Unique brood ester profile in a Varroa destructor resistant population of European honey bee (Apis mellifera)

SND-ID: 2024-173. **Version**: 1. **DOI**: https://doi.org/10.5878/h2hc-h513

Download data

Scaramella_et_al_2024_Contrast.tsv *(549 bytes)*

Scaramella_et_al_2024_Data.tsv *(17.05 KB)*

Associated documentation

Scaramella_et_al_2024_Analysis_log.txt *(104.43 KB)*

Scaramella_et_al_2024_Analysis.R *(34.55 KB)*

Scaramella_et_al_2024_Contrast_Read_Me.txt *(3.64 KB)*

Scaramella_et_al_2024_Data_Read_Me.txt *(3.99 KB)*

Download all files

2024-173-1.zip *(~164.2 KB)*

Citation

Scaramella, N., & Locke, B. (2024) Unique brood ester profile in a Varroa destructor resistant population of European honey bee (Apis mellifera) (Version 1) [Data set]. Swedish University of Agricultural Sciences. Available at: https://doi.org/10.5878/h2hc-h513

Creator/Principal investigator(s)

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Research principal

Swedish University of Agricultural Sciences - Department of Ecology

Principal's reference number

SLU.ekol.2024.4.4.IÄ-10

Description

Data of chemical compounds extracted from honey bee (Apis mellifera) brood in a varroa resistant and varroa susceptible population. Samples were taken 0, 6, 12, 18, 24, and 36 hours after brood capping by immersing pupae in pentane for 10 minutes. 6 hives from each population were used, and 3 replicates were taken per hive per time point. The FAME column was calculated by adding Methyl Palmitate, Linoloate, and Stearate together, while the FAEE columb was calculateed by adding Ethyl Palmitate, Linoloate, and Stearate together. Samples were analyzed using gas chromatography.

R version 4.4.0 and RStudio version 1.4.1.748 were used to analyze the data. All packages and their version is listed in the attached R script.

Data files included:
Scaramella_et_al_2024_Contrast.tsv: 16 rows × 12 columns
Scaramella_et_al_2024_Data.tsv: 210 rows × 14 columns

Data contains personal data

No

Language

English

Time period(s) investigated

2019-06 – 2019-08

Data format / data structure

Numeric

Text

Species and taxons

Apis mellifera
Varroa destructor

Data collection 1

- Mode of collection: Physical measurements and tests
- Description of the mode of collection:
  Pupae at pre-designated times (0, 6, 12, 18, 36 hours after brood capping) were removed and submerged in n-pentane for 10 minutes to remove voltile and semi-voltile compounds from the cuticular.
  These compounds were analysed using gas chromatography.
  Full description of methods available in manuscript.
- Time period(s) for data collection: 2021-06 – 2021-08
- Data collector: Swedish University of Agricultural Sciences
- Instrument: Gas Chromatography - A machine that vaporizes compounds, which flows along a long tube, with different chemicals in the compound reaching a sensor at different times. By comparing to documented times it takes a chemical to reach the sensor, chemicals can be quantified
- Sample: Brood cuticular compounds
  Cuticular compounds extracted from Apis mellifera pupae in n-pentane
- Source of the data: Research data: Unpublished, Research data
- Temporal resolution: 3 month
- Spatial resolution: 750 metres

Responsible department/unit

Department of Ecology

Funding

- Funding agency: European Research Council
- Funding agency's reference number: 949223
- Project name on the application: ERC Starting Grant

Research area

Zoology (Standard för svensk indelning av forskningsämnen 2011)

Ecology (Standard för svensk indelning av forskningsämnen 2011)

Evolutionary biology (Standard för svensk indelning av forskningsämnen 2011)

Keywords

Honeybees, Brood ester pheromones, Varroa destructor, Apis mellifera, Brood effects, Varroa resistance

Accessibility level

Access to data through SND
Data are freely accessible

Use of data

Things to consider when using data shared through SND

Versions

Version 1. 2024-06-24

Contacts for questions about the data

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Download metadata

DataCite

DDI 2.5

DDI 3.3

DCAT-AP-SE 2.0

JSON-LD

PDF

Citation (CSL)

File overview (CSV)

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