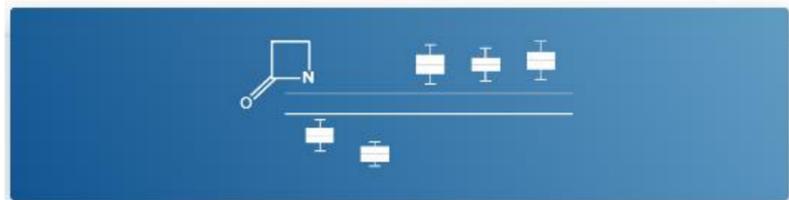


Antibiotic Hydrolysis Detection Analysis

CLOVER MS Data Analysis Software

What is it?



Antibiotic Hydrolysis Detection Analysis

Label Name	RH Norm	Interpretation
CHB6_CL1	0	Negative Hydrolysis
CHB6_CL1	0.009301988	Negative Hydrolysis
CP05_B1	1	Positive Hydrolysis
CP05_B1	1.00048714	Positive Hydrolysis

CLOVER MSDAS offers the **Antibiotic Hydrolysis Detection Analysis (AHDA)** module to measure and detect the hydrolysis ratio from one of the available antibiotics using **MALDI-TOF** spectra.

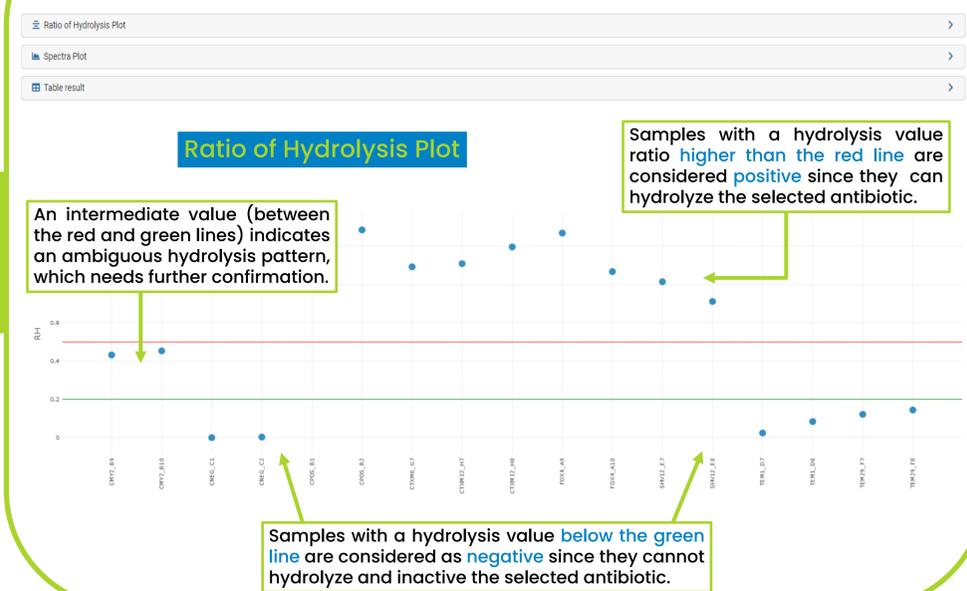
1 First steps

This guide is only for MALDI spectra

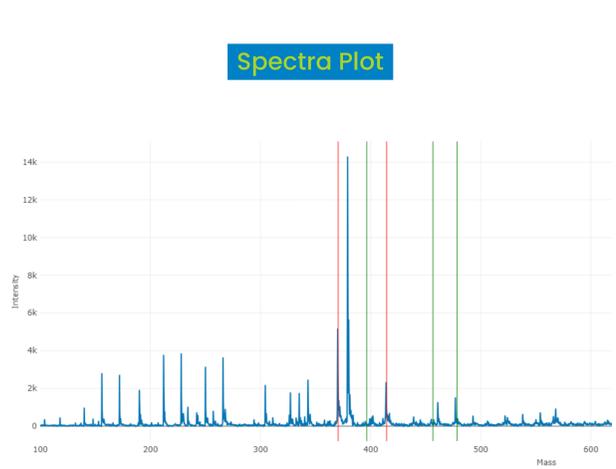
- Go to the **Bio Analysis** section and click on **Antibiotic Hydrolysis Detection Analysis**
- Choose a **New Antibiotic Hydrolysis Detection**
- Upload or select files for the analysis
- Choose the **antibiotic to evaluate** and the **negative/positive controls**. Run analysis

2.1. AHDA Results

Analysis results are divided into the ratio of hydrolysis plot, spectra plot, and the table result.



2.2. AHDA Results



The spectra of each sample and the positive and negative provided control values can be drawn for checking all of them.

Table Result

Label Name	RH Norm	Interpretation
FOK4_A9	1.068211838	Positive Hydrolysis
SHV12_E7	0.8144760591	Positive Hydrolysis
SHV12_E8	0.7118765613	Positive Hydrolysis
TEM1_D7	0.0244237164	Negative Hydrolysis
TEM1_D8	0.0837188822	Negative Hydrolysis
TEM25_F7	0.1217664054	Negative Hydrolysis
TEM25_F8	0.1445716073	Negative Hydrolysis

The **normalized hydrolysis ratio** and the interpretation of it for each sample are displayed (positive, intermediate, or negative hydrolysis).

Downloading and saving the results

A **PDF report** of the full analysis can be generated and downloaded. Also, the analysis can be saved for late reference in the **Project section**. Only users with the **right permissions** can see and retrieve the analysis in projects.



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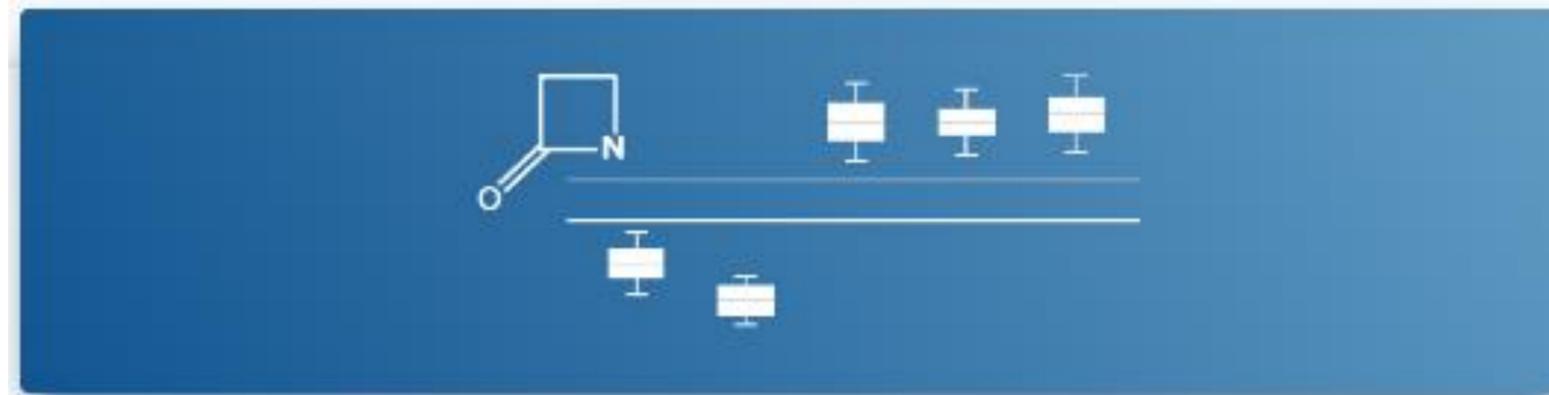
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What is it?



Antibiotic Hydrolysis Detection Analysis

Label Name	RH Norm	Interpretation
CNEG_CS_1	0	Negative Hydrolysis
CNEG_C6_1	0.0993901986	Negative Hydrolysis
CPOS_B5_1	1	Positive Hydrolysis
CPOS_B6_1	1.050548714	Positive Hydrolysis

CLOVER MSDAS offers the **Antibiotic Hydrolysis Detection Analysis** module to measure and detect the hydrolysis ratio from one of the available antibiotics using **MALDI-TOF** spectra.



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Antibiotic Hydrolysis Detection Analysis

CLOVER MS Data Analysis Software

1

First steps



This guide is only for MALDI spectra

The screenshots show the following steps:

- Navigation to the **Bio Analysis** section.
- Clicking on **New Antibiotic Hydrolysis Detection**.
- Uploading or selecting files for analysis.
- Choosing the antibiotic (Cefotaxime - CTX) and negative/positive control (CNEG_C1), then clicking **Run Analysis**.

1

Go to the **Bio Analysis** section and click on **Biomarker Analysis**

2

Choose a **New Antibiotic Hydrolysis Detection**

3

Upload or **select files** for the analysis

4

Choose the **antibiotic** to evaluate and the **negative/positive control**. **Run analysis**



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2.1.

AHDA Results

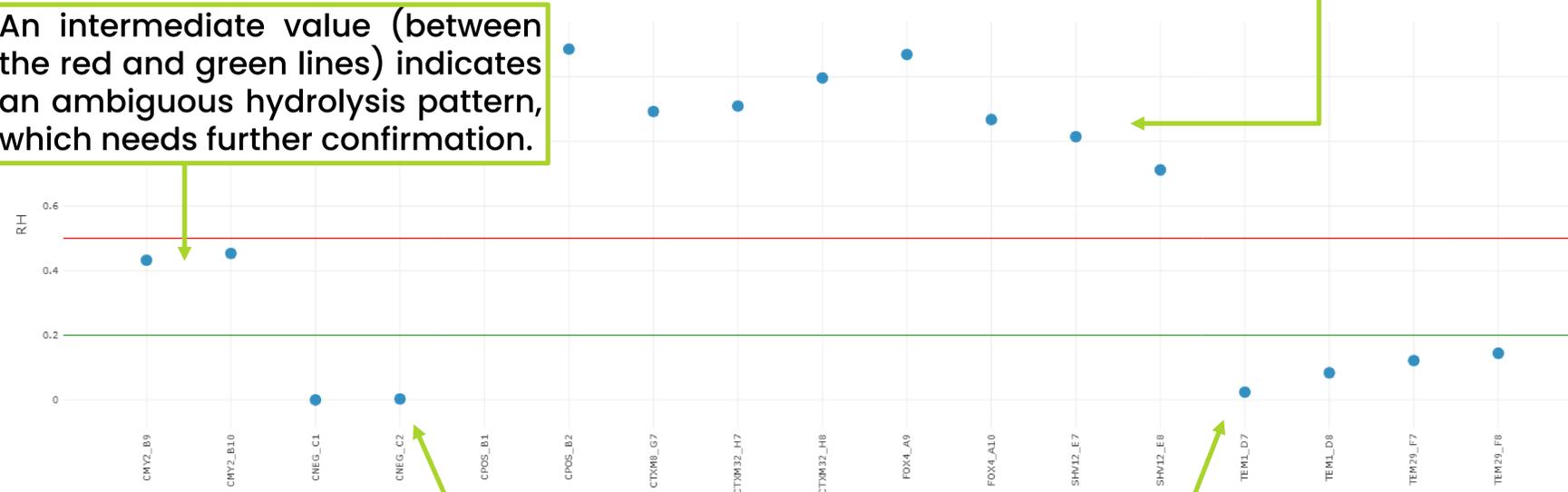
Analysis results are divided into the ratio of hydrolysis plot, spectra plot, and the table result.

- Ratio of Hydrolysis Plot
- Spectra Plot
- Table result

Ratio of Hydrolysis Plot

An intermediate value (between the red and green lines) indicates an ambiguous hydrolysis pattern, which needs further confirmation.

Samples with a hydrolysis value ratio **higher than the red line** are considered **positive** since they can hydrolyze the selected antibiotic.



Samples with a hydrolysis value **below the green line** are considered as **negative** since they cannot hydrolyze and inactive the selected antibiotic.



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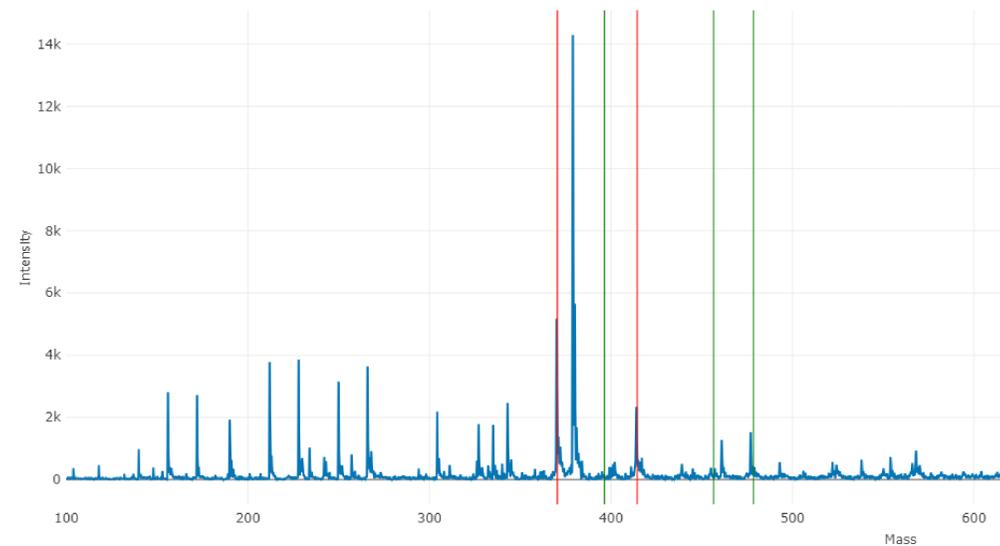
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2.2. AHDA Results

Spectra Plot



The spectra of each sample and the positive and negative provided control values can be drawn for checking all of them.

Table Result

Label Name	RH Norm	Interpretation
FOX4_A9	1.0685211838	Positive Hydrolysis
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SHV12_E8	0.7118765613	Positive Hydrolysis
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The normalized hydrolysis ratio and the interpretation of it for each sample are displayed (positive, intermediate, or negative hydrolysis).

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