

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 [<Value>](#) in the result section of the user interface.

Result

Name:

Sodium citrate

[NIRS Result:](#)

Match

[Value:](#)

99,9% (Limits 98% to 100%)

[Validate:](#)

Available

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	Value
1	Sodium citrate	20662	0.9995	0.9998	0.9997	3.7	99.95%
2	Sodium citrate	22859	0.9720	0.9791	0.9898	30.2	0.00%
3	Gentamicin sulfate	21081	0.8642	0.7533	0.9128	129.5	0.00%
4	Gentamicin sulfate	22604	0.8507	0.5621	0.9087	168.5	0.00%
5	Gentamicin sulfate	22857	0.8500	0.6552	0.9231	171.3	0.00%
6	Betamethasone dipropionate, micronized	21250SI	0.8461	0.4352	0.5797	188.9	0.00%
7	Clobetasol propionate	22724SI	0.8413	0.2396	0.5532	219.4	0.00%
8	Clobetasol propionate	22714SI	0.8402	0.2302	0.5613	228.3	0.00%
9	Betamethasone dipropionate, micronized	22372SI	0.8401	0.2162	0.5739	229.6	0.00%
10	Clobetasol propionate	21802SI	0.8399	0.3269	0.5469	231.3	0.00%
11	Gentamicin sulfate	20661	0.8398	0.3629	0.9109	232.1	0.00%
12	Betamethasone dipropionate, micronized	21366SI	0.8366	0.0292	0.5754	265.6	0.00%
13	Betamethasone dipropionate, micronized	20930	0.8359	0.4408	0.5744	275.9	0.00%
14	Clobetasol propionate	21896SI	0.8358	0.0994	0.5404	276.5	0.00%

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
Rank	Calculated ranking of consistency (match) between the measurement and the reference samples stored in the database	
Classification	Substance or substance group clearly 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)
Sample-ID	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.	
Significance	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.
Confidence	Outlier evaluation	The higher the value (maximum 1), the better the measured sample spectrum's fit in the distribution of the stored reference values.
Correlation	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.
Distance	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.
Rating	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%.
Specificity (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.	
Recognition rate (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.	