Formatting Allergens for Food Ingredients using NiceLabel

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EU Regulative (EU) No 1169/2011

The European Union's mandatory food labeling legislation, formalized in Regulation (EU) No 1169/2011, not only specifies what information must be shown, but also how that information is presented, including font, color and contrast. The regulation deals in detail only with font size, but leaves the exact type of allergen highlighting to the user. The allergens in the ingredient list must be printed in a typeset or font that distinguishes them from the rest of the list (such as bold, italic, underlined, inverse, different color).

NiceLabel has a built-in support for allergen formatting through the custom functions. These are predefined functions that you can use to highlight the allergens in the list of ingredients. By highlighting, you can you **bold**, *italic*, <u>underline</u> formatting or ***<u>combination</u>*** of this formatting. The function result is RTF-formatted data you can use with the Rich Text Box object.

Prerequisites

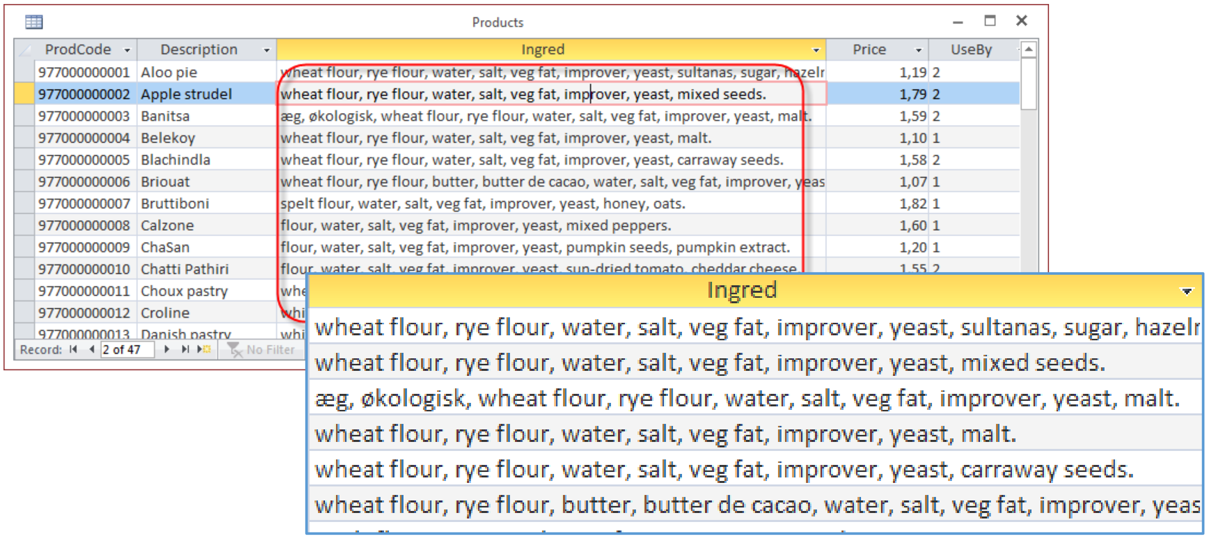
Can I use product's data from my MS SQL, Oracle, Access or Excel or some other database type?

Yes. You can keep data in any database type. Simply connect your database to the label, using **Data/Database Access** option.

Is the database structure important? Can I use any custom database structure?

The database name and its structure is not fixed. You can use any database type with any structure. What is important is the structure of the **field containing ingredients**. It is important to use correct formatting of ingredients:

Ingredients in the database field must be in CSV format – values separated by commas.



ProdCode	Description	Ingred	Price	UseBy
977000000001	Aloo pie	wheat flour, rye flour, water, salt, veg fat, improver, yeast, sultanas, sugar, hazelr	1,19	2
977000000002	Apple strudel	wheat flour, rye flour, water, salt, veg fat, improver, yeast, mixed seeds.	1,79	2
977000000003	Banitsa	æg, økologisk, wheat flour, rye flour, water, salt, veg fat, improver, yeast, malt.	1,59	2
977000000004	Belekoy	wheat flour, rye flour, water, salt, veg fat, improver, yeast, malt.	1,10	1
977000000005	Blachindla	wheat flour, rye flour, water, salt, veg fat, improver, yeast, carraway seeds.	1,58	2
977000000006	Briouat	wheat flour, rye flour, butter, butter de cacao, water, salt, veg fat, improver, yeas	1,07	1
977000000007	Bruttiboni	spelt flour, water, salt, veg fat, improver, yeast, honey, oats.	1,82	1
977000000008	Calzone	flour, water, salt, veg fat, improver, yeast, mixed peppers.	1,60	1
977000000009	ChaSan	flour, water, salt, veg fat, improver, yeast, pumpkin seeds, pumpkin extract.	1,20	1
977000000010	Chatti Pathiri	flour, water, salt, veg fat, improver, yeast, sun-dried tomato, cheddar cheese	1,55	2
977000000011	Choux pastry	whe		
977000000012	Croline	whi		
977000000013	Danish pastry	whi		

Ingred
wheat flour, rye flour, water, salt, veg fat, improver, yeast, sultanas, sugar, hazelr
wheat flour, rye flour, water, salt, veg fat, improver, yeast, mixed seeds.
æg, økologisk, wheat flour, rye flour, water, salt, veg fat, improver, yeast, malt.
wheat flour, rye flour, water, salt, veg fat, improver, yeast, malt.
wheat flour, rye flour, water, salt, veg fat, improver, yeast, carraway seeds.
wheat flour, rye flour, butter, butter de cacao, water, salt, veg fat, improver, yeas

How can I handle Allergens?

There are two options:

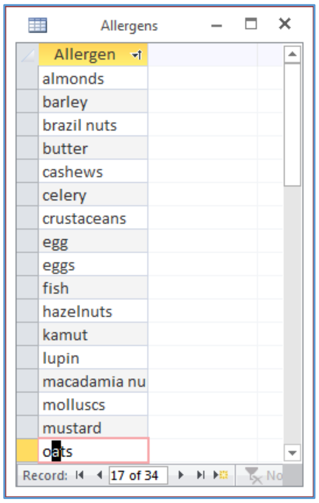
1. **List of allergens in a separate table**: Below find two samples where the list of allergens is saved in Excel datasheet or Access table. Note: If you want to keep the list of allergens in MS SQL or some other database type please contact sales@nicelabel.com for additional info.
2. **Allergens in the product database are marked with a special character**, for instance with asterisk "…sugar,*eggs*,..

1. List of allergens in a separate table

In order to use NiceLabel solution you need to create a separate table/ sheet containing list of allergens. In the database create a new table/sheet and create one filed.

You can use any table/sheet name and any name for this field. In our samples we named table/sheet as "Allergens" and field name as "Allergen".

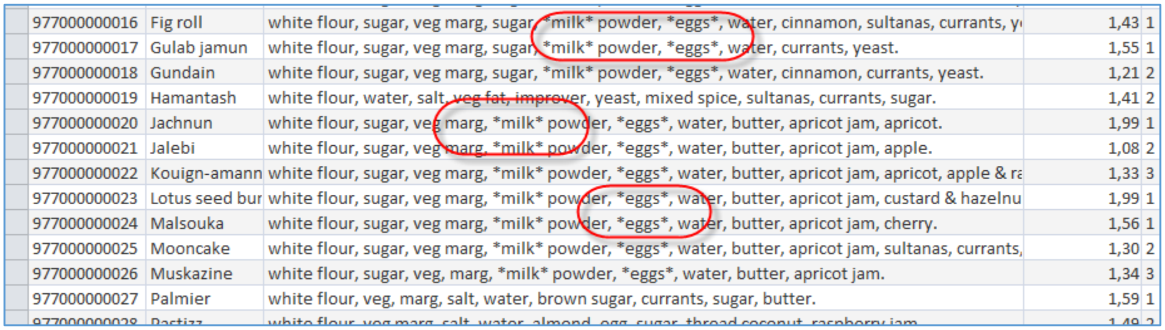
Each record in this table should contain one allergen. Because of such structure is very easy to maintain the list of allergens.



Allergen
almonds
barley
brazil nuts
butter
cashews
celery
crustaceans
egg
eggs
fish
hazelnuts
kamut
lupin
macadamia nu
molluscs
mustard
oats

2. Allergens marked with tags "*wheat* flour, *hazelnuts*"

Many companies already have products details saved in a database where all allergic ingredients are marked with custom tags. For details about such NiceLabel solution see Allergens are marked with custom character e.g. …*milk*…. You can use any database type.



977000000016	Fig roll	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, cinnamon, sultanas, currants, y	1,43	1
977000000017	Gulab jamun	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, currants, yeast.	1,55	1
977000000018	Gundain	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, cinnamon, currants, yeast.	1,21	2
977000000019	Hamantash	white flour, water, salt, veg fat, improver, yeast, mixed spice, sultanas, currants, sugar.	1,41	2
977000000020	Jachnun	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, apricot.	1,99	1
977000000021	Jalebi	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, apple.	1,08	2
977000000022	Kouign-amann	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, apricot, apple & ra	1,33	3
977000000023	Lotus seed bur	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, custard & hazelnu	1,99	1
977000000024	Malsouka	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, cherry.	1,56	1
977000000025	Mooncake	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, sultanas, currants,	1,30	2
977000000026	Muskazine	white flour, sugar, veg, marg, *milk* powder, *eggs*, water, butter, apricot jam.	1,34	3
977000000027	Palmier	white flour, veg, marg, salt, water, brown sugar, currants, sugar, butter.	1,59	1
977000000028	Pastizz	white flour, veg marg, salt, water, almond, egg, sugar, thread coconut, raspberry jam	1,49	2

Which NiceLabel product / license do I need to create and run Allergens solutions?

Download NiceLabel PowerForms Desktop for on-demand label printing (6.3 or higher version is required).

Download NiceLabel Automation for automated label printing.

NiceLabel Allergen Samples

Bellow you can find detailed instructions for how to use NiceLabel Allergens solutions if:

1. List of Allergens is saved in MS Excel database.
2. List of Allergens is saved in MS Access database.
3. Allergens are already marked with special character, e.g. …, *eggs*. There is no special table for allergens only a special character is added before and after the ingredient which is an allergen.

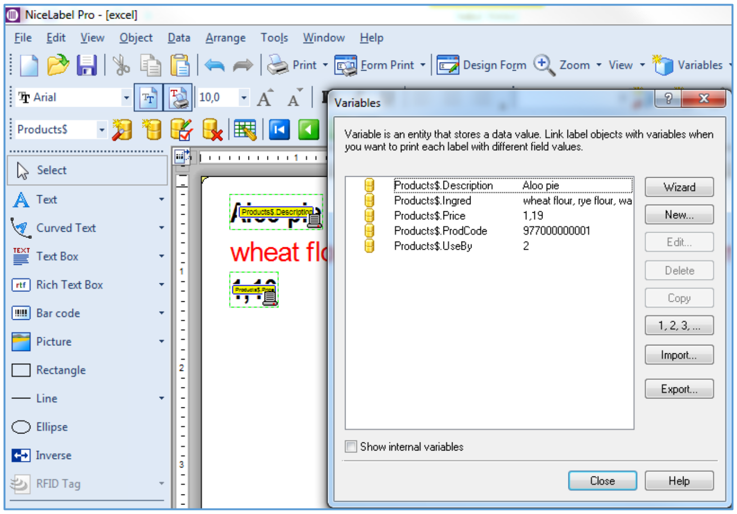
Allergens in MS Excel data sheet - Step by step guide

In our sample we have Microsoft Excel as a data source. DB.xlsx contains two sheets:

- Sheet1 “**Products**”: info about products – it also contains field “**Ingred**” with list of ingredients for each product. Note, you can use **any database** type for **products data.**
- Sheet2 “**Allergens**”: list of allergens should be kept in one simple **Excel** datasheet.

Solution setup - step 1

1. Run NiceLabel Pro and open a new label.
2. To be able to print records from the database where you keep products info, connect the table containing products details to the label. In this sample products details are saved in Excel datasheet Products.
3. Connect DB.xlsx / Sheet1 “Products” to the label. (Data/Database Access)
4. The result is a bunch of database variables.



Variable is an entity that stores a data value. Link label objects with variables when you want to print each label with different field values.

Products$.Description	Aloo pie
Products$.Ingred	wheat flour, rye flour, wa
Products$.Price	1,19
Products$.ProdCode	977000000001
Products$.UseBy	2

☐ Show internal variables

Solution setup - step 2

<u>Applying formatting to the allergens</u>

To format allergens in the list of ingredients, you have to execute the formatting function and provide the input parameters. The formatting functions are executed as VBScript function and will provide the result in the output variable, which can be used directly in the Rich Text Box object. The function that you would use must match the data location, where you keep the list of allergens, such as Microsoft Excel spreadsheet.

1. Select **Rich Text Box object** and place it on the label. Keep it empty and close it with OK button.
2. To format the allergens from the list in Excel, do the following:
3. In NiceLabel Pro, select **Data>Functions**.
4. Click **New**.
5. Select **Visual Basic Script** and type in the function **Name**.
6. Go to **Detailed** tab.
7. Click **Build Script**.
8. Change the line `Result = "0"` into `Result =` and position the cursor after the equal sign.
9. In the **Category** section, expand **Custom Functions** and select **Food allergens**.
10. In the **Name** category, double click the function **FormatAllergensFromExcel**.
11. In the **Expression** category, define the function parameters, for example:

    ```
    Result = FormatAllergensFromExcel([Products$.Ingred],
    "c:\TMP\DB.xlsx", "Allergens", "1", "bold")
    ```

    This will read the list of ingredients provided in the MS Excel file DB.xlsx:
    sheet `Products`, field `Ingred`, read the list of allergens from DB.xlsx sheet `Allergens` (=Sheet1) from the first column `Allergen` (=Column no. 1) and apply bold formatting to all allergens within.

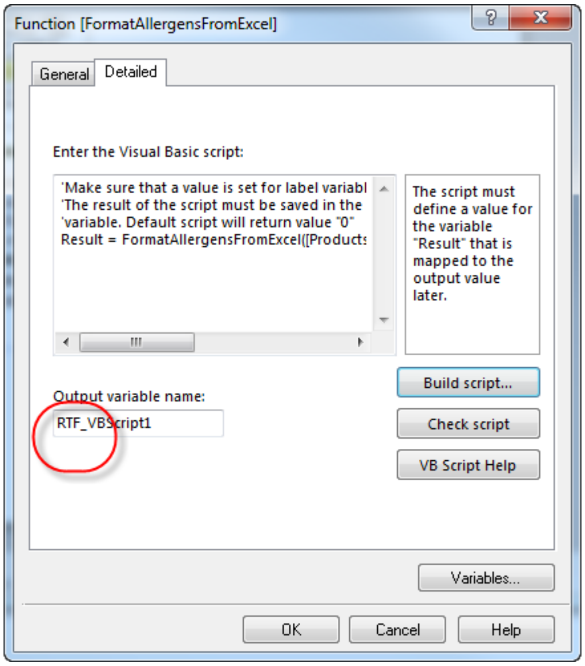
    NOTE: Database location stated in VBScript function is **fixed.** Please consider this when you prepare the solution. If you will copy the solution to some other location an error message will appear.
    In the sample you can see how to solve variable database path.

    NOTE: Please read details about formatting at the end of this paragraph.

12. Click **OK**.
13. In **Output variable name**, define the variable name, where the formatted allergens will be saved.

    NOTE: Make sure the variable begins with the prefix "RTF_", such as ***RTF_VBScript1***. This will instruct Rich Text Object to honor formatting specified with the variable.

14. Click **OK**.
15. Click **Close**.
16. Select already existing **Rich Text Box object** and open its properties. Use button **Edit** to open Rich Text Editor.
17. In **Rich Text Editor**, select your variable in the list and add it into the content. You can add additional variables or fixed text if necessary.



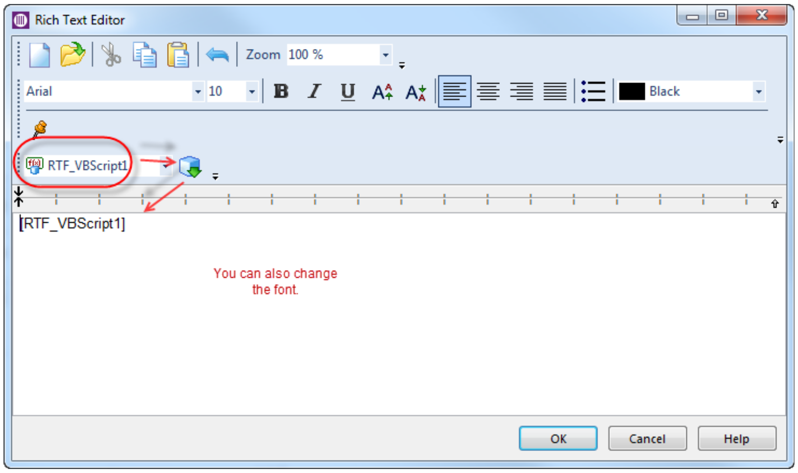
Enter the Visual Basic script:

```
'Make sure that a value is set for label variabl
'The result of the script must be saved in the
'variable. Default script will return value "0"
Result = FormatAllergensFromExcel([Products
```

The script must define a value for the variable "Result" that is mapped to the output value later.

Output variable name: RTF_VBScript1

18. You can use the controls available in the Rich Text Editor to format the font type, size and colors.
19. Click **OK**.
20. You can also enable “Best fit” for Rich Text Box object *(Properties, tab Detailed)*



[RTF_VBScript1]

You can also change the font.

Formatting allergens with the allergens from Microsoft Excel spreadsheet

This function will accept the list of ingredients and location of the Microsoft Excel spreadsheet. The function reads the allergens from the spreadsheet and creates the RTF code with highlighted allergens. All words from the spreadsheet that are matched in the `Ingredients` will be formatted by the `Highlight` specification.

Syntax:

```
FormatAllergensFromExcel(Ingredients,ExcelFile,Spreadsheet,Column,Highlight)
```

Parameter	**Description**
Ingredients	The CSV list of ingredients.
Excel file	The full path and filename to the Microsoft Excel file containing the allergens.
Spreadsheet	The name of the spreadsheet that contains the list of allergens.
Column	The column number that contains the list of allergens. Column A must be provided as "1", column B as "2", etc. Note: The first line in the column contains the field name and will be ignored. The import of allergens will begin in row 2.
Highlight	The CSV list of formatting switches you want to apply to the allergen. You can use bold, italic and/or underline. This is optional parameter. If omitted, **bold** format is used.

Examples:

- Ingredients manual input allergens in Allergens sheet, column 1:

```
FormatAllergensFromExcel("wheat flour, salt, veg fat, hazelnuts",
"c:\files\data.xlsx","Sheet1","1","bold,italic")
```

- Ingredients from prompted variable and allergens in Allergens sheet, column 1:

```
FormatAllergensFromExcel(Ingredients,"c:\files\data.xlsx","Sheet1","1","bold,italic")
```

- Ingredients from database field [Products$.Ingred] and allergens in Allergens sheet, column 1:

```
FormatAllergensFromExcel([Products$.Ingred],"c:\files\data.xlsx","Allergens","1","bold,italic")
```

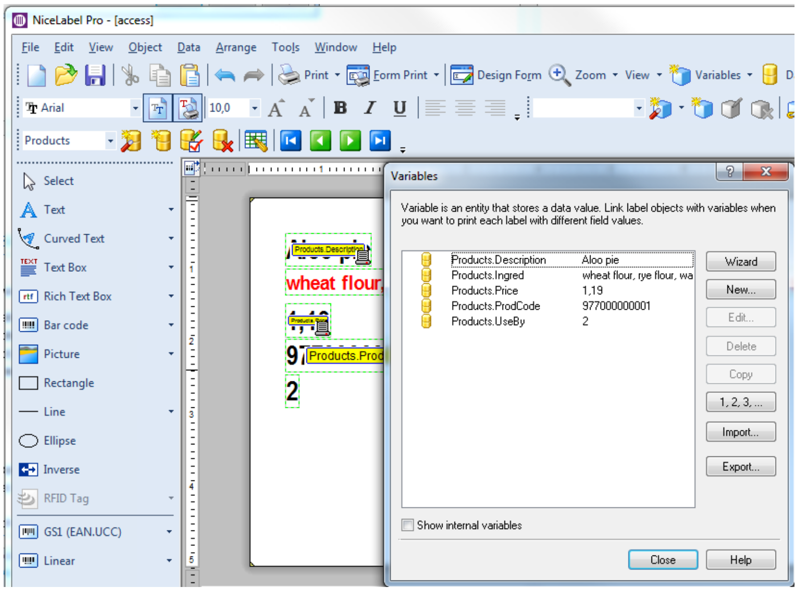
Allergens in MS Access table – Step by step guide

In our sample we have Microsoft Access as a data source. DB.mdb contains two tables:

- Table1 “**Products**”: info about products. It also contains field “**Ingred**” with list of ingredients for each product. Note, you can use **any database** type for **products data**.
- Table2 “**Allergens**”: list of allergens should be kept in **Access table**.

Solution setup - step 1

1. Run NiceLabel Pro and open a new label.
2. To be able to print records from the table where you keep products info, connect the table containing products details to the label. In this sample products data are saved in Access table ***Products***.
3. Connect DB.mdb / Table1 “Products” to the label (Data/Database Access).
4. The result will be a bunch of database variables.



Variable is an entity that stores a data value. Link label objects with variables when you want to print each label with different field values.

Products.Description	Aloo pie
Products.Ingred	wheat flour, rye flour, wa
Products.Price	1,19
Products.ProdCode	977000000001
Products.UseBy	2

☐ Show internal variables

Solution setup - step 2

To format allergens in the list of ingredients, you have to execute the formatting function and provide the input parameters. The formatting functions are executed as VBScript function and will provide the result in the output variable, which can be used directly in the Rich Text Box object. The function that you would use must match the data location, where you keep the list of allergens, such as Microsoft Access table.

1. Select **Rich Text Box object** and place it on the label. Keep it empty and close it.

2. To format the allergens from a table in Access, do the following:
3. In NiceLabel Pro, select **Data>Functions**.
4. Click **New**.
5. Select **Visual Basic Script** and type in the function **Name**.
6. Go to **Detailed** tab.
7. Click **Build Script**.
8. Change the line `Result = "0"` into `Result =` and position the cursor after the equal sign.
9. In the **Category** section, expand **Custom Functions** and select **Food allergens**.
10. In the **Name** category, double click the function **FormatAllergensFromAccess**.
11. In the **Expression** category, define the function parameters, for example:

    ```
    Result = FormatAllergensFromAccess([Products.Ingred],"c:\TMP\DB.
    mdb","Allergens",“Allergen", "bold")
    ```

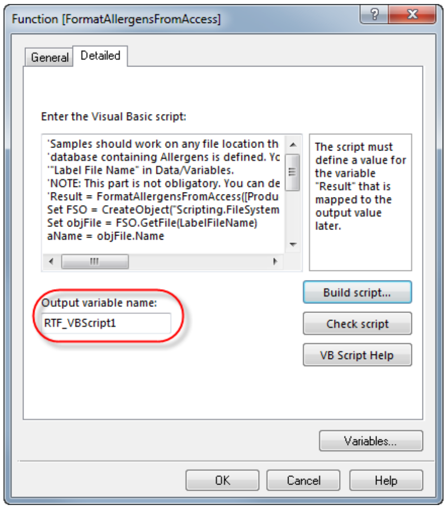
    This will read the list of ingredients provided in table Products, from the field Ingredients, read the list of allergens from the table Allergens, field Allergen and apply bold formatting to all allergens within.

    NOTE: Please read details about formatting at the end of this paragraph.

    Click **OK**.
12. In **Output variable name**, define the variable name, where the formatted allergens will be saved.

    NOTE: Make sure the variable begins with the prefix “RTF_”, such as **RTF_VBScript1**. This will instruct Rich Text Object to honor formatting specified with the variable.

    Click **OK** and **Close**.
13. Select already existing **Rich Text Box object** and open its properties. Use button **Edit** to open **Rich Text Editor**.



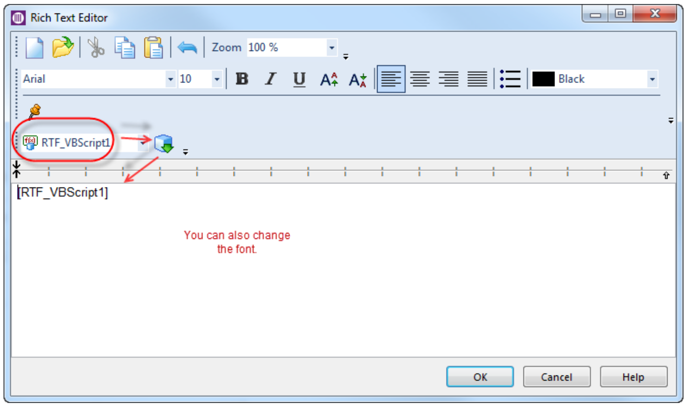
Enter the Visual Basic script:

```
'Samples should work on any file location th
'database containing Allergens is defined. Yc
'"Label File Name" in Data/Variables.
'NOTE: This part is not obligatory. You can de
'Result = FormatAllergensFromAccess([Produ
Set FSO = CreateObject("Scripting.FileSystem
Set objFile = FSO.GetFile(LabelFileName)
aName = objFile.Name
```

The script must define a value for the variable "Result" that is mapped to the output value later.

Output variable name: RTF_VBScript1

14. In **Rich Text Editor**, select your variable in the list and add it into the content. You can add additional variables or fixed text if necessary.
15. You can use the controls available in the Rich Text Editor to format the font type, size and colors.
16. Click **OK**.
17. You can also enable “Best fit” for Rich Text Box object *(Properties, tab Detailed)*



[RTF_VBScript1]

You can also change the font.

Formatting allergens with the allergen list from Microsoft Access database

This function will accept the list of ingredients and location of the Microsoft Access table. The function reads the allergens from the table and creates the RTF code with highlighted allergens. All words from the table that are matched in the `Ingredients` will be formatted by the `Highlight` specification.

Syntax:

```
FormatAllergensFromAccess(Ingredients,AccessDb,Table,Field,Highlight)
```

Parameter	**Description**
Ingredients	The CSV list of ingredients.
AccessDb	The full path and filename to the Microsoft Access file containing the allergens.
Table	The name of the table that contains the list of allergens.
Field	The name of the field that contains the allergens.
Highlight	The CSV list of formatting switches you want to apply to the allergen. You can use bold, italic and/or underline. This is optional parameter. If omitted, bold format is used.

Examples:

- Ingredients manual input and allergens in Allergens table, field Allergens:

```
FormatAllergensFromAccess("wheat flour,salt,veg fat,hazelnuts",
"c:\files\db.mdb","Allergens","Allergen","bold,italic")
```

- Ingredients from prompted variable and allergens in Allergens table, field Allergen:

```
FormatAllergensFromAccess(Ingredients,"c:\files\db.mdb","Allergens","Aller
gen","bold,italic")
```

- Ingredients from database field [Products.Ingred] and allergens in Allergens table, field Allergens:

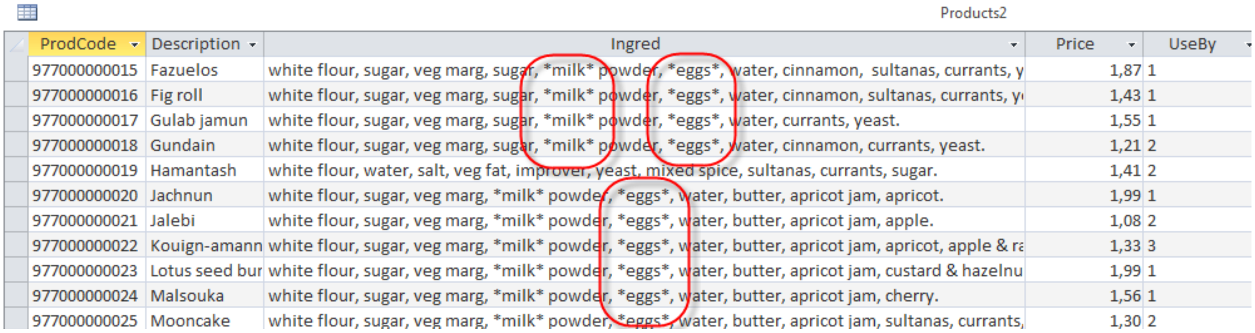
```
FormatAllergensFromAccess([Products.Ingred],"c:\files\db.mdb","Allergens",
"Allergen","bold,italic")
```

Allergens are marked with custom character e.g. …*milk*…

This function formats the allergens enclosed in the custom tags and highlights (bold, italic and/or underline) them. All input parameters are strings. The result is RTF-formatted data to be used with the RTF object.

Any database type can be used. In our sample we have Microsoft Access as a data source:

- DB.mdb contains one table only: “**Products**” contains field “**Ingred**” with list of ingredients for each product. In this field all allergens are enclosed in custom tags, in our case with asterisks.
- There is no special table with allergens. NiceLabel will format all marked ingredients with predefined highlights.

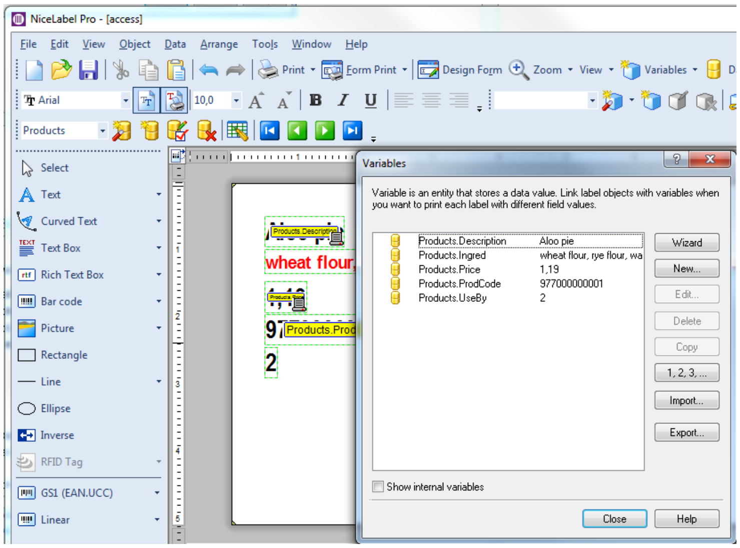


Products2

ProdCode	Description	Ingred	Price	UseBy
977000000015	Fazuelos	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, cinnamon, sultanas, currants, y	1,87	1
977000000016	Fig roll	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, cinnamon, sultanas, currants, y	1,43	1
977000000017	Gulab jamun	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, currants, yeast.	1,55	1
977000000018	Gundain	white flour, sugar, veg marg, sugar, *milk* powder, *eggs*, water, cinnamon, currants, yeast.	1,21	2
977000000019	Hamantash	white flour, water, salt, veg fat, improver, yeast, mixed spice, sultanas, currants, sugar.	1,41	2
977000000020	Jachnun	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, apricot.	1,99	1
977000000021	Jalebi	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, apple.	1,08	2
977000000022	Kouign-amann	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, apricot, apple & ra	1,33	3
977000000023	Lotus seed bur	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, custard & hazelnu	1,99	1
977000000024	Malsouka	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, cherry.	1,56	1
977000000025	Mooncake	white flour, sugar, veg marg, *milk* powder, *eggs*, water, butter, apricot jam, sultanas, currants,	1,30	2

Solution setup - step 1

1. Run NiceLabel Pro and open a new label.
2. To be able to print records from the database, connect database table containing products details to the label.
3. Connect DB.mdb / Table1 “Products” to the label. Use Database Wizard. (Data/Database Access/Wizard).
4. The result will be a bunch of database variables.



Variable is an entity that stores a data value. Link label objects with variables when you want to print each label with different field values.

Products.Description	Aloo pie
Products.Ingred	wheat flour, rye flour, wa
Products.Price	1,19
Products.ProdCode	977000000001
Products.UseBy	2

☐ Show internal variables

Solution setup - step 2

To format allergens in the list of ingredients, you have to execute the formatting function and provide the input parameters. The formatting functions are executed as VBScript function and will provide the result in the output variable, which can be used directly in the Rich Text Box object. The function that you would use must match the data location, where you keep the list of ingredients, such as Microsoft Access table.

1. Select **Rich Text Box object** and place it on the label. Keep it empty and close it.
2. To format the allergens from a table in Access, do the following:
3. In NiceLabel Pro, select **Data>Functions**.
4. Click **New**.
5. Select **Visual Basic Script** and type in the function **Name**.
6. Go to **Detailed** tab.
7. Click **Build Script**.
8. Change the line `Result = "0"` into `Result =` and position the cursor after the equal sign.
9. In the **Category** section, expand **Custom Functions** and select **Food allergens**.
10. In the **Name** category, double click the function **FormatAllergensFromTags**.
11. In the **Expression** category, define the function parameters, for example:

    ```
    Result = FormatAllergensFromTags([Products.Ingred],"*","bold")
    ```

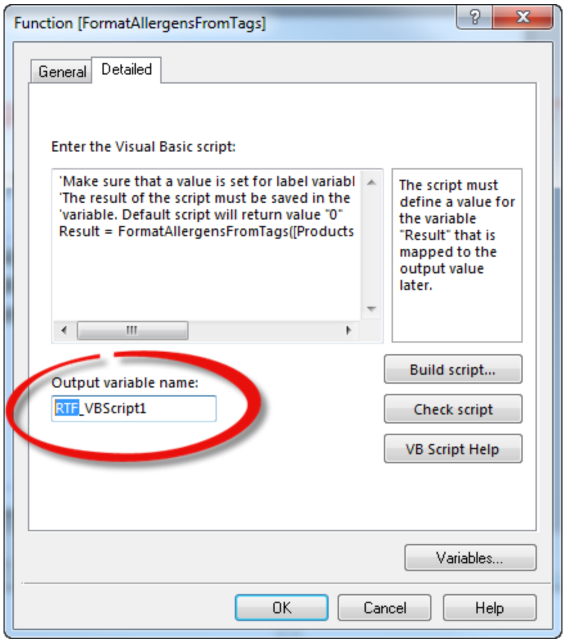
    This will read the list of ingredients provided in the database field Ingredients,and apply bold formatting to all allergens marked with tag.

    NOTE: Please read details about formatting at the end of this paragraph.

12. Click **OK**.
13. In **Output variable name**, define the variable name, where the formatted allergens will be saved.

    NOTE: Make sure the variable begins with the prefix RTF_, such as **RTF_VBScript1**. This will instruct Rich Text Object to honor formatting specified with the variable.

14. Click **OK**.
15. Click **Close**.
16. Select already existing **Rich Text Box object** and open its properties. Use button **Edit** to open **Rich Text Editor**.



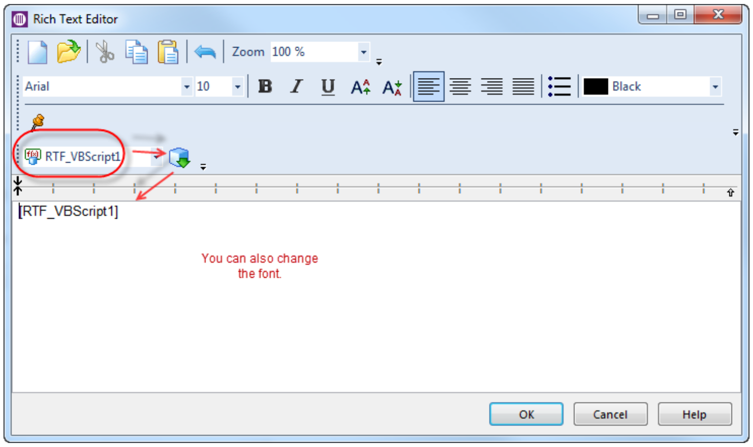
Enter the Visual Basic script:

```
'Make sure that a value is set for label variabl
'The result of the script must be saved in the
'variable. Default script will return value "0"
Result = FormatAllergensFromTags([Products
```

The script must define a value for the variable "Result" that is mapped to the output value later.

Output variable name: RTF_VBScript1

17. In **Rich Text Editor**, select your variable in the list and add it into the content. You can add additional variables or fixed text if necessary.
18. You can use the controls available in the Rich Text Editor to format the font type, size and colors.
19. Click **OK**.



[RTF_VBScript1]

You can also change the font.

Formatting allergens embedded within the custom tags

This function will accept the list of ingredients where the allergens are marked with tag. The tag is a custom character placed in front of and after the allergen. The value between the two tags is highlighted as specified by Highlight.

Syntax:

```
FormatAllergensFromTags(Ingredients,Tag,Highlight)
```

Parameter	**Description**
Ingredients	The list of ingredients where the allergens have been enclosed by tag characters.
Tag	The character that is used in front of and after the allergen. Make sure to select the character that is not used anywhere else in this string.
Highlight	The CSV list of formatting switches you want to apply to the allergen. You can use bold, italic and/or underline. This is optional parameter. If omitted, bold format is used.

Examples:

- Ingredients manual input:

```
FormatAllergensFromTabs("*wheat* flour, salt, veg fat,*hazelnuts*",sugar”,
”*”,"bold,italic")
```

- Ingredients from prompted variable:

```
FormatAllergensFromAccess(Ingredients,"*","bold,italic")
```

- Ingredients from database field [Products.Ingred]:

```
FormatAllergensFromAccess([Products.Ingred],"*","bold,italic,underline")
```