

# Reference Material Honey-Profiling in honey blend

P2528-RMHb



## Summary

Reference material P2528-RMHb is validated in method ring test P2528-MRT, which is organised, performed and evaluated according to the requirements of DIN EN ISO/IEC 17043 and the “International Harmonized Protocol”. ISO 13528 is considered during the evaluation of the submitted results and during homogeneity and stability testing. Details related to the applied statistics are summarised in the full specification, which is provided after purchase of the reference material.

Reference material P2528-RMHb consists of 50 g honey blend from EU and non-EU countries, which is adulterated with 10 % organic rice sirup and 3 % fructose.

Seven laboratories took part in the method ring test. One laboratory provided two independent results from different spectrometers. Thus, eight different results are considered for each parameter during evaluation.

The assigned values, which are calculated of the results of the participants of the method ring tests P2528-MRT, are summarised in table 1.

Of the 36 parameters of the Honey-Profiling method the parameters of the results related to:

- the sugars fructose, glucose, turanose, maltose, and raffinose,
- the amino acids alanine and proline,
- the organic acids citric acid, malic acid, acetic acid, lactic acid, formic acid, pyruvic acid, and succinic acid, and
- the honey specific parameters 2,3-butanediol, 5-HMF, and ethanol

were evaluated with respect to the comparability criterion ( $|z\text{-score}| \leq 2$ ).

*Table 1. Reference material P2528-RMHb – specification*

Parameter	Unit	Assigned value	Total number of results
Fructose	g/100 g	37.0	8
Glucose	g/100 g	33.3	8
Turanose	g/100 g	1.21	7
Maltose	g/100 g	4.24	8
Raffinose	g/100 g	-*	-
Citric acid	mg/kg	187	8
Malic acid	mg/kg	174	8
Alanine	mg/kg	14.0	8
Proline	mg/kg	445	8
2,3-Butanediol	mg/kg	38.6	8
5-HMF	mg/kg	5.70	7
Acetic acid	mg/kg	29.9	8
Ethanol	mg/kg	15.2	8
Lactic acid	mg/kg	54.0	8
Formic acid	mg/kg	37.7	8
Pyruvic acid	mg/kg	15.7	8
Succinic acid	mg/kg	55.7	8

\* comparability criterion not applied, all labs reported 0.2 g/100 g.