30 secondary		Weight change: 6089-7974 = + 1885g
Serving size: 160g primary or 260g secondary		Allergens: nil
Preparation time: 20 minutes	Cooking time: 40 minutes	Total time: 60 minutes

Ingredient				Costing (date:12/04/2008)		
Quantity	Quantity description	Ingredient name	Ingredient description	Ingredient unit	Unit cost £0.00	Dish cost £0.00
2.7kg	6lb, approx. 3 medium	Butternut squash		1.0kg	1.69	4.56
2.0kg	10 large	Onions	Peeled	1.0kg	0.79	1.58
50g	10 cloves	Garlic	Whole	145g	0.99	0.34
135g	150ml	Vegetable oil	Blended (12% saturates)	5.0L	3.49	0.10
3g	1 tablespoon	Dried rosemary		15g	0.75	0.15
1.5kg		Pasta	White, Penne	500g	0.67	2.01
500g		Crème fraiche	3g fat /100g	500g	1.59	1.59
500g		Fat-free natural yoghurt	0.1% fat	500g	1.19	1.19
6g	1 tablespoon	Black pepper	Freshly cracked	85g	1.58	0.11
				TOTAL £11.63		

Method

1. Preheat oven to 180°C.
2. Peel and chop squash into 2cm cubes.
3. Chop each onion into 8 wedges.
4. Peel and bruise garlic by flattening with the blade of a knife.
5. Place squash, onion, garlic and rosemary on a tray and toss in oil.
6. Bake for 30 minutes or until vegetables cooked, then remove garlic.
7. Meanwhile bring water to boil in a large pan, add pasta and cook until al dente.
8. Drain pasta and allow to cool slightly before adding crème fraiche, yoghurt and pepper and tossing through.
9. Add roasted vegetables and toss again before serving.



Appendix 3

Calculating the nutrient content of school lunch recipes:

Caterer's template

For gathering essential information

Title of dish:	Recipe File No.:
Portions and age range:	Weight change:
Serving size:	Method of cooking:

Ingredient Information				
Ingredient Name (as bought, where necessary)	Brand and Supplier details	Ingredient Quantity Description	Ingredient Quantity	Ingredient Measure

Preparation/Cooking				New Ingredient	
Ingredient Name (as bought, where necessary)	Further Preparation	Further Cooking	If fruit or vegetable, are they cooked? If yes, tick	New ingredient? If yes, tick	Ingredient information available? If yes, tick and attach. If no, cross

Calculating the nutrient content of school lunch recipes:

Caterer's template – example only

For gathering essential information

Title of dish: Macaroni pasta salad with yoghurt, carrot and corn	Recipe File No.: SalPas001
Portions and age range: 45 primary or 30 secondary	Weight change: nil
Serving size: 40g primary or 60g secondary	Method of cooking: Mix all ingredients together

Ingredient Information				
Ingredient Name (as bought, where necessary)	Brand and Supplier details	Ingredient Quantity Description	Ingredient Quantity	Ingredient Measure
Macaroni		1x500g packets	500	g
Fresh carrots		2 medium	150	g
Canned sweetcorn kernels		½ can, drained	150	g
Yoghurt 1% fat		½ 500g carton	250	g

Preparation/Cooking				New Ingredient	
Ingredient Name (as bought, where necessary)	Further Preparation	Further Cooking	If fruit or vegetable, are they cooked? If yes, tick	New ingredient? If yes, tick	Ingredient information available? If yes, tick and attach. If no, cross
Macaroni		boiled			
Fresh carrots	Peeled, grated				
Canned sweetcorn kernels					
Yoghurt 1% fat				✓	✓

Appendix 4



Common food allergens

The Food Standards Agency published 'Guidance on allergen management and consumer information' in June 2006.⁵

- Peanuts
- Nuts (including almonds, hazelnuts, walnuts, Brazil nuts, cashews, pecans, pistachios, macadamia nuts and Queensland nuts)
- Eggs
- Milk
- Crustaceans (including prawns, crab and lobster)
- Fish
- Sesame (seeds)

- Cereals containing gluten (including wheat, rye, barley, oats, spelt, kamut)
- Soya
- Celery
- Mustard
- Sulphur dioxide/sulphates (preservatives in some foods and drinks) at levels above 10mg per kg or per litre

It is also important to highlight these ingredients on standard recipes. Caterers must also label any dishes that contain these allergens, so that children are aware



Appendix 5

Standard conversion tables

Whilst information in conversion tables may differ slightly, the following tables may be used to convert weight and fluid measures (Food Portion Sizes, 3rd edition, 2002, pviii).⁶ Figures should be rounded up to the nearest whole number after conversion.

Standard weights and measures

1 ounce (oz)	28.35 g	
1 pound (lb)	453.6 g	
1 gram (g)	0.0353 oz	
1 kilogram (kg)	2.20516 lb	
1 fluid ounce (fl oz)	28.41 millilitre (ml)	
1 pint	568.3 ml	
1 litre (L)	1.76 pints	
1 teaspoon	1/8 fl oz	5ml
1 dessertspoon	1/4 fl oz	10ml
1 tablespoon	1/2 fl oz	15ml

Check the ingredients that do not weigh very much. Remember that a cup of flour does not weigh the same as a cup of sugar. Getting it right will make a significant difference to the end results e.g. sodium:

1 level teaspoon of salt	= 5g (2g sodium)
1 heaped teaspoon of salt	= 8g (3.2g sodium)
1 teaspoon bicarbonate of soda	= 4g (1.1g sodium)
1 teaspoon of baking powder	= 4g (0.47g sodium)
or for herbs and spices:	
1 teaspoon of dried herbs	= 1g
1 level teaspoon of curry powder	= 3g

References



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3. The Statutory Instrument 2007 No. 2359 Education, England. The Education (Nutritional Standards and Requirements for School Food (England) Regulations 2007. www.opsi.gov.uk/si/si2007/pdf/uksi_20072359_en.pdf
4. School Meals Review Panel (2005). Turning the Tables: Transforming School Food. Appendix 4.2. www.schoolfoodtrust.org.uk/doc_item.asp?DocId=14&DocCatId=1
5. Food Standards Agency, (2006). 'Guidance on allergen management and consumer information'. www.food.gov.uk/multimedia/pdfs/maycontainguide.pdf
6. Food Standards Agency, (2002). Food Portion Sizes, third edition. The Stationery Office. www.tso.co.uk/bookshop

Notes

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School Food Trust (Freepost)
N904 Moorfoot
Sheffield
S1 4PQ

Website www.schoolfoodtrust.org.uk

E-mail info@sft.gsi.gov.uk

Phone 0844 800 9048



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