


## Details of identification (ranking)

Apo-Ident compares the measured spectrum with all samples saved in the spectral reference library. A maximum of 20 results of the highest match may be displayed in the ranking table. In order to view the ranking table, please click the hyperlink [<Rating>](#) in the result section of the user interface.

Result



Name

**Fructose**

[NIR Result](#)

Match

[Rating](#)

99.9% (Limits 98% to 100%)

Comment

[Additional tests](#)

(empty)

A table will then be displayed which provides all the identification criteria. If you select the button [<Show as PDF>](#), you will get the displayed table in PDF format and you may print and file it together with the test report.

At the first position (rank 1) the reference substance with the **highest match with the sample** will be displayed. If the criteria for the identification of the substance are met, it will be displayed in **green**.

Thereafter, the nearest reference substances follow in **red**, because the best match in rank 1 presents all other from leading to the positive result “match”. Please note that the ranking table lists substance names, while the result-name may display the name of the group of substances (e.g. “triglycerides”).

Ranking	Classification	Sample ID	Significance	Confidence	Correlation	Distance	Rating
1	Fructose	21281	0.9986	1.0000	1.0000	3.7	99.86%
2	NO_ID	NOID25355	0.9752	0.9990	0.9421	16.9	0.00%
3	Calcium glycerophosphate	21234	0.9260	0.9975	0.9880	34.9	0.00%
4	Sodium hyaluronate	25495	0.9249	0.9962	0.9835	35.3	0.00%
5	Polymyxin B sulfate	21329	0.9134	0.9971	0.9711	39.9	0.00%
6	Riboflavin	20825	0.9128	0.9967	0.9687	40.2	0.00%
7	Colistin sulfate	20915	0.9076	0.9950	0.8833	42.4	0.00%
8	Polymyxin B sulfate	20853	0.9054	0.9961	0.9073	43.4	0.00%
9	Amphotericin B	20933	0.8949	0.9941	0.9601	48.5	0.00%
10	Bacitracin	20851	0.8827	0.9950	0.8940	55.3	0.00%

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This figure supports the confirmability and validation of the identification results by the user.

You can find an explanation of the particular terms on the next page.

Term	Explanation	Assesment
<b>Rank</b>	Calculated ranking of consistency (match) between the measurement and the reference samples stored in the database	
<b>Classification</b>	Substance or substance group <b>clearly</b> distinguishable using Apo-Ident; a substance group represents multiple substances not clearly separable using Apo-Ident, but which are available for the measurement (e.g. 'triglycerides').	Classifications are marked yellow (non-unique result)
<b>Sample-ID</b>	HiperScan GmbH identification number assigned to reference samples whose spectra are used to build the Apo-Ident reference database. Detailed information on all reference samples can be found in the validation documentation.	
<b>Significance</b>	Measure of the distance between the measurement result and the mean value of sample/classification reference measurements.	The higher the value (maximum 1), the closer the measured sample spectrum is to the stored reference values.
<b>Confidence</b>	Outlier evaluation	The higher the value (maximum 1), the better the measured sample spectrum's fit in the distribution of the stored reference values.
<b>Correlation</b>	A statistical measure of the similarity between the back-projection of the stored reference spectra mean value and the back-projection of the measured sample spectrum.	The higher the value (maximum 1), the higher the correlation of the back-projections.
<b>Distance</b>	A measure of distance between the mean value of a reference sample stored and the measured spectrum as a function of the principal component space (Mahalanobis distance).	The smaller the value, the closer the sample spectrum is to the stored reference values.
<b>Rating</b>	The overall rating (regarding the aforementioned criteria) of the measured spectrum, as shown (or would be shown) on the screen and in the report.	The higher the value (maximum 100 %), the closer the sample is to the stored reference values. The defined minimum value for identification is 98%.
<b>Specificity</b> (only for the PhytoComm substance group)	The specificity of a classification is the true negative rate. It denotes the percentage of the spectra truly classified as non-identified during the validation.	
<b>Recognition rate</b> (only for the PhytoComm substance group)	This is the true positive rate. It denotes the percentage of the spectra truly classified as identified during the validation.	