

Instruction manual



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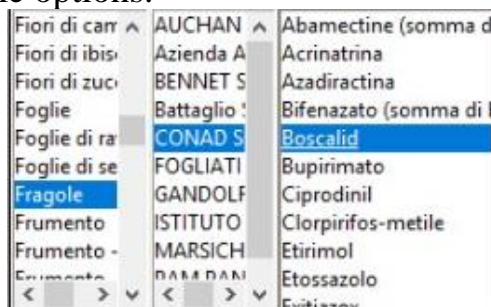
1. Upload excel files.



2. Click on the title of the graph that you want to obtain.

1. Pie chart on total number of samples per product for one client	5. Average concentration of one compound found in one product by clients in a certain time span
2. Pie chart of samples by one client categorised into groups based on their concentration relative to their threshold for one year	6. Pie chart of total number of samples per product for all SATA clients
3. Average concentrations of all compounds found in one product from one client in a certain time span	7. Distribution of a certain compound throughout the years for one client and one product
4. Bar chart on average amount of researched compounds for all clients in one year	8. Pie chart on occurrence of clients exceeding the limit per year

3. Select the possible options.



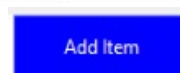
4. Click "GO!"



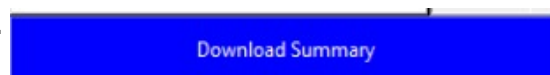
5. Watch the graph, and, if possible, click the buttons for more graph options.



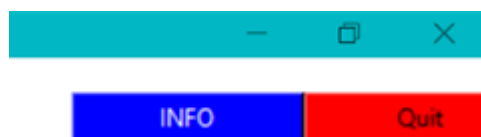
6. If you want the graph in your report, click "Add Item".



7. Once you are finished, click "Download Summary" to download the report in pdf.



8. Use the "Quit" button to exit SATAnalytics. Do **NOT** use the X.



The Layout

SATAnalytics

File Loading Buttons

Excel 1 - Prova Excel 2 - Campione

1. Pie chart on total number of samples per product for one client
2. Pie chart of samples by one client categorised into groups based on their concentration relative to their threshold for one year
3. Average concentrations of all compounds found in one product from one client in a certain time span
4. Bar chart on average amount of researched compounds for all clients in one year
5. Average concentration of one compound found in one product by clients in a certain time span
6. Pie chart of total number of samples per product for all SATIA clients
7. Distribution of a certain compound throughout the years for one client and one product
8. Pie chart on occurrence of clients exceeding the limit per year

Download Summary

Changes graph font size

Welcome to SATAnalytics

Font size

Quit button that closes window and all subproc

Link to Instruction Manual

Toggles the graph mode from showing client names to showing numbers

Creates another graph that elaborates on current graph if possible

List of functions
Creates PDF of all results, last button to press

Starts function

Browse your results

Toggles the graph mode from full names to shortened names

GO! Previous Screen Next Screen Full Names Show Details Show Client Add Item

SATalytics Basics

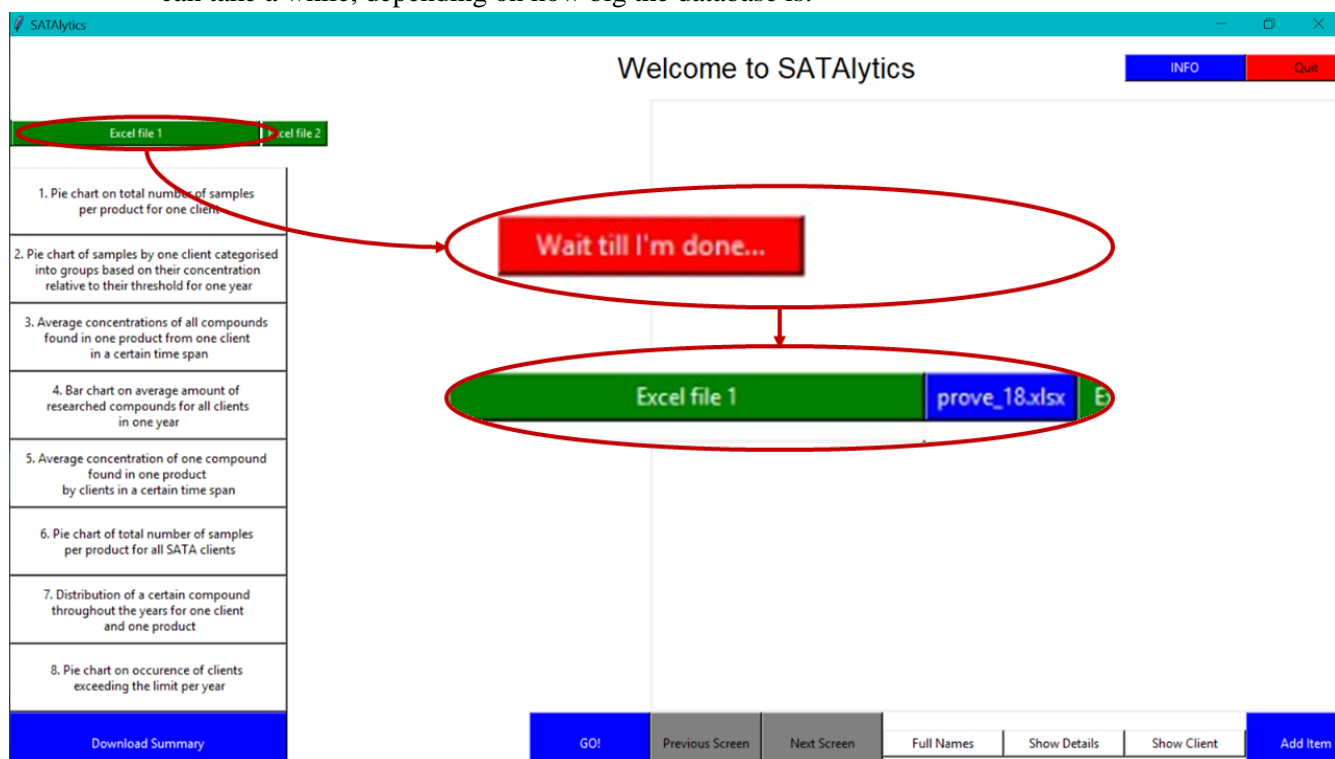
Before we start

There are two excel files that need to be uploaded in order for SATalytics to work:

- **prove_year(s).xlsx** → This file has to be uploaded clicking the **Excel 1** button in SATalytics interface. Check that the following columns are present in this file:
 - ANNO
 - N_campione
 - Cliente
 - Data_Arrivo
 - Gruppo_prodotto
 - dettaglio_prodotto
 - Prova
 - Risultato
 - Limite
 - N_Molecole
 - Ris_Lim_perc
 - Classi_Ris_Lim_perc

Be sure that they are written exactly as presented in this instruction manual, **taking the capitalized letters and underscores in mind.**

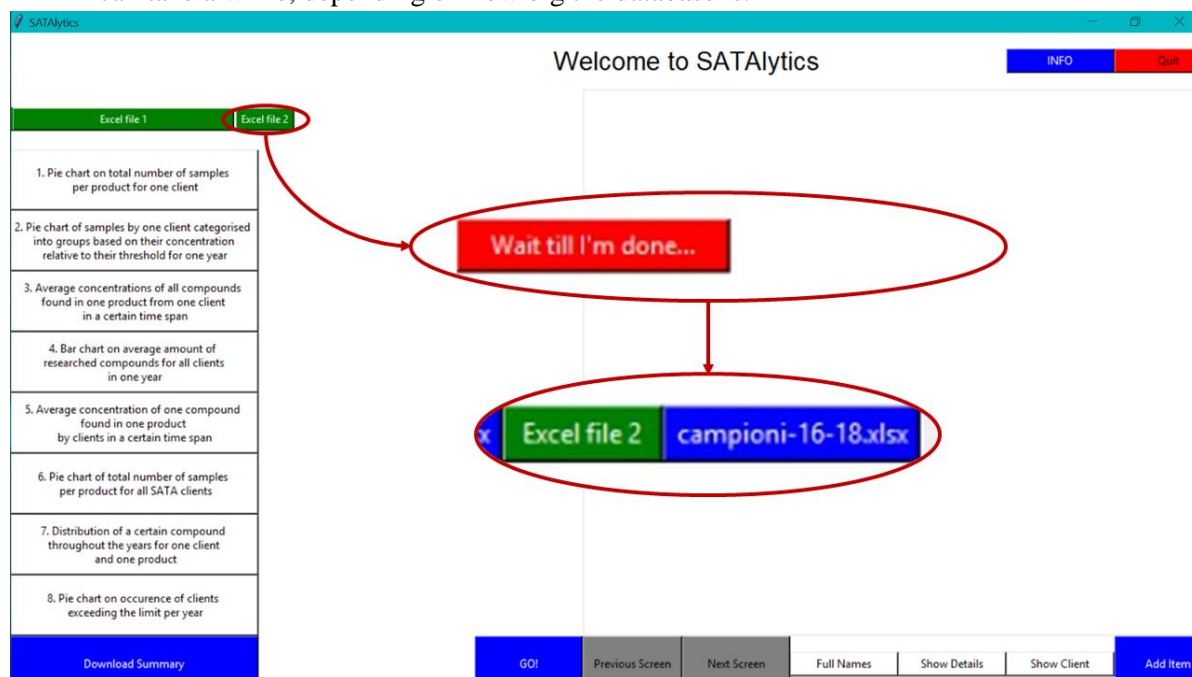
Once the file are uploaded, you will see the file appear in a **blue box** next to the button. This can take a while, depending on how big the database is.



- **campioni-year(s).xlsx** → This file has to be uploaded clicking the **Excel 2** button in SATalytics interface. Check that the following columns are present in this file:
 - ANNO
 - N_campione
 - Cliente
 - Data_Arrivo
 - Gruppo_prodotto
 - N_Molecole
 - Analisi_richiesta_EX_NOTE_LAB

Be sure that they are written exactly as presented in this instruction manual, **taking the capitalized letters and underscores in mind.**

Once the file are uploaded, you will see the file appear in a **blue box** next to the button. This can take a while, depending on how big the database is.



Changing the font size

If the user wants to modify the font size of a certain graph, it is possible to do so using the entry box situated on the left of the “Info” and the “Quit” buttons. Insert a number in the entry box and follow the steps to produce the graph again.



Be sure that you introduce a **round number (without decimals)**. If you add anything else, it will not work.

Missing values

There are several results that are **not** analyzed by SATAltycs and, therefore, they will not be included in the analysis:

- Trials from: Grado Rifrattometrico, Acidità, Acidità (espr. in ac.citrico), Calibro medio, Durezza, Durezza totale.
- Products labeled as NON NORMATO.
- Results that contain: “<”, “-”, or “Assenza”.

Scrolling lists

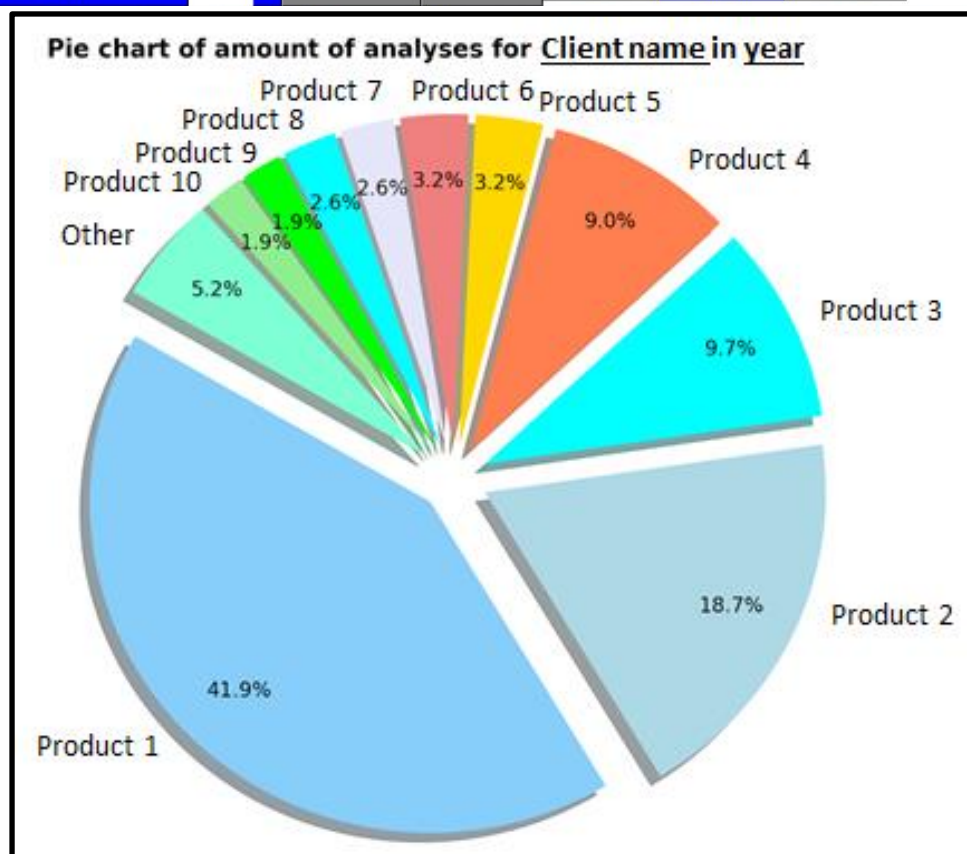
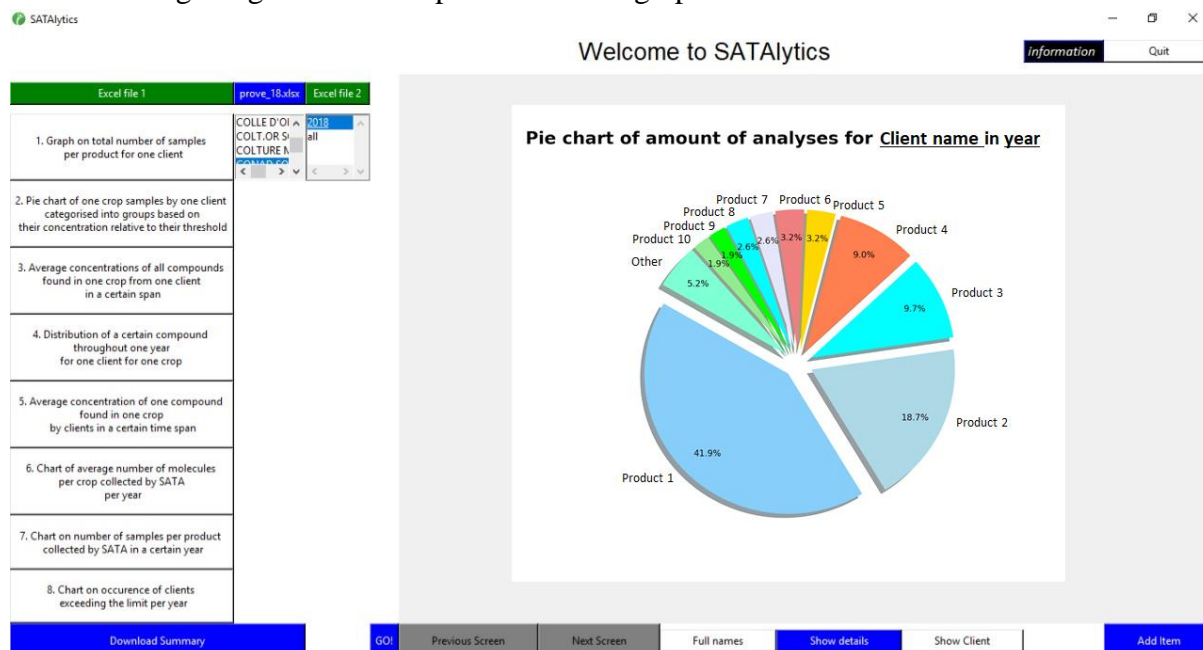
Whenever you want to sort the graph by client, crop, product or date; a scroll list with all the possible choices will appear.

This list is NOT ordered by alphabetical order. Depending on how it is sorted in the database, that is how is going to be presented in the scroll list.

SATAltycs Functions

1. Graph on total number of samples per product for one client

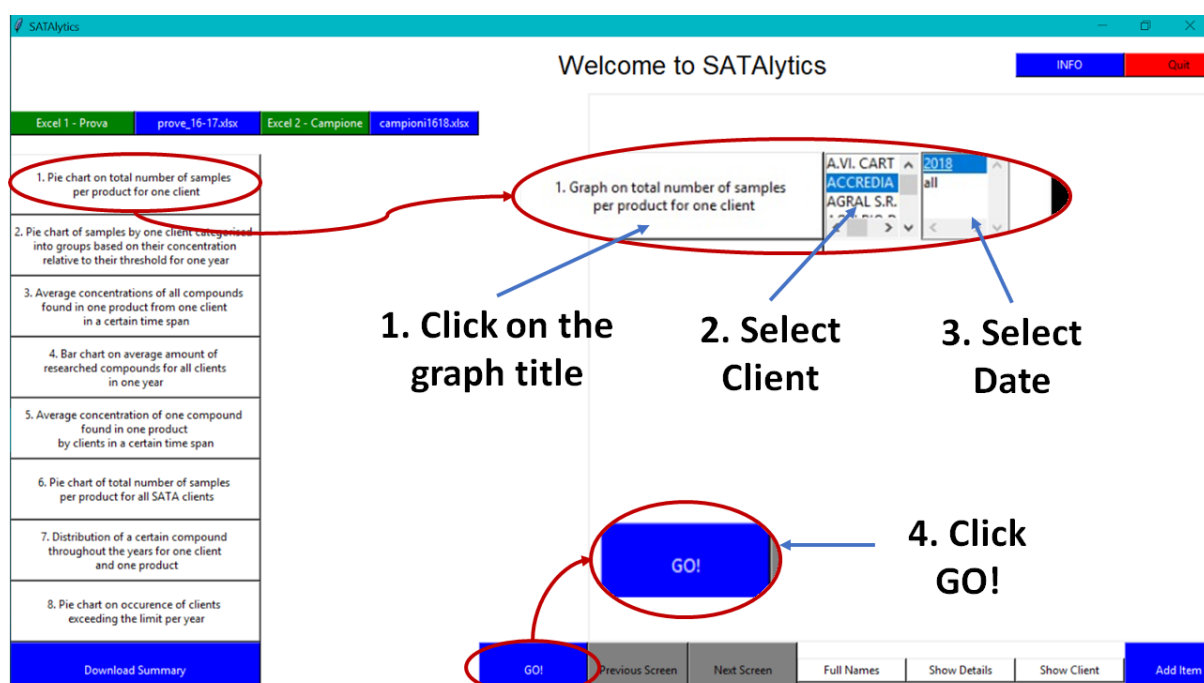
This function will produce a pie chart of the amount of analyses of crops/products in a certain client. It is also possible to obtain the amount of analyses of crops/products in a certain year. The following images is an example of how this graph would look.



It shows the ten largest products/crops for the client (labeled in the picture as “Product 1-10”), and the rest are stored in the category “Other”.

How do you obtain this graph?

1. Upload the **prove_year(s).xlsx** file. For this graph, the **campioni-year(s).xlsx** is NOT required.
2. Select the **client name**.
3. If desired, select the **date**. If you do not want to get a certain year, select “all” in the date box.
4. Click the GO! Button.



If you want to obtain the details of the crops/products (dettaglio_prodotto), you can get the amount of analyses of the detailed products in a certain client, with the possibility of selecting also the year, by clicking the button “Show details”. This will produce a pie chart as the previous one, but instead of the products, it will show the detailed products.

Steps to obtain the detailed graph:

1. It is **necessary** to have the previous graph. You cannot obtain the detailed product graph, without the product pie chart.
2. Check that the “Show details” button is blue.
3. Click “Show details”.



Things that can go wrong...

- After I select client and/or date and clicking “GO!” I see that there were no results.

Remember that several values are missing and SATAltytics does NOT analyze them. Check the missing values in Page 4, if you only tested for these values, the graph will be empty.

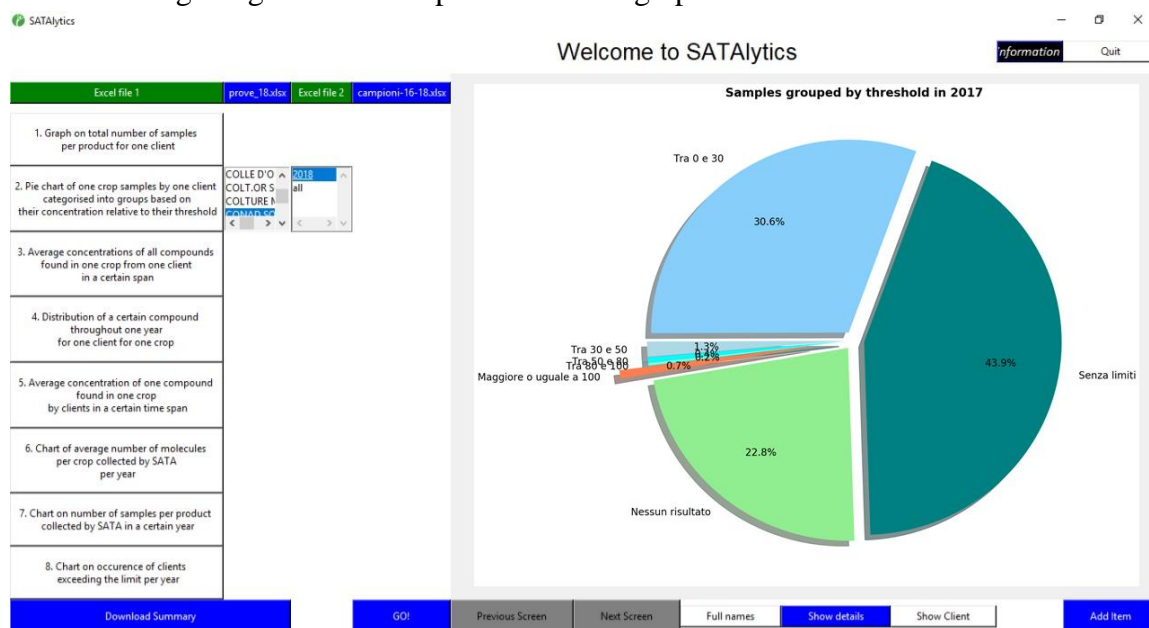
- **When I click on “Show details” it produces a graph that is very different from the products I used.** Sometimes, the dettaglio_prodotto column is not complete. Check if the detailed products are written in the dettaglio_prodotto column, the more complete is the column, the more precise this graph will be.
- **I press “Show Client” or “Full names”, but nothing happens.** This buttons are not in blue, which means that this chart does not have that functionality.

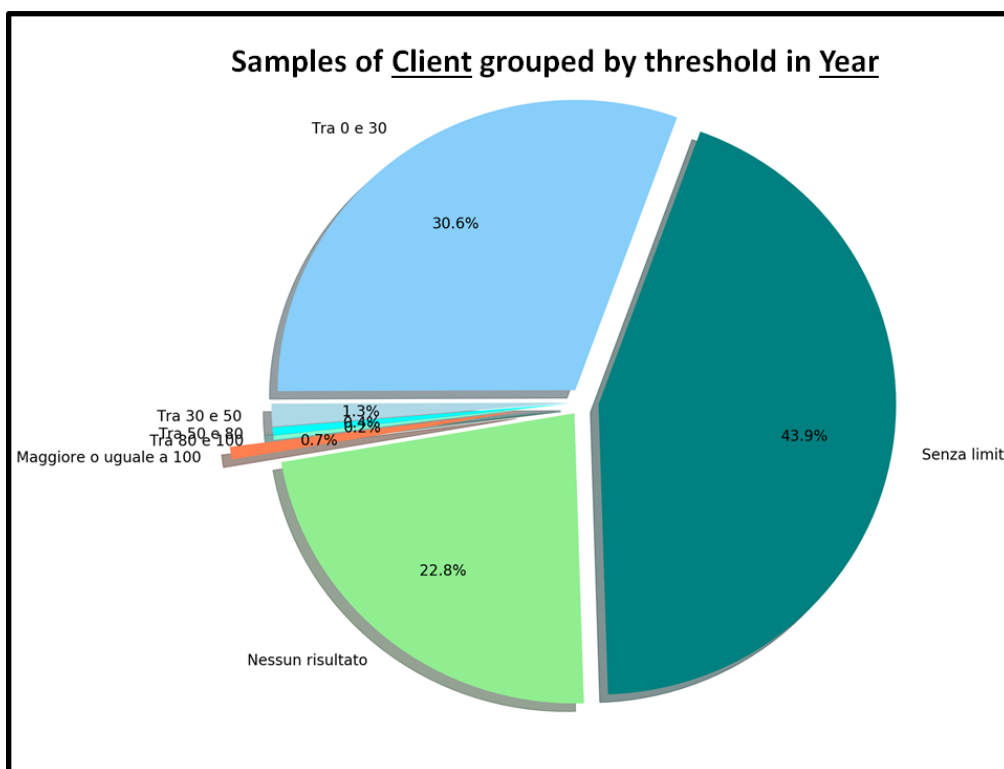
2. Pie chart of all samples by one client categorised into groups based on their concentration relative to their threshold

This function divides the samples in different categories. Sorting by client and year is optional:

- Samples without threshold: shown in dark green.
- Samples without a detectable result: shown in light green.
- Samples below the threshold: shown in different tones of blue. In this group is subdivided in four types:
 - Between 0% and 30% of the threshold.
 - Between 30% and 50% of the threshold.
 - Between 50% and 80% of the threshold.
 - Between 80% and 100% of the threshold.
- Samples above the threshold: shown in red.

The following images is an example of how this graph would look.





How do you obtain this graph?

1. Upload the excel files: **prove_year(s).xlsx** and **campioni-year(s).xlsx**. Both of them are required for this graph.
2. If desired, select the **client name**. If you do not want to get a certain client, select “all” in the client scroll box.
3. If desired, select the **date**. If you do not want to get a certain year, select “all” in the date box.
4. Click the GO! Button.

Welcome to SATALytics

Excel 1 - Prova prove_16-17.xlsx Excel 2 - Campione campioni1618.xlsx

1. Click on the graph title

2. Select Client

3. Select Date

4. Click GO!

GO!

Previous Screen Next Screen Full Names Show Details Show Client Add Item

Download Summary

1. Pie chart on total number of samples per product for one client

2. Pie chart of samples by one client categorised into groups based on their concentration relative to their threshold for one year

3. Average concentration of all compounds found in one product from one client in a certain time span

4. Bar chart on average amount of researched compounds for all clients in one year

5. Average concentration of one compound found in one product by clients in a certain time span

6. Pie chart of total number of samples per product for all SATA clients

7. Distribution of a certain compound throughout the years for one client and one product

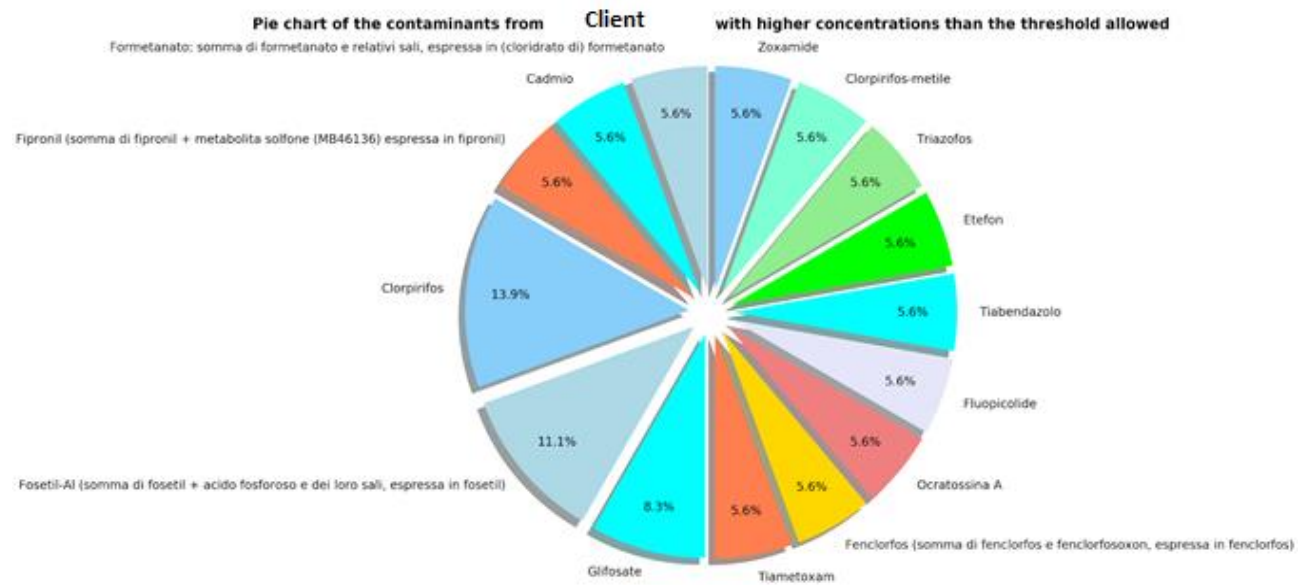
8. Pie chart on occurrence of clients exceeding the limit per year

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CULTURE M
SATA

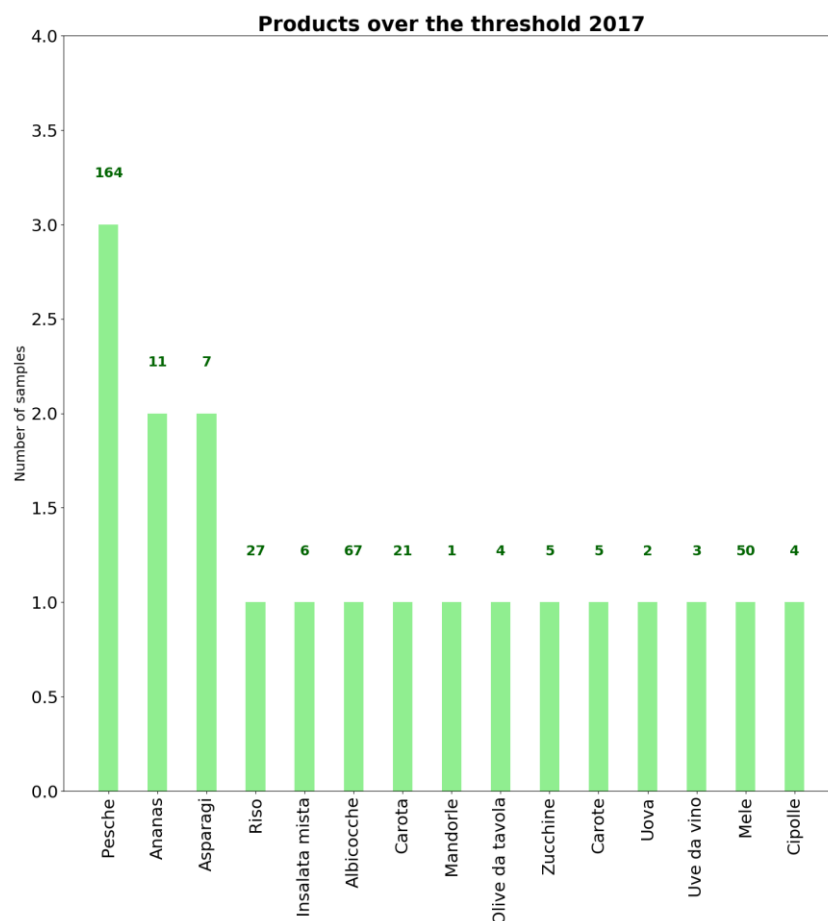
GO!

This graph gives the possibility to obtain information about the samples that are above the threshold by clicking the button “Show details”. This will produce two new graphs:

- First graph is a pie chart that shows which compounds have concentrations above the threshold over different products.



- Second graph is a bar chart that show the distribution of the samples above the threshold over different products. The total number of samples per product appears on top of each bar.



Steps to obtain the detailed graphs:

1. It is **necessary** to have the previous graph. You cannot obtain the details from the samples above the threshold, without the threshold pie chart.
2. Check that the “Show details” button is blue.
3. Click “Show details”.

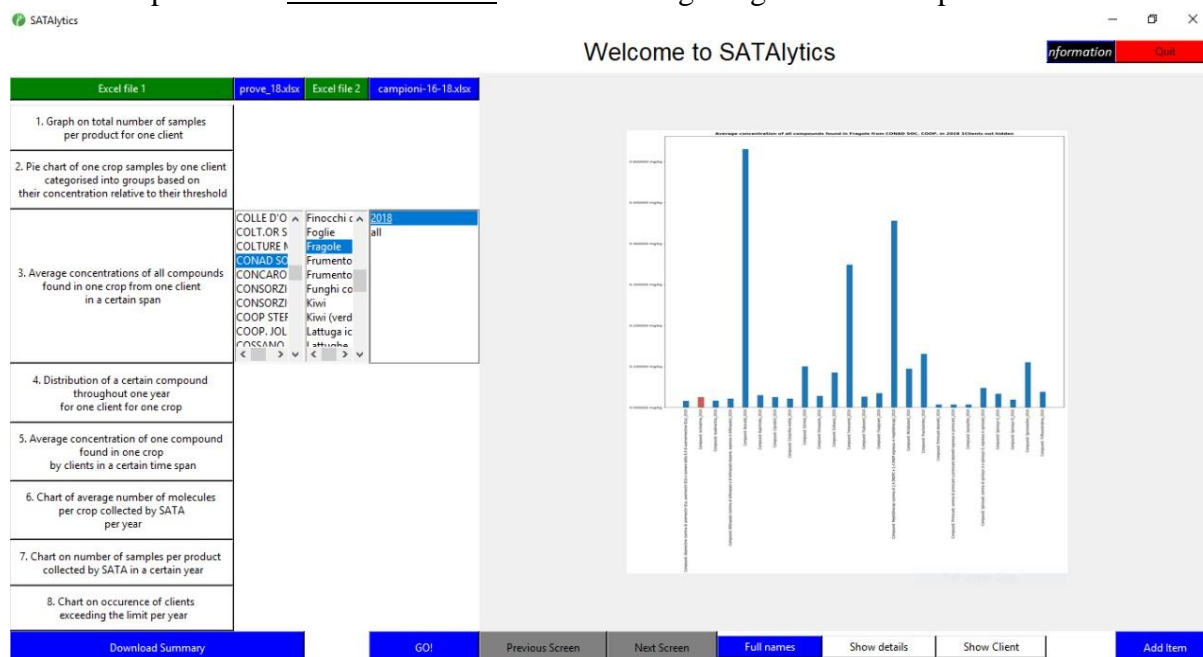


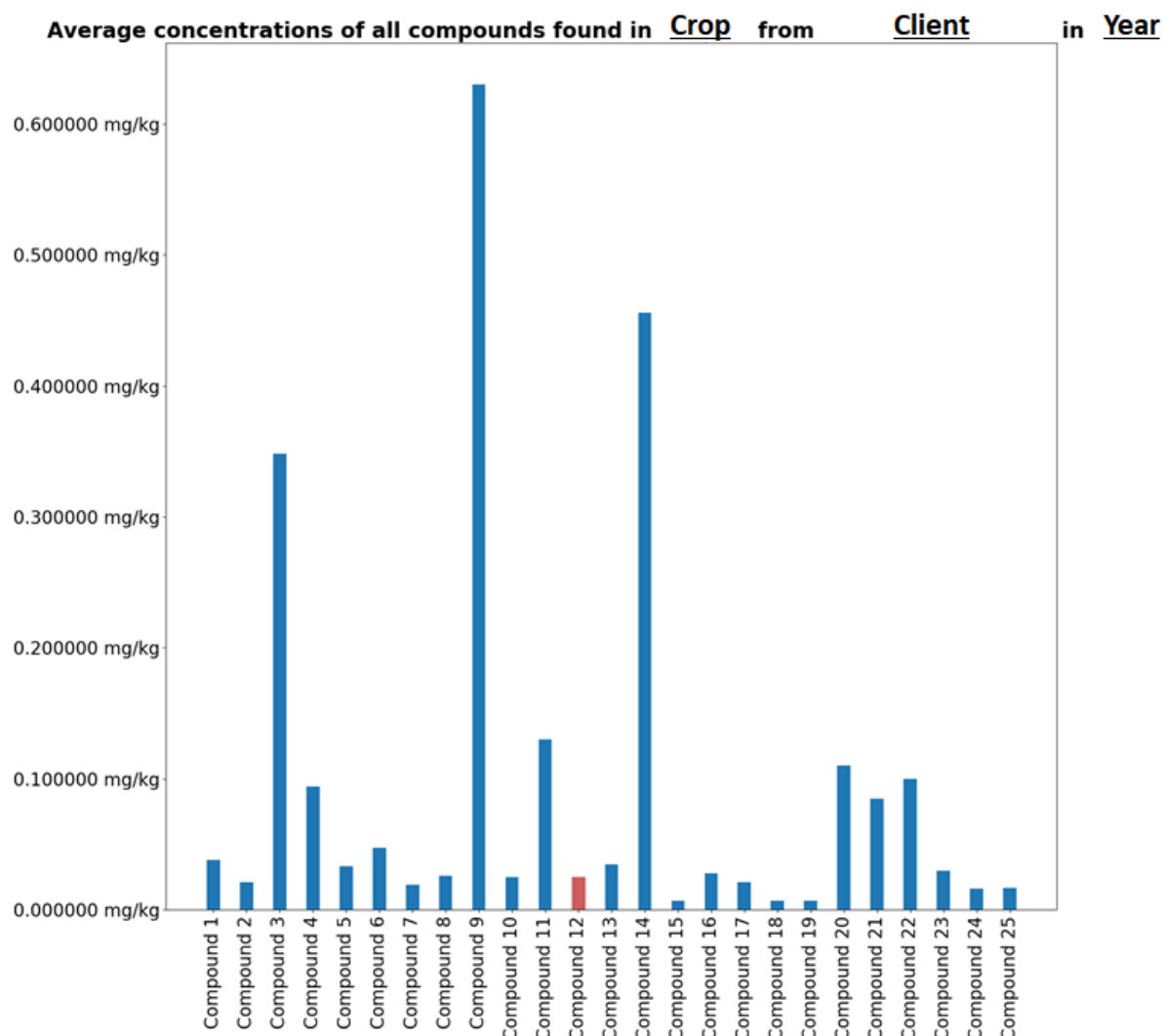
Things that can go wrong...

- After I select client and/or date and clicking “GO!” I see that there were no results.
Remember that several values are missing and SATAlytics does NOT analyze them. Check the missing values in Page 4, if you only tested for these values, the graph will be empty.
- When I click on “Show details” nothing happens.. If there are no samples over the threshold, then the detailed graphs will not appear. Check that the samples above the thresholds contain more than 0.0% in the pie chart.
- I press “Show Client” or “Full names”, but nothing happens. These buttons are not in blue, which means that this chart does not have that functionality.

3. Average concentration of all compounds found in one crop from one client in a certain time span

This function produces a graph that shows the average concentration of all compounds, whose samples had a detectable result. The following images is an example of how it looks.



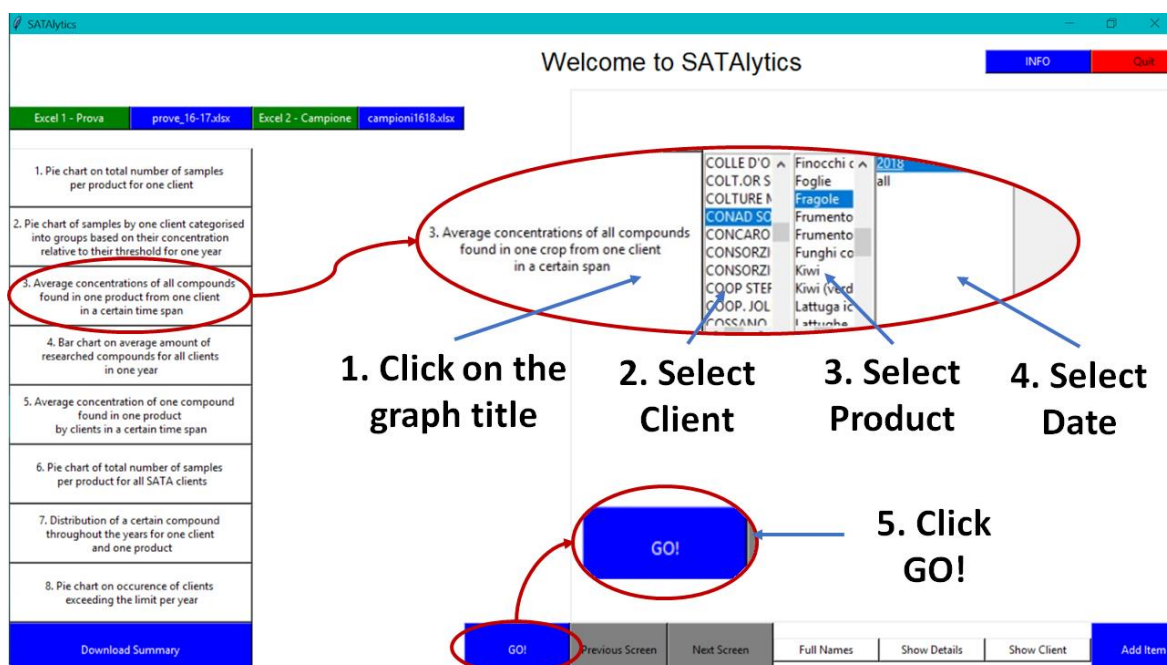


Bars are blue when the compound's concentration is below the threshold. However, when the concentrations exceed the threshold, the bar turns red. With this function, it is possible to obtain several graphs, this can be because of two reasons:

- There are too many compounds. To prevent that the names won't be readable, compounds will be divided in groups of 30.
- Analyzed compounds have very different concentration ranges. To prevent bars which are barely visible, graphs with different concentration ranges are made.

How do you obtain this graph?

1. Upload the **prove_year(s).xlsx** file. For this graph, the **campioni-year(s).xlsx** is NOT required.
2. Select the **client name**.
3. Select the **product/crop**.
4. If desired, select the **date**. If you do not want to get an certain year, select "all" in the date box.
5. Click the GO! Button.



Compound names are often too long, this function gives the possibility to shorten the names, so the graph can be more compact. This can be done clicking “Full names”. Steps to obtain the detailed graphs:

1. It is **not necessary** to have the full names graph. If you want the chart with the short names from the beginning, follow the next steps. .
2. Check that the “Full names” button is blue.
3. Click “Full names”. It will turn into a red button that states “Short names”.
4. Follow the steps from “How do you obtain this graph?”



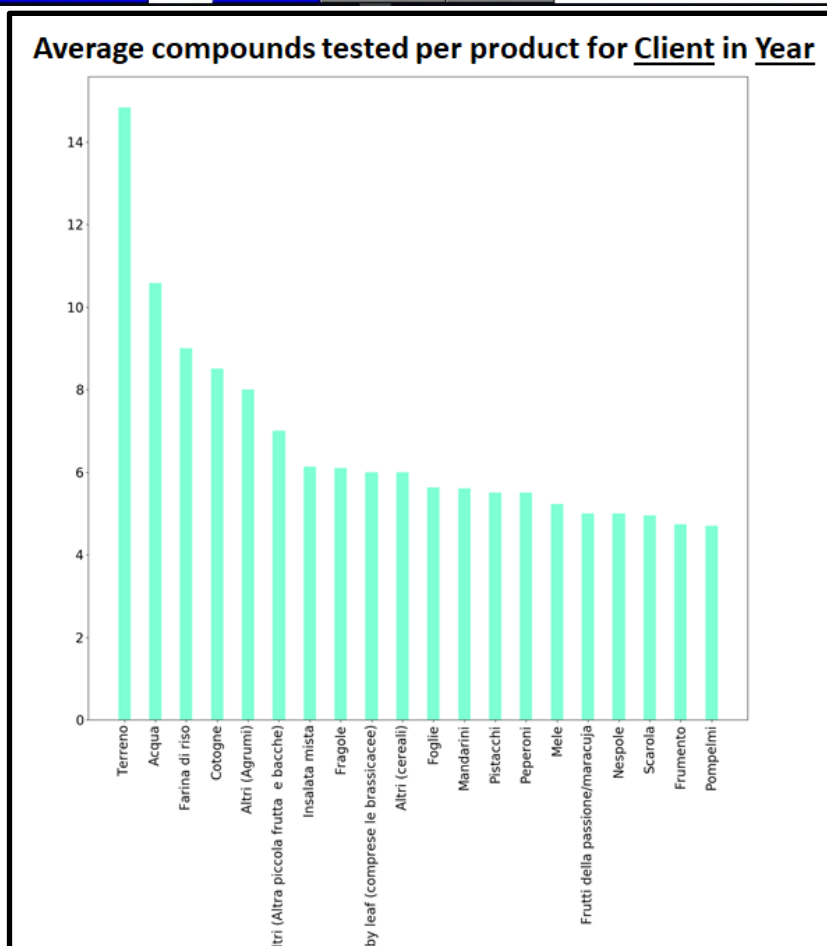
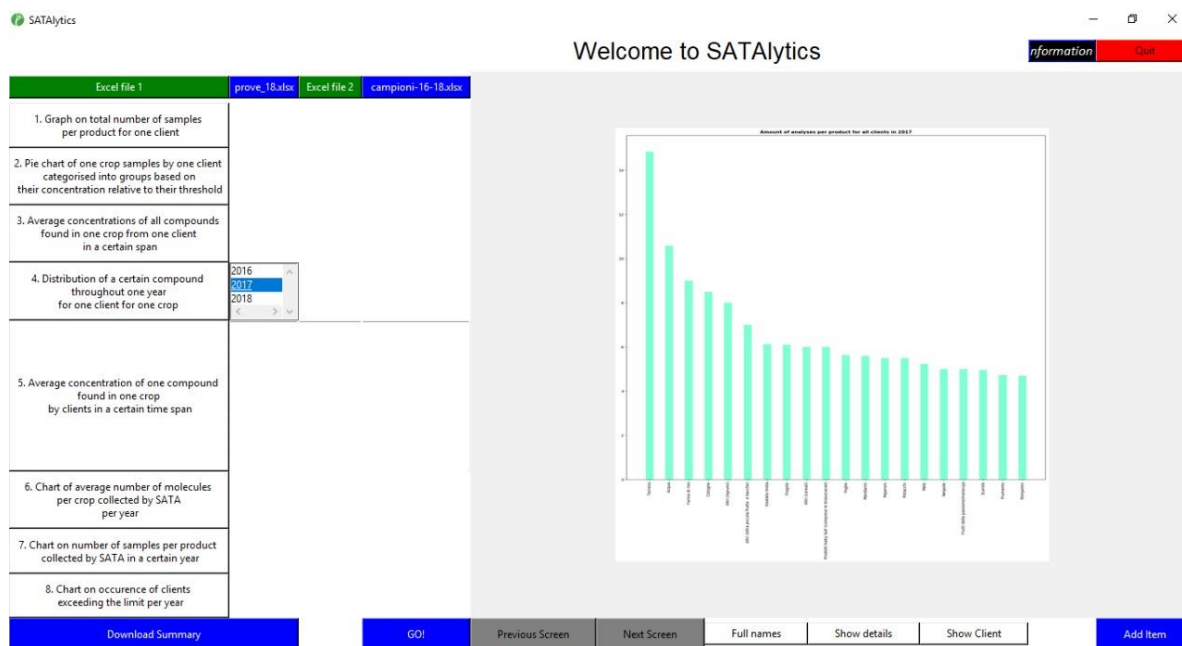
This will produce the same graph as before, but the names will have 15 characters maximum.

Things that can go wrong...

- **After I select client, crop and/or date and clicking “GO!” I see that there were no results.**
Remember that several values are missing and SATAlytics does NOT analyze them. Check the missing values in Page 4, if you only tested for these values, the graph will be empty.
- **I press “Show details” or “Show Client”, but nothing happens.** These buttons are not in blue, which means that this chart does not have that functionality.
- **One of the compounds has a red bar, but I know that usually the concentration of that compound is below the threshold.** Remember that this graph only gives the average of the detectable results. Concentrations that are not detectable are NOT used to obtain this graph.

4. Bar chart on average amount of researched compounds for all clients in one year

This function gathers the averages of the amount of the type of analysis performed per product and shows them in a bar chart. The following images are an example of what it should look like.



Only the twenty products that have the greatest amount of analyses will be illustrated in the graph. It is also possible to sort by client and by date, if the user wants to obtain a more specific chart.

How do you obtain this graph?

1. Upload the **campioni-year(s).xlsx** file. For this graph, the **prove_year(s).xlsx** is NOT required.
2. If desired, select the **date**. If you do not want to get an certain year, select “all” in the date box.
3. If desired, select the **client name**. If you do not want to get an certain client, select “all” in the client name box.
4. Click the **GO! Button**.

The screenshot shows the SATAltycs web application. On the left is a sidebar with eight graph options. Option 4, '4. Bar chart on average amount of researched compounds for all clients in one year', is highlighted with a red circle. A red arrow points from this option to the main graph area. In the main area, the title '4. Bar chart on average amount of researched compounds for all clients in one year' is circled in red, with a blue arrow pointing to it labeled '1. Click on the graph title'. To the right of the title is a date selector with options for 2016, 2017 (selected), and 2018, circled in red with a blue arrow labeled '2. Select Date'. Below the main area is a navigation bar with a 'GO!' button circled in red, a blue arrow pointing to it labeled '3. Click GO!', and other buttons like 'Previous Screen', 'Next Screen', 'Full Names', 'Show Details', 'Show Client', and 'Add Item'.

Things that can go wrong...

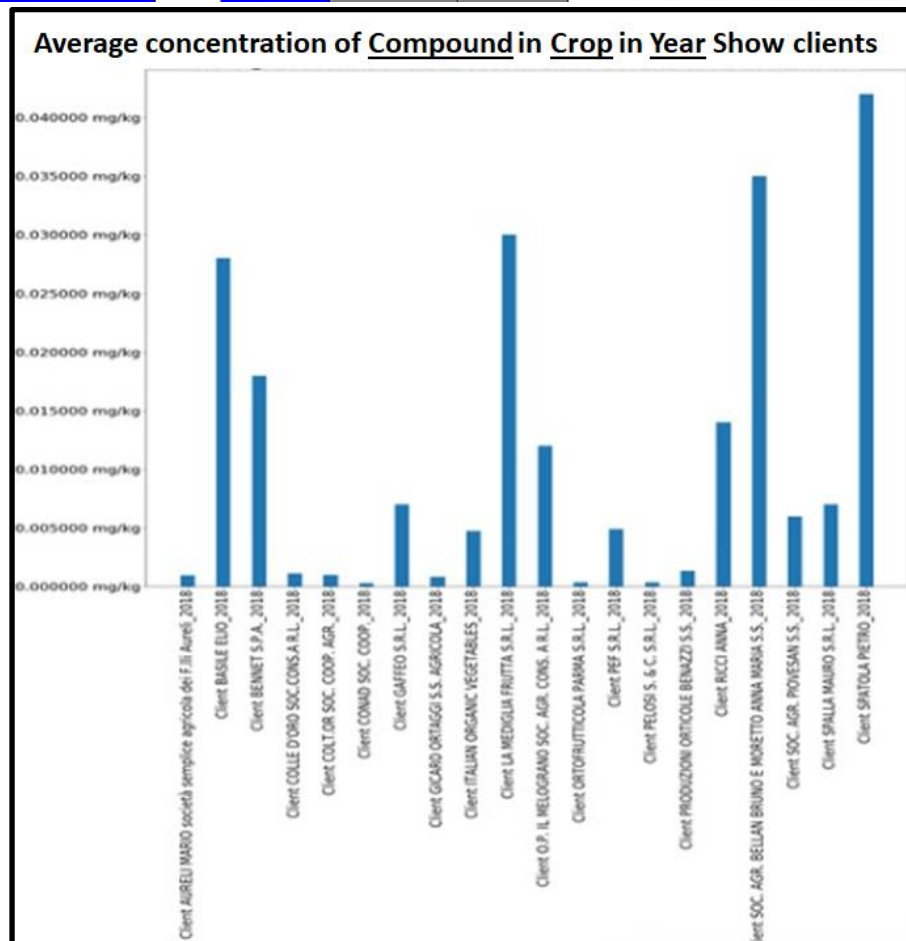
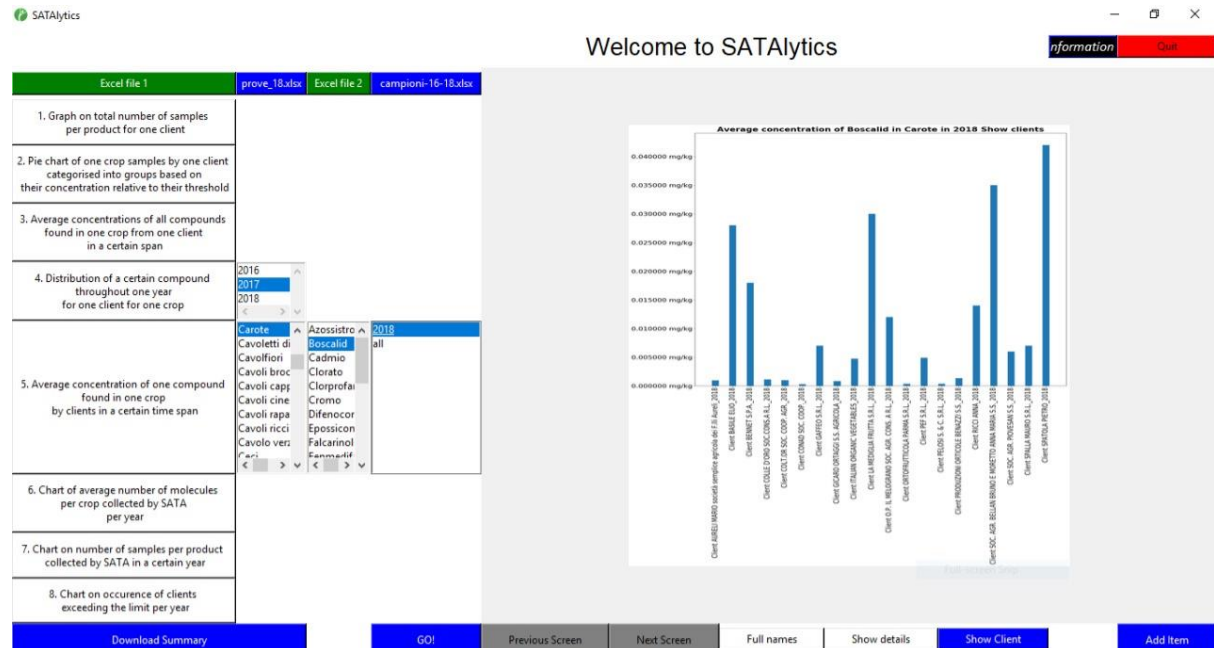
- After I select client and/or date and clicking “GO!” I see that the result is an empty graph.

This can be due to two reasons:

- If you sort by client, remember that several values are missing and SATAltycs does NOT analyze them. Check the missing values in Page 4, if the selected client only tested for these values, the graph will be empty.
- This function relies on the column “N_Molecole”, if this column is not complete, the graph might be misleading. The more complete the database is, the more efficient the function will be.
- I press “Show details”, “Show Client” or “Full names”, but nothing happens. This buttons are not in blue, which means that this chart does not have that functionality.

5. Average concentration of one compound found in one crop by clients in a certain time span

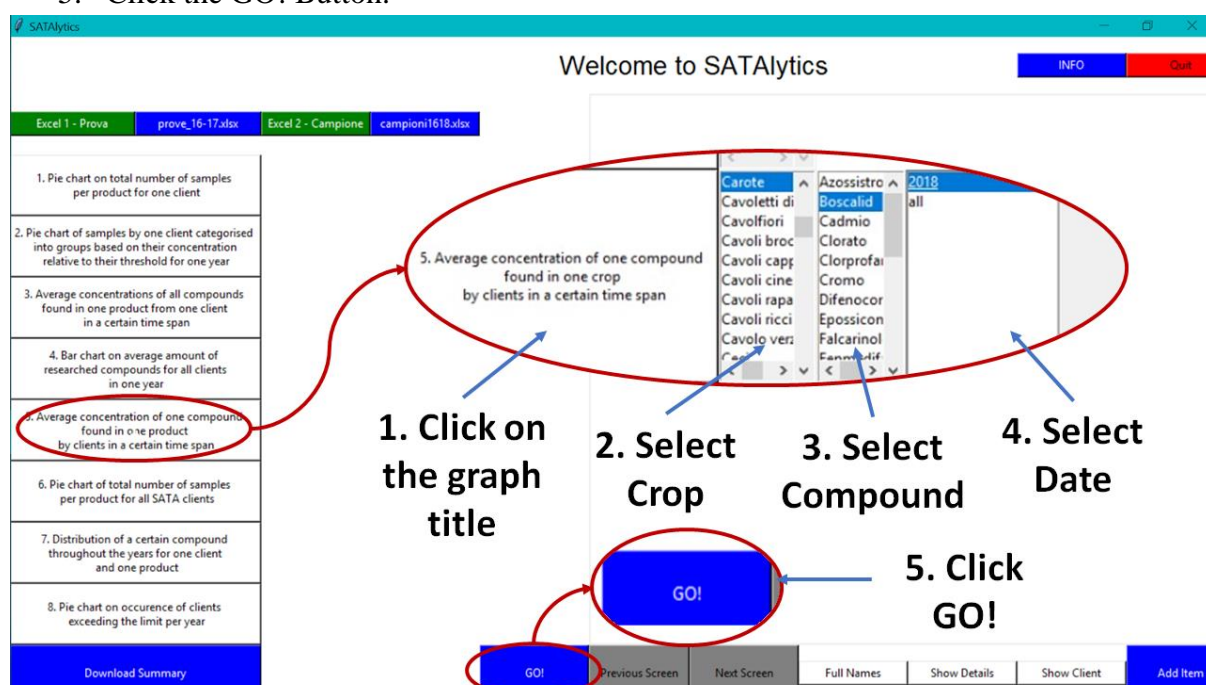
This function produces a bar chart containing the average concentration of one compound in one crop for all the clients that analyzed that compound in that crop. It is possible to sort only one year if desired. The following images are an example of what it should look like.



To perform the average concentration of the compound, this function takes into account all the results for that compound, including the non detectable results (these count as 0 mg/kg in the function).

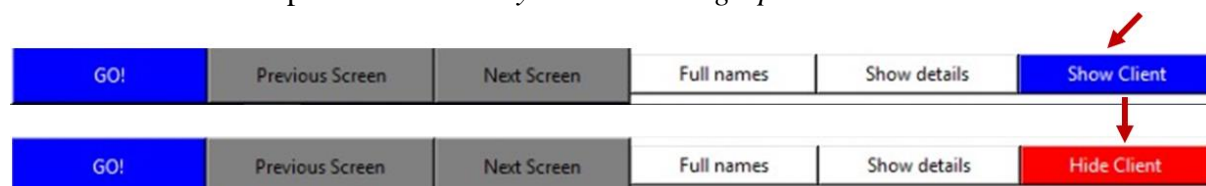
How do you obtain this graph?

1. Upload the excel files: **prove_year(s).xlsx** and **campioni-year(s).xlsx**. Both of them are required for this graph.
2. Select **crop/product**.
3. Select **compound**.
4. If desired, select the **date**. If you do not want to get an certain year, select “all” in the date box.
5. Click the **GO!** Button.



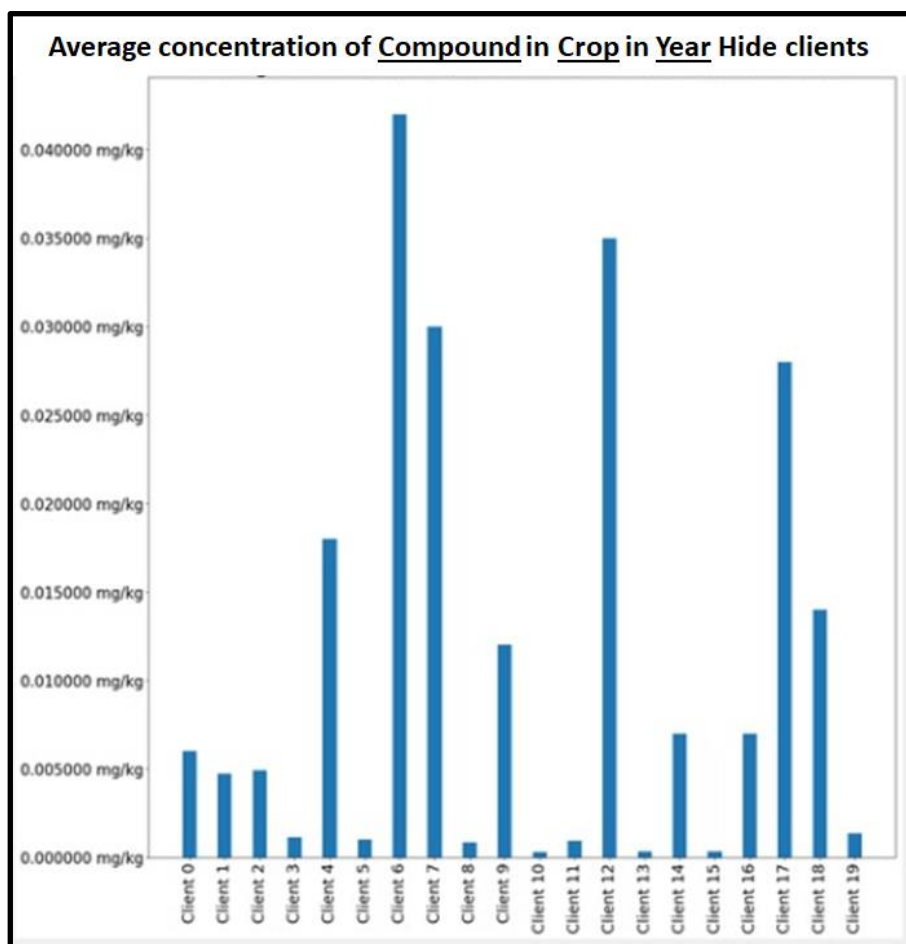
This function allows the user to hide the names of the clients, in case the report wants to be given to a certain company and the confidentiality wants to be preserved. To do so, follow the next steps:

1. It is **not necessary** to have the full names graph. If you want the chart with the hidden names from the beginning, continue with the next steps.
2. Check that the “Show Client” button is blue.
3. Click “Show Client”. It will turn into a red button that states “Hide Client”.
4. Follow the steps from “How do you obtain this graph?”



Once you click the “GO!” button, the program will ask you the path to store a file called: “**Client_index.xlsx**”. This file contains the client names according to the index given by the program.

An example of the graph with the hidden client names is illustrated in the following image:



Things that can go wrong...

- After I select compound, crop and/or date and clicking “GO!” I see that the result is an empty graph.
Remember that several values are missing and SATAnalytics does NOT analyze them. Check the missing values in Page 4, if the selected client only tested for these values, the graph will be empty.
- I press “Show details” or “Full names”, but nothing happens. These buttons are not in blue, which means that this chart does not have that functionality.

6. Pie chart of total number of samples per product for all SATA clients

This function will produce a pie chart of the amount of analyses of crops/products for all SATA clients in a certain year.

The following images serve as an example for what the graph should look like.

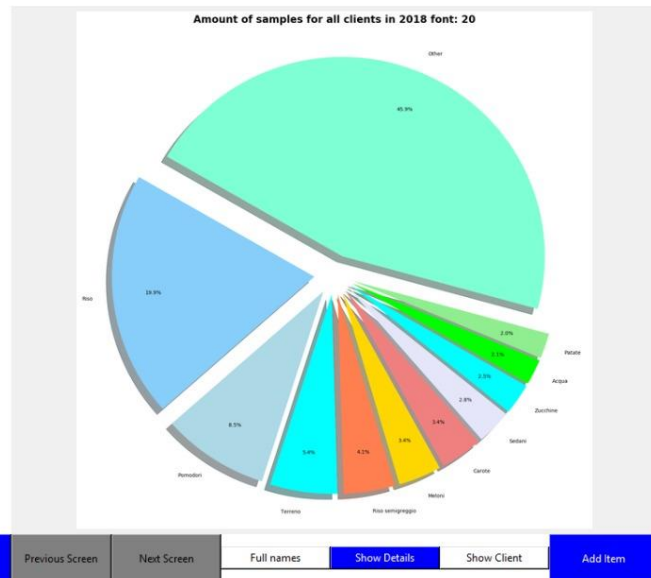
Excel 1 - Prova prove_18.xlsx Excel 2 - Campione

1. Pie chart on total number of samples per product for one client
2. Pie chart of samples by one client categorised into groups based on their concentration relative to their threshold for one year
3. Average concentrations of all compounds found in one product from one client in a certain time span
4. Bar chart on average amount of researched compounds for all clients in one year
5. Average concentration of one compound found in one product by clients in a certain time span
6. Pie chart of total number of samples per product for all SATA clients
7. Distribution of a certain compound throughout the years for one client and one product
8. Pie chart on occurrence of clients exceeding the limit per year

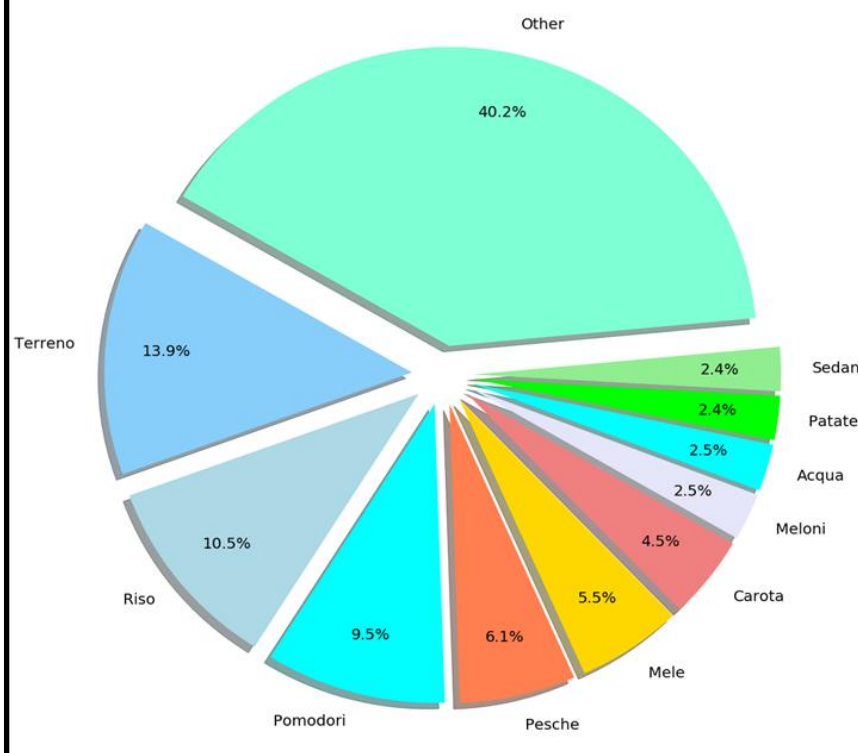
2018

Download Summary

Full-screen Snip



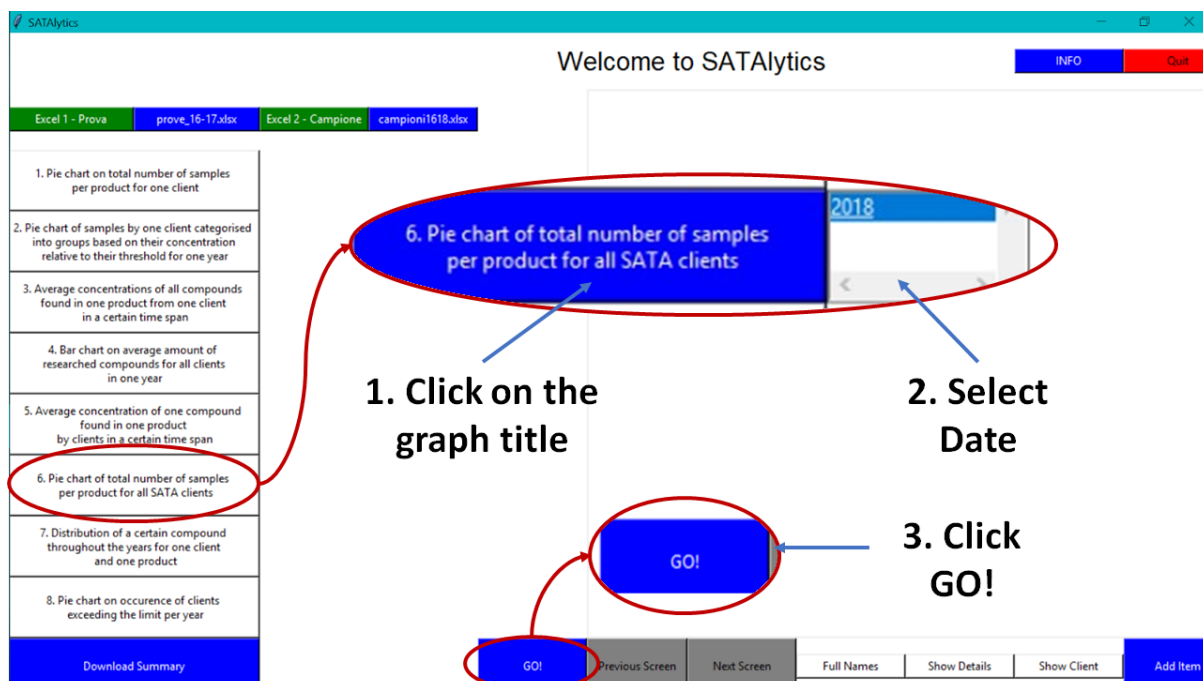
Pie chart of amount of analyses for all in Year



It shows the ten largest products/crops for the client (labeled in the picture as “Product 1-10”), and the rest are stored in the category “Other”.

How do you obtain this graph?

1. Upload the **prove_year(s).xlsx** file. For this graph, the **campione-year(s).xlsx** is NOT required.
2. Select the **date**.
3. Click the GO! Button.



If you want to obtain the details of the crops/products (dettaglio_prodotto), you can get the amount of analyses of the detailed products in a certain client, with the possibility of selecting also the year, by clicking the button “Show details”. This will produce a pie chart as the previous one, but instead of the products, it will show the detailed products.

Steps to obtain the detailed graph:

1. It is **necessary** to have the previous graph. You cannot obtain the detailed product graph, without the product pie chart.
2. Check that the “Show details” button is blue.
3. Click “Show details”.

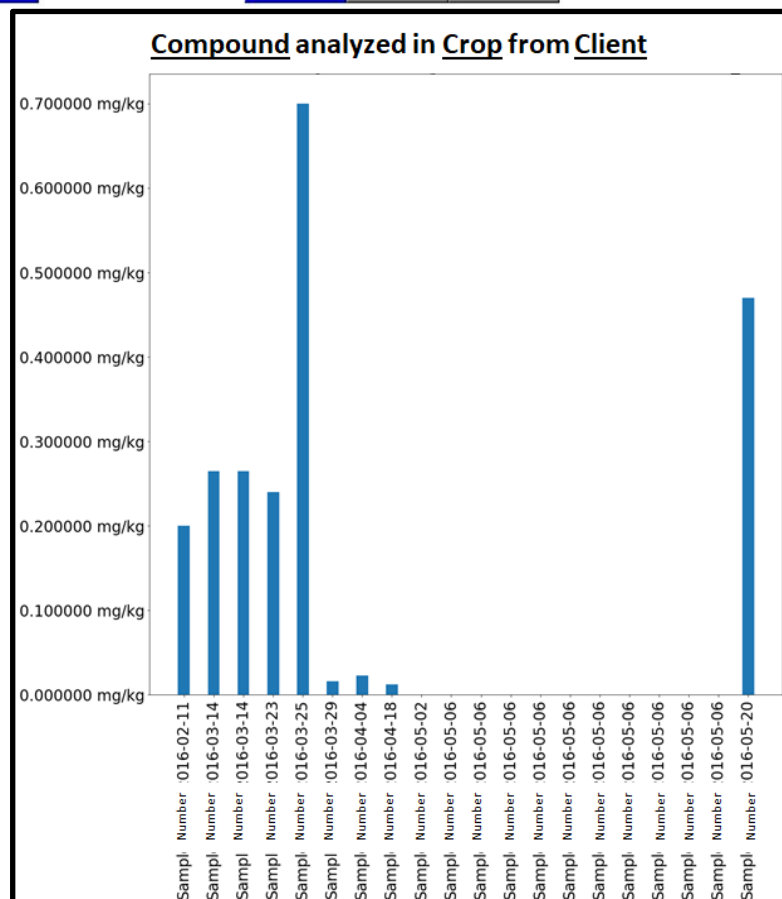
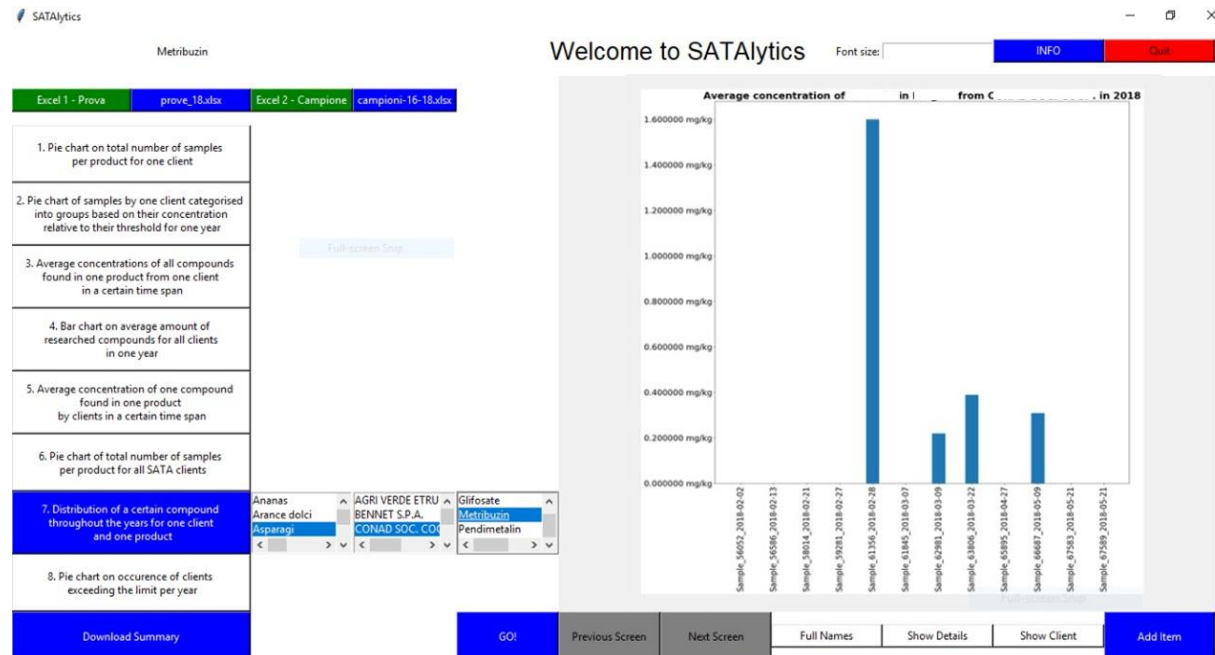


Things that can go wrong...

- **After I select date and clicking “GO!” I see that there were no results.**
Remember that several values are missing and SATAltytics does NOT analyze them. Check the missing values in Page 4, if you only tested for these values, the graph will be empty.
- **When I click on “Show details” it produces a graph that is very different from the products I used.** Sometimes, the dettaglio_prodotto column is not complete. Check if the detailed products are written in the dettaglio_prodotto column, the more complete is the column, the more precise will this graph be.
- **I press “Show Client” or “Full names”, but nothing happens.** These buttons are not in blue, which means that this chart does not have that functionality.

7. Distribution of a certain compound throughout the years for one client and one product

This function produces a bar chart that illustrates the concentration of one compound in one product/crop for all the samples of a certain client, ordered chronologically. The following images serve as an example for what the graph should look like.



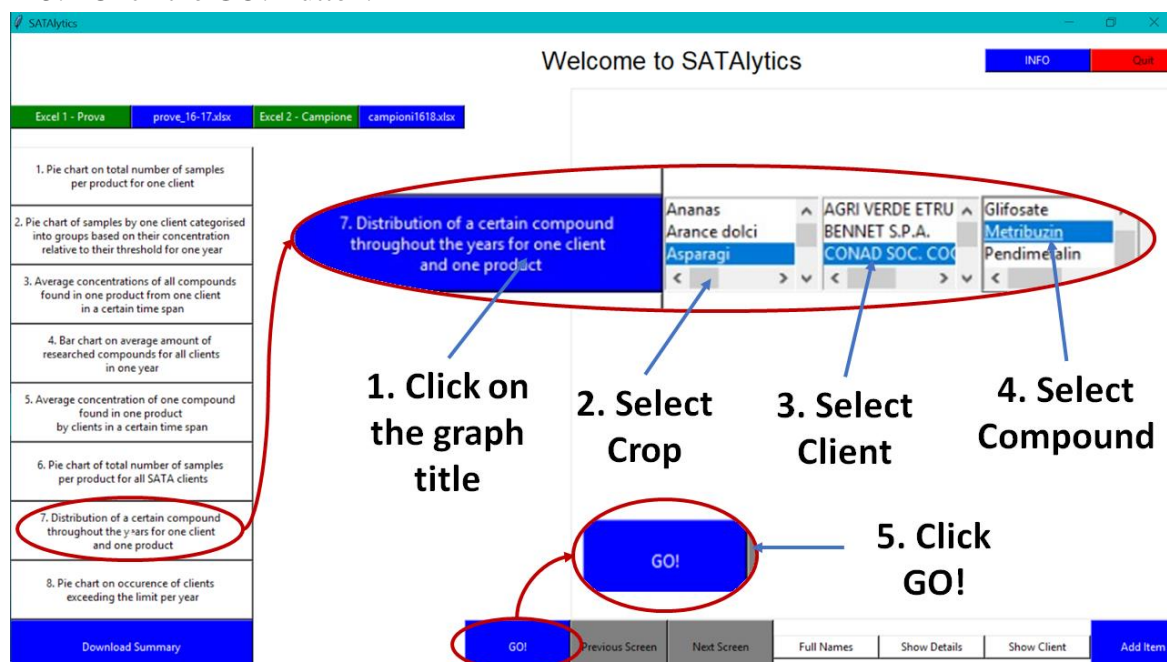
Bars are blue when the compound's concentration is below the threshold. However, when the concentrations exceed the threshold, the bar turns red. With this function, it is possible to obtain several graphs, this could be because there are too many samples. To prevent that the names won't be readable, compounds will be divided in groups of 30.

It is possible that a sample's compound concentration does not give a detectable result. If this is the case for a group of 30 adjacent samples, the result will not be a graph, it will be a message showing between which dates the compound has not been detected in the samples:

No results detected between Sample_ N 1_2016-05-02 and Sample_ N 2_2017-11-24

How do you obtain this graph?

1. Upload the excel files: **prove_year(s).xlsx** and **campioni-year(s).xlsx**. Both of them are required for this graph.
2. Select the **product/crop**.
3. Select the **client name**.
4. Select the **compound**.
5. Click the **GO!** Button.



Things that can go wrong...

- **After I select crop, client and compound and clicking “GO!” I see that there were no results.**
Remember that several values are missing and SATAltycs does NOT analyze them. Check the missing values in Page 4, if you only tested for these values, the graph will be empty.
- **I press “Show Client”, “Show details”, or “Full names”, but nothing happens.**
These buttons are not in blue, which means that this chart does not have that functionality.

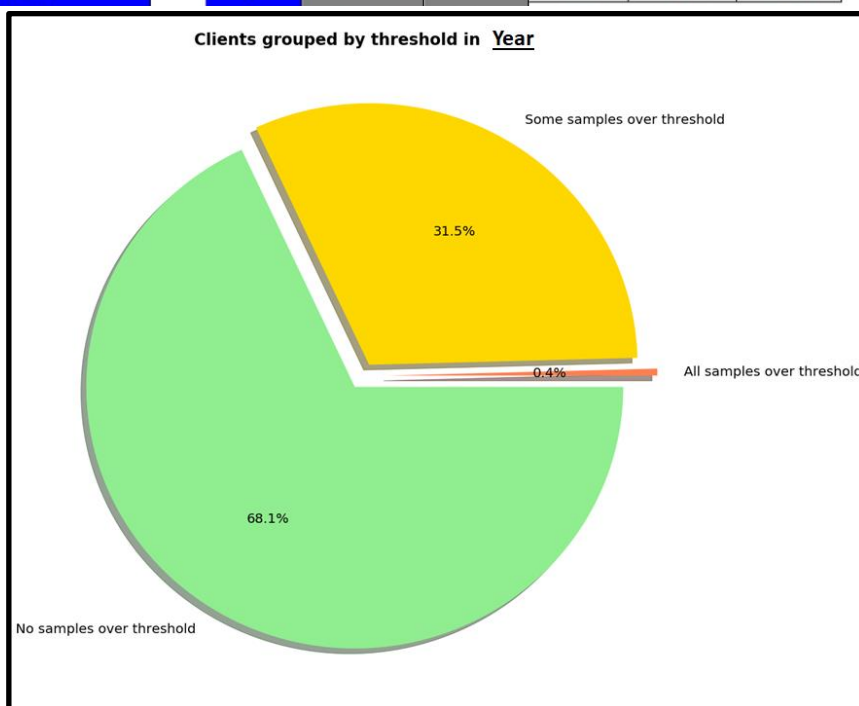
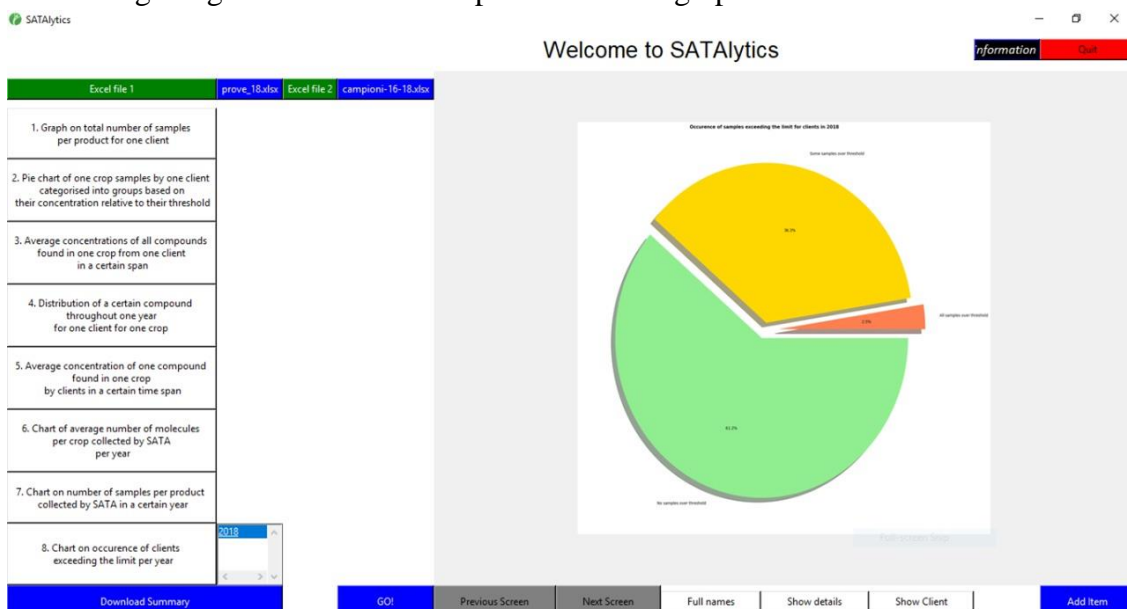
- **Not all my samples appear in the graphs.** If in 60 adjacent samples there is not a detectable concentration of the desired compound, only one graph will be produced with the message shown in the previous page. The same occur with 90 adjacent samples, 120, 150, etc. Therefore, all the samples in between will not appear in the graphs.

8. Pie chart on occurrence of clients exceeding the limit per year

This function divides SATA clients in three different categories:

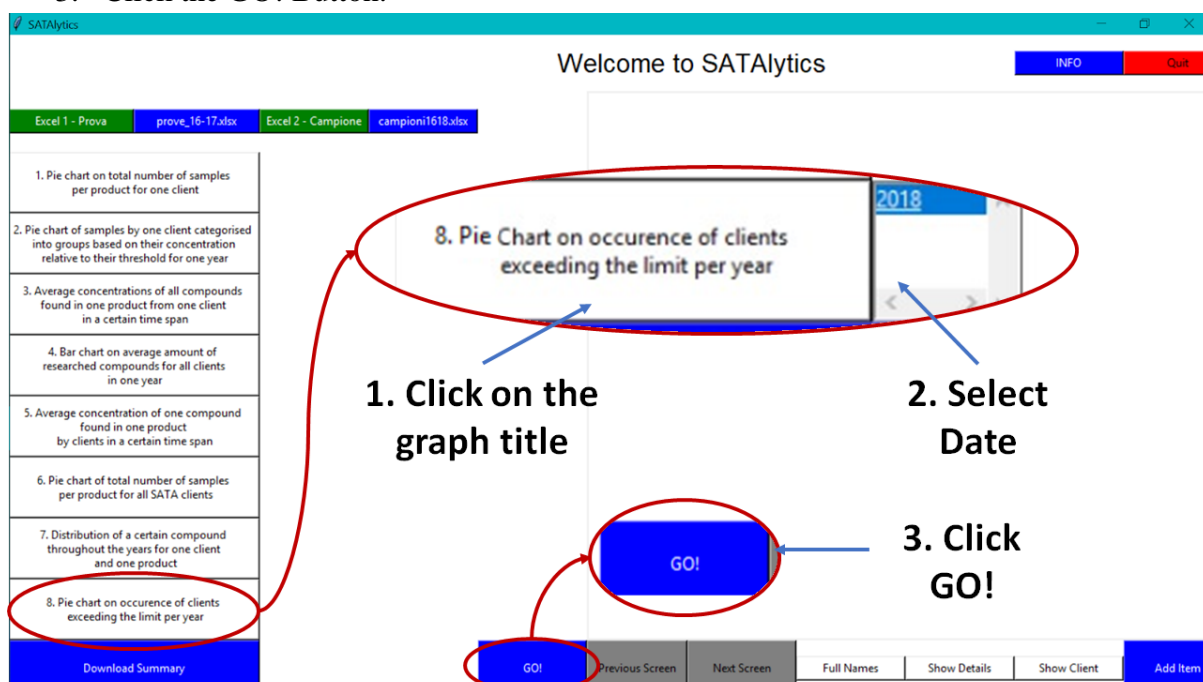
- Clients with **no samples** over the threshold for any compound: shown in green.
- Clients with **some samples** over the threshold for any compound: shown in yellow.
- Clients with **all samples** over the threshold for any compound: shown in red.

The following images serve as an example of what the graph should look like.



How do you obtain this graph?

1. Upload the excel files: **prove_year(s).xlsx** and **campioni-year(s).xlsx**. Both of them are required for this graph.
2. Select the **date**.
3. Click the **GO!** Button.



It is possible to ask for details in this graph, to know which clients are in each of the three categories, by clicking the button “Show details”. This will produce an excel file named **Client_group.xlsx**, containing the list of clients in each group.

Steps to obtain the detailed file:

4. It is **necessary** to have the previous graph. You cannot obtain the excel file, without the product pie chart.
5. Check that the “Show details” button is blue.
6. Click “Show details”.



Things that can go wrong...

- I press “Show Client” or “Full names”, but **nothing happens**. These buttons are not in blue, which means that this chart does not have that functionality.

Thank you for using our software

