

Supporting Information

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Discriminating Metabolites of *Curcuma caesia* and *Kaempferia parviflora* through ¹H-NMR and GC-MS Analysis for Plant Authentication

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Table of Contents	Page
Figure S1: Test report summary	2
Figure S2: Overview of the generated PCA model of all groups; (a) summary of fit, (b) score plot, (b) DModX plot, (d) Hottelling's T2 plot	3

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IDENTIFICATION AND AUTHENTICATION OF PLANT SPECIES WITH DNA MARKERS

SUMMARY OF TEST REPORT TO
 MUHAMMAD SAFWAN BIN AHAMAD BUSTAMAM
 INSTITUTE OF BIOSCIENCE,
 UNIVERSITI PUTRA MALAYSIA
 (Lebu Silikon, 43400 Serdang, Selangor Darul Ehsan)
 Service Code: MGB0423

Background

On 26 September 2023, two samples claimed to be *Curcuma caesia* (KH1) and *Kaempferia parviflora* (HH2) were received from Muhammad Safwan bin Ahamad Bustman (019-2487165; Institute of Bioscience, Universiti Putra Malaysia.) for species authentication. The samples were designated as 010B23 and 012B23.

No	Lab ID	Customer ID (Claimed species)	Photo
1	010B23	KH1 (<i>Curcuma caesia</i>)	
3	012B23	HH2 (<i>Kaempferia parviflora</i>)	

Findings

DNA Sequences of ITS2 Region:

>ITS2_010B23 (KH1)

CACGCCTGCTTGGGYGTCATGACATCGTCGCTTTTGTCCATGCTTCGYCGGCATTGAG
 CGCGGAAGTTGGCCCCGTGTGCCCTCGGGCACAGTCGGTCGAAGAGTGGGTAGTCGG
 TAATCGTCGAGCACGATGGACGTTGGTCGTCGCGAGCGAGAAGTGAACGTC

>ITS2_012B23 (HH2)

GCTTGGGAGTCATGGCATTGCCGCTCCGCTCCACGCGATGCTGGTGCTGAGCGCGTA
 GATTGGCCCCGTGTGCCCTCGGGCACAGTCGGCCGAAGAGCGGGCAGTCGCCGGTGC
 TCGGGCACGATGGGTGTTGGTCGTCATATGAGCGGGAACAGAACATCGTCCCC

Conclusion

Based on the above findings, we hereby authenticate that, 010B23 belongs to the species *Curcuma caesia*.; 012B23 belongs to the species *Kaempferia parviflora*.

PREPARED BY



DR. TNAH LEE HONG
 Research Officer
 Date: 16 October 2023

APPROVED BY



DR. LEE SOON LEONG
 Head of Genetics Laboratory
 Date: 16 October 2023

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Figure S1: Test report summary

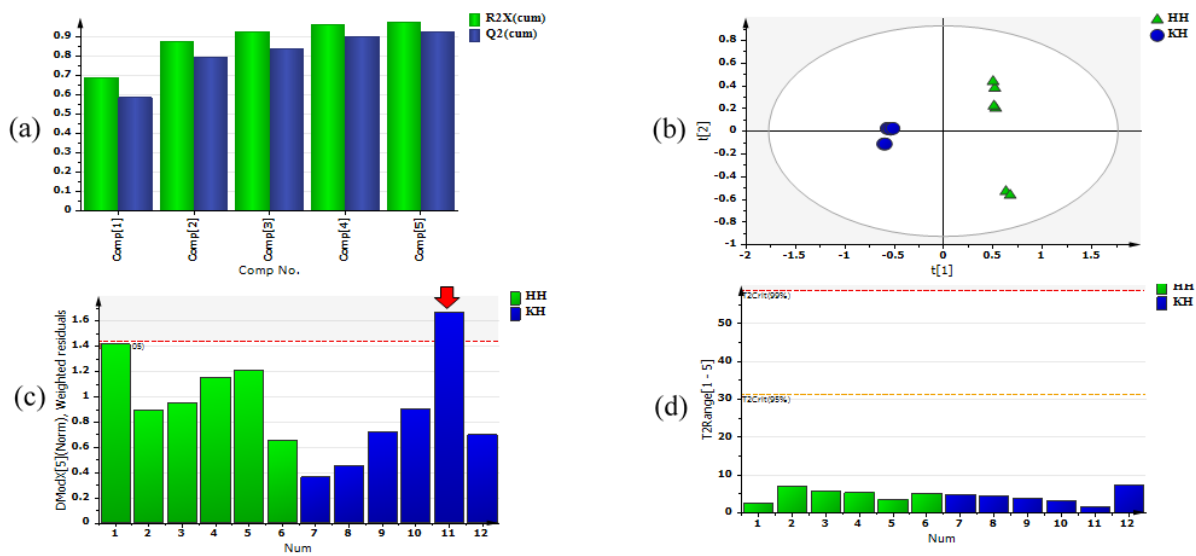


Figure S2: Overview of the generated PCA model of all groups; (a) summary of fit, (b) score plot, (b) DModX plot, (d) Hotelling's T2 plot