

MEAT CONTENT CALCULATION

Introduction

Amendments to the European Labelling Directive have resulted in the need to harmonise the definition of meat across Europe. This new definition attempts to ensure a common standard for the declarations of meat content on pre packed meat products.

Exova, in conjunction with the BMPA (British Meat Processors Association), have developed the Meat Content Calculator to assist industry in calculating the meat contents of your products rapidly, consistently and accurately.

The *BMPA has contributed to the current standards published by the FSA*, for the acceptable levels of fat, pork rind and other collagenous materials in meat and meat products, which gives guidance on how fat and connective tissue in recipes can be evaluated.

Using these standards in the form of a database in conjunction with a computer program, meat contents of your products can be quickly calculated by entering the recipe details onto a website. At a touch of a button the meat content, fat and connective tissue values are all available to assist you in the labelling of your product.

• Fast	• Accurate
• Consistent	• Pay-as-you go
• Immediately up-dated	• Secure
• Industry recognised	• Web-enabled

Registration Process

The Meat Content Calculator is a transaction based program which can only be accessed by registered users. Registration and purchase of transactions must be completed in advance to allow access. Each time you perform a meat content calculation a transaction will be deducted from your total. When you have no transactions left access to the program will be suspended until you purchase more.

To purchase transactions click on the purchase button at the end of this page.

Transactions are sold in packages and their price depends upon the volume purchased and whether you are a member of Exova and/or the British Meat Processors Association. All new registered users will be emailed with a copy of the BMPA Code of Practice, which accounts for the price differentiation for non-members and reflects the benefits of either BMPA or Exova membership. Qualifying members of either Exova or BMPA will receive the benefits of additional transactions for the transaction fee bands. In addition,

members of Exova and the BMPA can obtain advice from their member organisation through their membership on the interpretation of the legislation and formulation of their products.

When you click the purchase button you will be taken to our secure online shopping site at Exova.com

The list of products represents the different packages available for purchase. These can be added to your shopping basket and then paid for by credit/debit card or invoice (UK only). If you are a current Exova client or paying by credit/debit card, access should be available within 48 hours (Monday to Friday). If you are a new client and wish to be invoiced, delays may result in setting up and authorising your account. If you wish to receive the more favourable membership rates you must provide the relevant membership number on the information form when registering.

Once membership information has been checked and payment cleared, a username and password will be emailed to the address given when you paid. For security reasons, this is the only way that usernames and passwords will be issued. Usernames and passwords cannot be changed.

If you have problems accessing the site or making payment please contact our Helpline on +44 (0)121 251 4099. Please note that this Helpline will only provide advice on registering and accessing the program and will not provide assistance in the formulation of products or interpretation of results.

Purchasing additional transactions is the same as your first time purchase but instead of being issued a username and password you will be notified by email when your payment has been processed so that you can then access the program again with your existing username and password.

For security purposes, no data is stored on the website. Once you have completed your calculation you must print off your results or save the webpage before exiting or moving on to the next transaction.

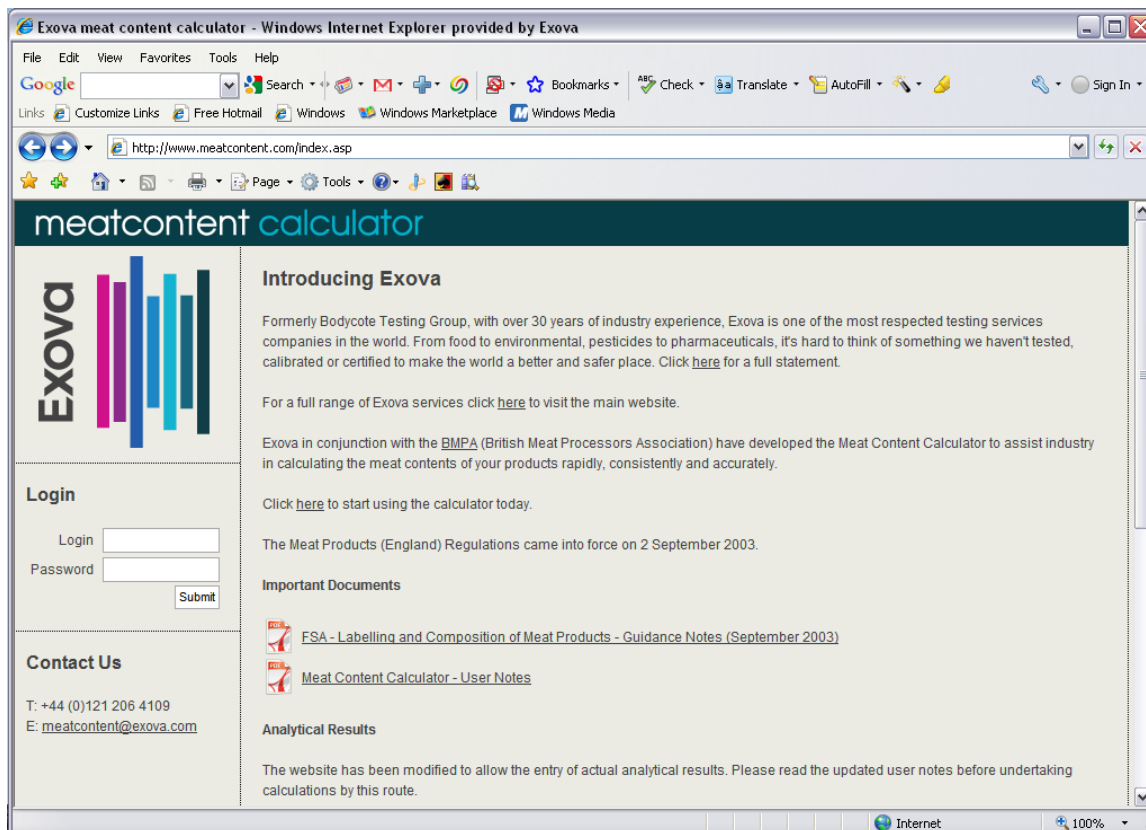
PRIOR TO USING THE MEAT CONTENT CALCULATOR IT IS STRONGLY RECOMMENDED THAT YOU READ THE FSA GUIDELINES. THESE CAN BE ACCESSED FROM THE “ABOUT” SECTION OF THE MEAT CONTENT CALCULATOR MENU (second paragraph where it states click “here”).

Accessing the Meat Content Calculator

You need to have purchased some transactions and have been issued with a username and password before you can login.

To Log-In:

- Go to <http://www.meatcontent.com/>
- The following screen will appear:



Type in your Login Name exactly as it appears on the email you were sent after purchasing transactions.

Type in your password exactly as it appears on the email you were sent after purchasing transactions.

Click on the Submit button.

Note: If the system is left idle for 20 minutes after login, the website will automatically log you out. This is a security feature of the calculator to prevent unauthorised use of registered users' transactions. Any part-processed transactions will be lost and it will be necessary to login again.

Using the Meat Content Calculator

The top of the Meat Content Calculator screen tells you how many transactions you have remaining.

Once that figure reaches zero you will no longer be able to login and you will need to purchase more transactions before you can calculate further meat contents. Proceed to the purchase transactions instructions.

Before you begin you need to decide if you wish to use theoretical/reference fat, collagen and protein figures or figures generated from your own analytical results.

FAT

For fat you can choose to use visual lean figures, average fat values as specified in Annex B of the FSA guidance note or your own analytical results for the raw material. The use of any of these figures is acceptable but please be aware that you will generate different results from each.

COLLAGEN/PROTEIN

For collagen and protein figures you can choose to use those supplied by the categories in the calculator (these are the same as those of Annex B in the FSA guidelines) or those gained from your own analytical results. The use of either of these figures is acceptable but please be aware that you will generate different results from each.

The “worst case” will be generated by the use of VL and using the collagen and protein levels supplied by the categories in the calculator (a replica of Annex B).

Where you choose to use your own analytical results, please be aware that the figure must be based on at least 3 separate analyses (as discussed at a meeting with the FSA in February 2003 as a reasonable starting level for new analyses), that ongoing analysis of the materials must be made to an acceptable schedule and these documented results must be retained for Due Diligence purposes. A review of the calculated meat content for each finished product must be made on a regular basis using the revised analytical results to ensure that it does not fall below the meat content declared on labels.

IF YOU DECIDE TO USE YOUR OWN ANALYTICAL FIGURES PLEASE CLICK ON THE “CLICK FOR ANALYTICAL” BUTTON IN THE TOP RIGHT HAND CORNER. THIS WILL TAKE YOU TO A SCREEN THAT ALLOWS THE INPUT OF ANALYTICAL DATA. FOR NON-ANALYTICAL DATA ENTRY SEE BELOW:

Setting up a recipe using reference information.

Once you have logged in the first screen allows you to set up the recipe for which a meat content is required. Please note the “Click for Analytical” button in the top right hand corner. Use this **only** if you wish to enter your own analytical data.

The screenshot shows a web browser window titled "Meat Content Calculator - Windows Internet Explorer provided by Exova". The address bar shows the URL "http://www.meatcontent.com/newsos/addtobasket2.asp". The page content includes a welcome message for Helen Norfolk, a form to add ingredients to a recipe, a table showing the current contents of the recipe, a cooking loss input field, and buttons for "Calculate Recipe" and "Clear Recipe".

Welcome Helen Norfolk you have 25 transactions left [Click for Analytical](#)

Add ingredients to recipe

Ingredient Description	Qty Kg	VL%	Fat%	Choose Category
				Please choose a category

[Add ingredients to recipe](#)

Contents of Recipe

Ingredient Description	Qty Kg	VL%	Fat%	Category
Total Kg	0			

[Amend](#)

Cooking Loss %

[Calculate Recipe](#)

[Clear Recipe](#)

Adding your ingredients:

To add an ingredient to the recipe, follow the steps outlined below.

Adding an Ingredient

Step 1: In the box under “Ingredient Description” type the name of the ingredient as you wish it to appear on your recipe sheet. This may be a basic or a more detailed description and can include material codes up to a maximum of 50 characters.

Welcome Helen Norfolk you have 25 transactions left [Click for Analytical](#)

Add ingredients to recipe

Ingredient Description	Qty Kg	VL%	Fat%	Choose Category
Pork 80VL				Please choose a category

[Add ingredients to recipe](#)

Contents of Recipe

Ingredient Description	Qty Kg	VL%	Fat%	Category
Total Kg	0			

[Amend](#)

Cooking Loss %

[Calculate Recipe](#)

[Clear Recipe](#)

If no ingredient name is added, the description will default to that supplied by the category name shown in step 4.

QUANTITY

Step 2: Move the cursor to the box under “QTY Kg” and enter the quantity of the ingredient used in the recipe in Kilogrammes. Add only numbers – no units are necessary.

If you use % in your recipe rather than weights you can add the % figure in here, as the system will treat this as a weight per 100kg batch size.

Welcome Helen Norfolk you have 25 transactions left [Click for Analytical](#)

Add ingredients to recipe

Ingredient Description	Qty Kg	VL%	Fat%	Choose Category
Pork 80VL	100			Please choose a category

[Add ingredients to recipe](#)

Contents of Recipe

Ingredient Description	Qty Kg	VL%	Fat%	Category
Total Kg	0			

[Amend](#)

Cooking Loss %

[Calculate Recipe](#)

[Clear Recipe](#)

VL AND FAT ENTRY

Step 3: The calculator requires either a VL **or** a fat content in percentage form, **but not both**, in order to calculate the meat content. The fat content can be taken from Annex B of the FSA Guidance Note. It is also possible to input your own analysed fat content in the fat box.

Step 3a - VL: Move the cursor to the box under “VL”. Add the visual lean level for the ingredient. The VL used for fat in the absence of more accurate data should be 10. You may wish to use the fat content for the ingredient rather than try to use a VL.

Step 3b – Fat: Move the cursor over the box under Fat %. Add the fat content for the ingredient as listed in the last column of Annex B of the FSA Guidance Note or from your own average analytical results.

Non-meat products including heart, liver, kidney, headmeat, MRM and other non-meat proteins should have a VL of “0” (zero). This box may be left blank for non-meat products.

Welcome Helen Norfolk you have 25 transactions left [Click for Analytical](#)

Add ingredients to recipe

Ingredient Description	Qty Kg	VL%	Fat%	Choose Category
Pork 80VL	100	80		Please choose a category

[Add ingredients to recipe](#)

Contents of Recipe

Ingredient Description	Qty Kg	VL%	Fat%	Category
Total Kg	0			

[Amend](#)

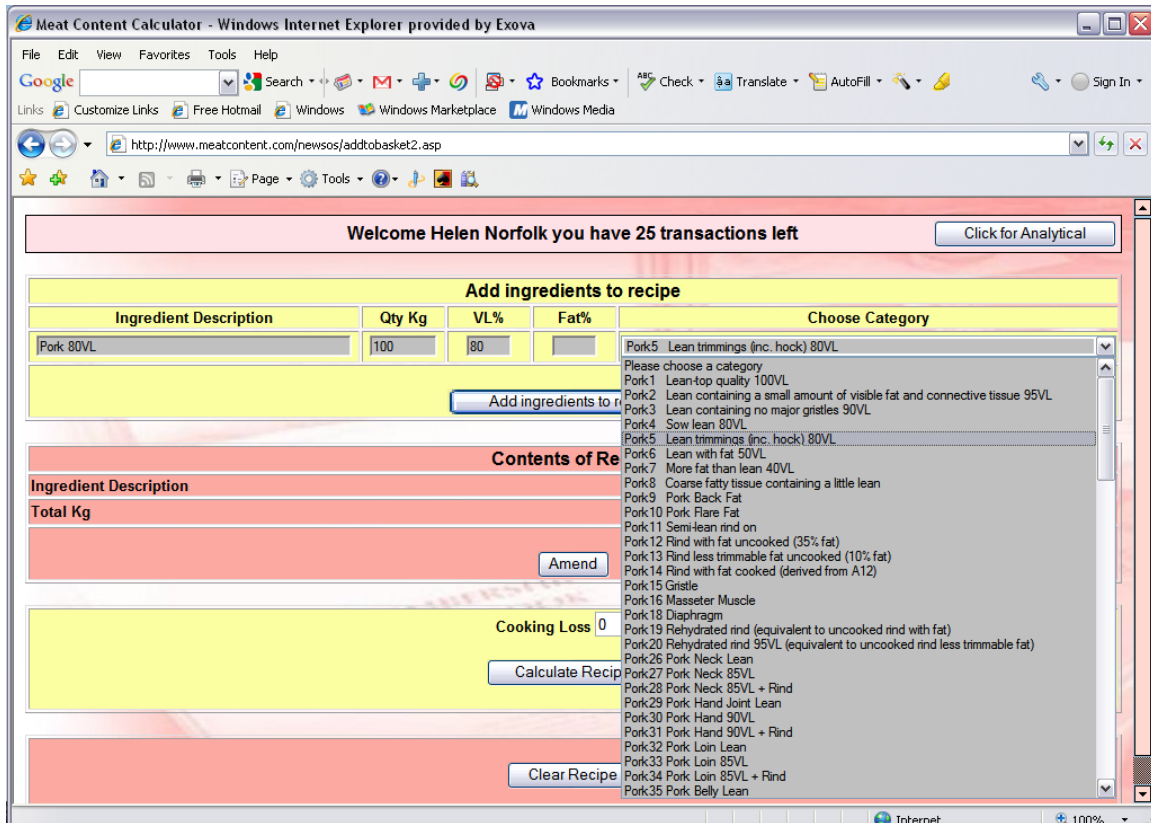
Cooking Loss %

[Calculate Recipe](#)

[Clear Recipe](#)

Step 4: Move the cursor to the box under “Choose Category”

To the right of this box is a small downward pointing arrow in a grey box. Click once on this box and a list of ingredient categories will drop from the box. This list can be scrolled through using either the up and down arrows in the grey strip to the right of the box, or by using the up and down arrows on the keyboard.



The list is taken directly from the FSA Guidance Note and supplies information to the calculator on collagen to protein ratios for each category. This category DOES NOT AFFECT THE FAT CONTENT. Fat contents are calculated from the information you have just added into the VL or Fat boxes.

The list includes a number of main cuts of meat frequently used in meat product manufacture. These categories can be found towards the end of the list for each product.

Select the category closest to your product. The calculation will be completed using the VL or fat levels you specified in Step 3, taking the category information as an accurate estimate of collagen and protein in each cut.

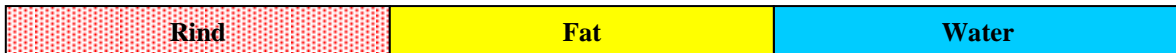
Drinde:

Drinde is dehydrated commercial rind. When it is dehydrated it loses both water AND fat. In order to include Drinde as part of the meat ingredients it must either be replenished fully to its **Commercial Rind Status** with the appropriate quantities of water and fat OR it may be partially replenished to using only the water that has been removed. YOU MAY NOT REPLACE THE FAT THAT WAS INITIALLY REMOVED USING WATER FOR THE PURPOSES OF MEAT CONTENT CALCULATION.

The FSA has accepted these two techniques only for the inclusion of Drinde into meat products. You may only use one or the other.

COMMERCIAL RIND

For the sake of simplicity we will assume that Commercial Rind is “Rind”, “Fat” and “Water”



DRINDE

Drinde is “Rind” plus a little fat. We have removed water and most of the fat.



ACCEPTED REHYDRATION OF DRINDE FOR INCLUSION IN THE MEAT CONTENT CALCULATION:

OPTION 1 – RETURN THE PRODUCT TO RIND LESS TRIMMABLE FAT STATUS.

Water only can be added back at a ratio of 1 kg of Drinde to 1.25Kg of water. The weight of the water must be deducted from the weight of water in the recipe. The Category information in Pork 20 must be used (Fat 10%, Collagen 22.4% Protein 34.5%)



OPTION 2 – RETURN THE PRODUCT TO COMMERCIAL RIND STATUS.

Both Water and Fat must be added back to the product.

For specific quantities of water and fat relating to your re-hydration factor please consult your supplier.

The weight of the water and fat must then be deducted from their respective weights in the recipe.

The category information in Pork 19 must be used (Fat 35%, Collagen 14.2% Protein 22%)

Rind	Fat	Water from water ingredients	Fat from Fat Ingredients.
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Please remember to negate any water and fat used in the re-hydration from the weight of water and fat used in the recipe.

Heart, Liver, Kidney etc:

Heart, liver, kidney and similar products no longer classed as “meat” under the new definition are listed at the end of the category lists and will not be used to calculate the meat contents. These items may also be classified as miscellaneous non-meat.

Quick Tip

To move quickly to a specific ingredient category, press the first letter of the category name:

e.g.

“P” = Pork “B” = Beef “L” = Lamb

ASSIGN INGREDIENT TO RECIPE

Step 5: Once this has been completed press the “Add ingredients to recipe” button and the ingredient will appear in the “Contents of Recipe” table.

Welcome Helen Norfolk you have 25 transactions left [Click for Analytical](#)

Add ingredients to recipe

Ingredient Description	Qty Kg	VL%	Fat%	Choose Category
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Please choose a category

[Add ingredients to recipe](#)

Contents of Recipe

Ingredient Description	Qty Kg	VL%	Fat%	Category
Pork 80VL	100	80		Pork5
Total Kg	100			

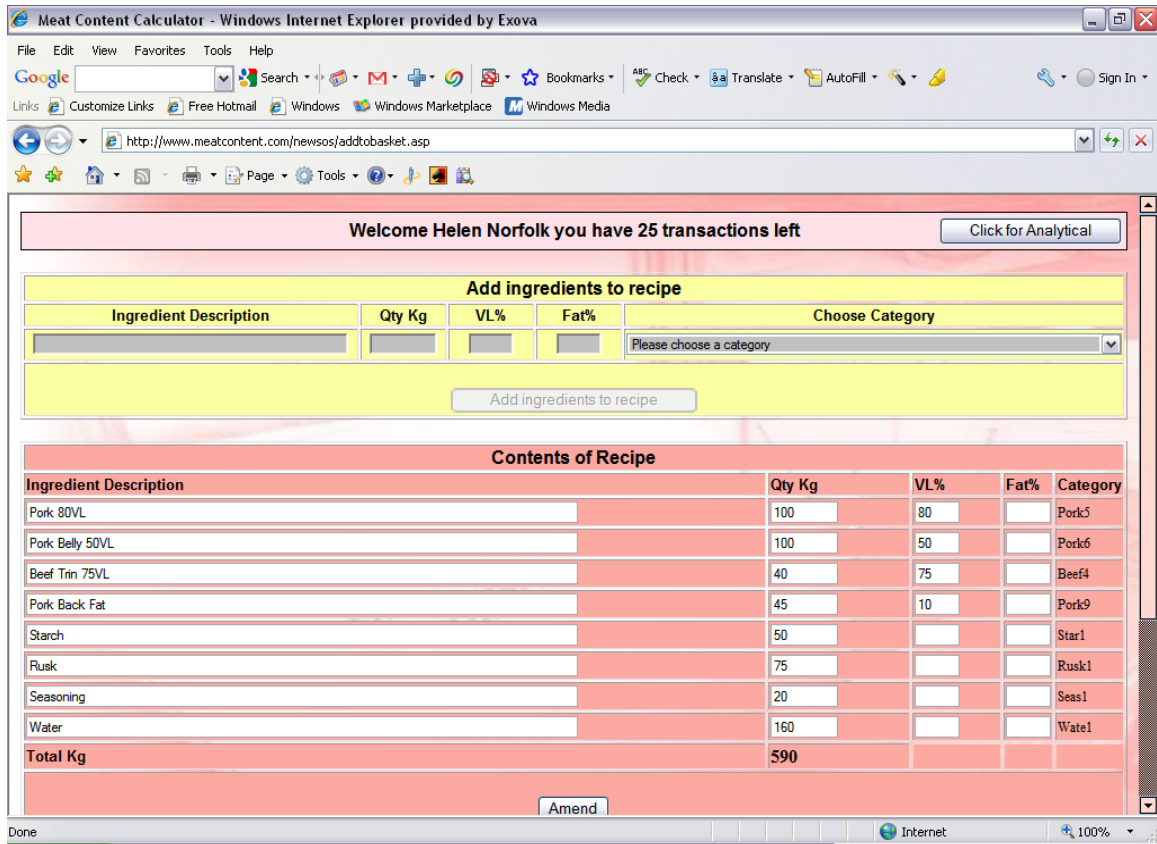
[Amend](#)

Cooking Loss %

[Calculate Recipe](#)

[Clear Recipe](#)

Repeat Steps 1 to 5 for all other ingredients.



To confirm you have included all of your ingredients you can cross check the Total Kg weight identified at the bottom of the Qty Kg column. If you have used % figures, this should read 100.

Notes

All meat ingredients must be added separately and given a quantity, VL or Fat Content and Category.

Ingredients not classed as meat may be grouped together as a quantity, given no VL and a category of "Miscellaneous Non-Meat". This will allow the meat content to be calculated but will not list all of the other ingredients in the final recipe.

Corrections to Ingredients

If you find that an ingredient needs to be changed after it has been added to the recipe, the following data can be amended in the “Contents of Recipe” table, Ingredient description, Quantity and VL or Fat.

To Amend:

Click on the box containing the data to be amended.
Amend Data. Click the “Amend” button at the bottom of the table.

Correcting the Category:

Move the cursor to the box showing the quantity of the ingredient for which the category needs to be changed.
Type “0” (zero)
Press the “Amend” button
Return to the “Add Ingredients to Recipe” section and add the ingredient again with the correct category.

CLEAR RECIPE

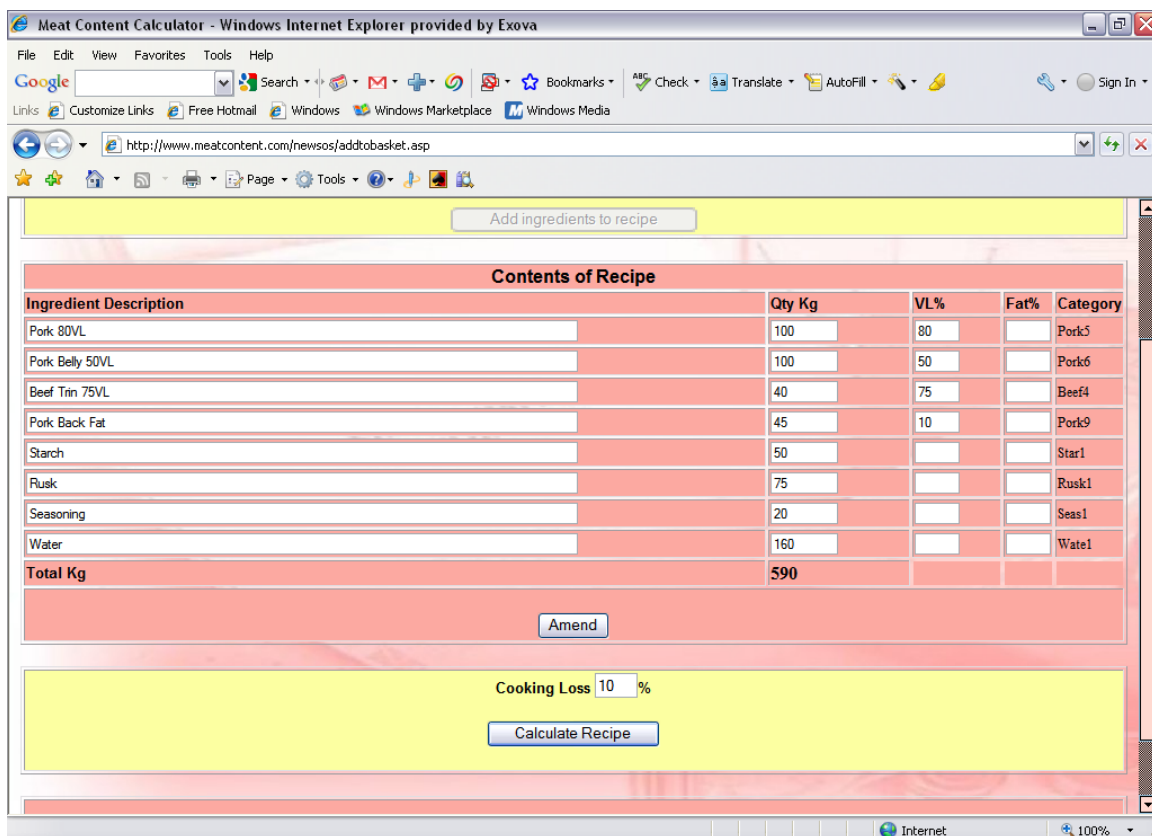
If you wish to correct the whole recipe and restart, click on “Clear Recipe” button. A prompt will ask if you really want to clear the recipe. Click “Yes”. This will delete all of the data from the Contents of Recipe table and the Cooking Loss box.

COOKING LOSS

If the product is cooked, please add any cooking loss as a percentage figure to the “Cooking Loss” box.

Add this figure after the recipe has been completed and just before you click the calculate recipe button.

Add the figure as a direct percentage figure (i.e. a 10% cooking loss should be added as “10” rather than 0.1)



The screenshot shows a web browser window titled "Meat Content Calculator - Windows Internet Explorer provided by Exova". The address bar shows the URL "http://www.meatcontent.com/newsos/addtobasket.asp". The main content area features a table titled "Contents of Recipe" with the following data:

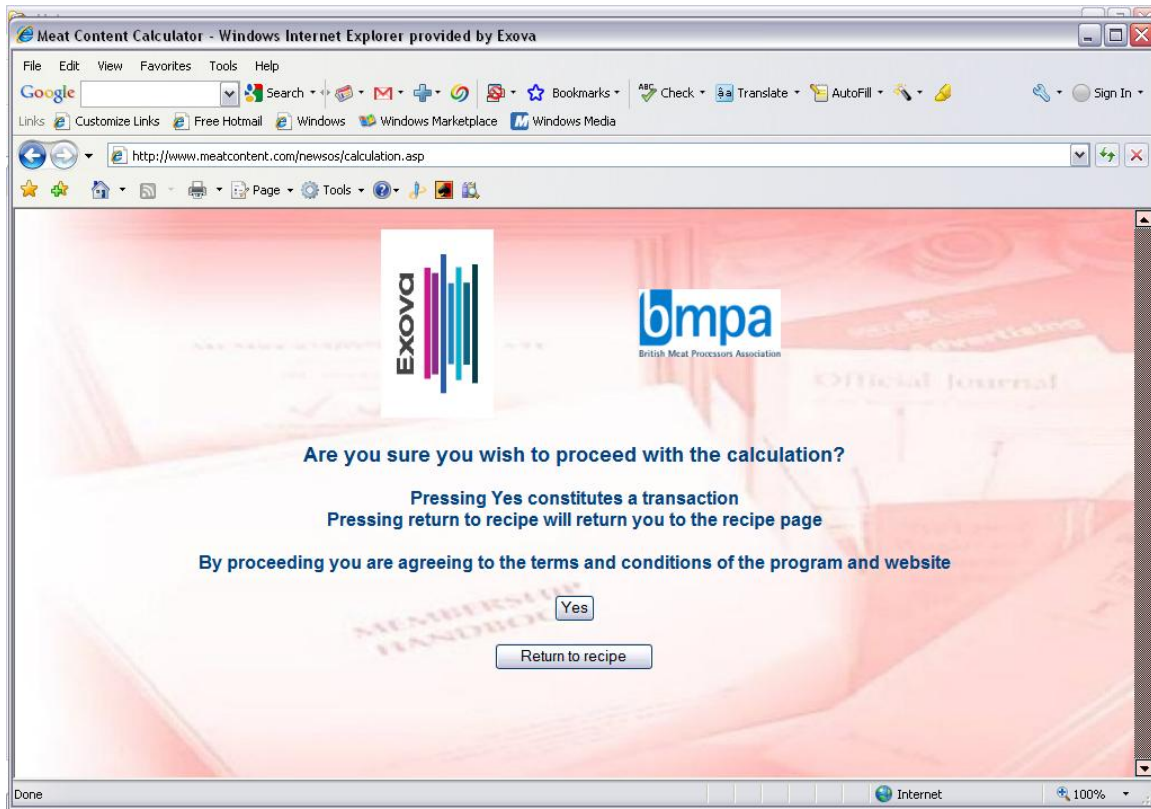
Ingredient Description	Qty Kg	VL%	Fat%	Category
Pork 80VL	100	80		Pork5
Pork Belly 50VL	100	50		Pork6
Beef Trn 75VL	40	75		Beef4
Pork Back Fat	45	10		Pork9
Starch	50			Star1
Rusk	75			Rusk1
Seasoning	20			Seas1
Water	160			Wate1
Total Kg	590			

Below the table is an "Amend" button. At the bottom of the form, there is a "Cooking Loss" input field containing the value "10" and a "Calculate Recipe" button.

Calculating the Meat Content

Once you are happy that the information in the “Contents of Recipe” table accurately reflects the product, the “Calculate Recipe” button can be pressed. Note: If a meat category has been entered but the VL or fat box has not been completed the system will issue a prompt for this information before proceeding with the calculation. Enter the data in the box provided before continuing.

Once the “Calculate Recipe” button has been pressed, the screen will appear asking if you are sure you wish to proceed with the calculation. If you are happy with the recipe click on the “Yes” button.



When “Yes” is clicked the system will calculate the meat content for the product and one of your pre-paid transactions will be deducted from your account (i.e. at this point you pay for the calculation).

If you do not wish to proceed, click the “Return to Recipe” button and you will be returned to the previous screen without charge.

Please Note: The “back” arrow can be used after the “yes” button has been pressed and the screen however the system will charge for every time the “yes” button is pressed.

Calculation Results Screen

Meat Content Calculator - Windows Internet Explorer provided by Exova

File Edit View Favorites Tools Help

Google Search

Links Customize Links Free Hotmail Windows Windows Marketplace Windows Media

http://www.meatcontent.com/newsos/calculation.asp

EXOVA

bmpa
British Meat Processors Association

Helen Norfolk you now have 24 transactions left
[Click here to purchase transactions](#)

Recipe name 02/09/2009 10:15:06

WARNING: If you do not print this page before exiting this screen you will lose your recipe and calculation results

Calculation Results - 10% Cooking Loss					
Meat Description	Meat Content for Declaration%	Connective Tissue in Meat%	Fat in Meat%	Excess Connective Tissue in Recipe%	Excess Fat in Recipe%
Pork	32.6	22.6	50.6	0	13.6
Beef	6.3	30	34	0.3	0.9

Recipe				
Description	Qty	VL%	Fat%	Category
Pork 80VL	100	80	-	Pork5
Pork Belly 50VL	100	50	-	Pork6
Beef Trin 75VL	40	75	-	Beef4
Pork Back Fat	45	10	-	Pork9

This screen shows a box next to “Recipe Name”. A product name, recipe name or code can be entered into this box to allow distinctions between recipes.

Below this box is the “Calculation Results” table.

Column 1

The first column in this table shows the meat description. The species will be identified separately for Quantitative Ingredient Declaration purposes.

Column 2

The second column indicates the meat content for declaration for each respective meat species.

Column 3 and 4

The third and fourth columns show the **amount of connective tissue and fat in the meat species**. This will allow the product to be assessed for formulation and development if required.

Column 5 and 6.

The fifth and sixth columns indicate **any excess connective tissue and fat for each species in the recipe.**

A “0” (zero) figure in either column 5 or 6 indicates that the level of fat and/or connective tissue is less than the maximum specified by the regulation and there would be no requirement to declare fat or connective tissue for that species in the ingredients list.

Below the results table is a copy of the recipe used in the calculation.

A recipe name or number should be typed into the box above the calculation results. This will allow recipes to be distinguished easily on the print-out or saved webpage.

AS A SECURITY FEATURE OF THE SYSTEM, THE CALCULATOR DOES NOT STORE RECIPES AND MEAT CONTENTS. PLEASE PRINT THE INFORMATION OR SAVE THE WEBPAGE BEFORE EXITING THE SCREEN.

To print off your recipe and meat content calculation press the print icon on your toolbar or select Print from the File Menu.

To save the recipe electronically go to “File” and “Save As” to save in the relevant location.