

Supplementary material

Climate and Processing Effects on Tea (*Camellia sinensis* L. Kuntze) Metabolome: Accurate Profiling and Fingerprinting by Comprehensive Two-Dimensional Gas Chromatography/Time-of-Flight Mass Spectrometry

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The supplementary material comprises four Supplementary Figures:

Figure S1: 2D data elaboration work-flow adopted to comprehensively map tea primary metabolites signatures, by adopting a combined Untargeted and Targeted UT template matching approach.

Figure S2: schematic diagram of the extraction and derivatization procedure.

Figure S3: experimental results on targeted primary metabolites extraction yields.

Figure S4: method repeatability is indicated in terms of % relative standard deviation (%RSD) for both chromatographic dimensions (1tR and 2tR) and for % response, collected from UT peak-regions.

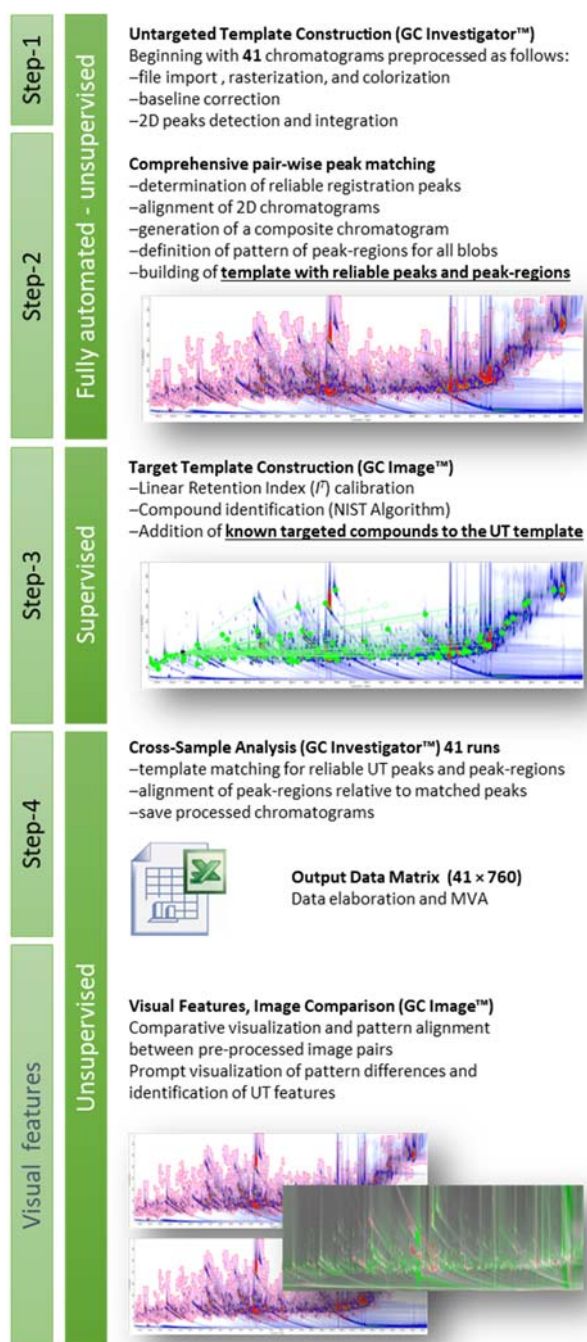


Figure S1. 2D data elaboration work-flow adopted to comprehensively map tea primary metabolites signatures, by adopting a combined Untargeted and Targeted UT template matching approach.

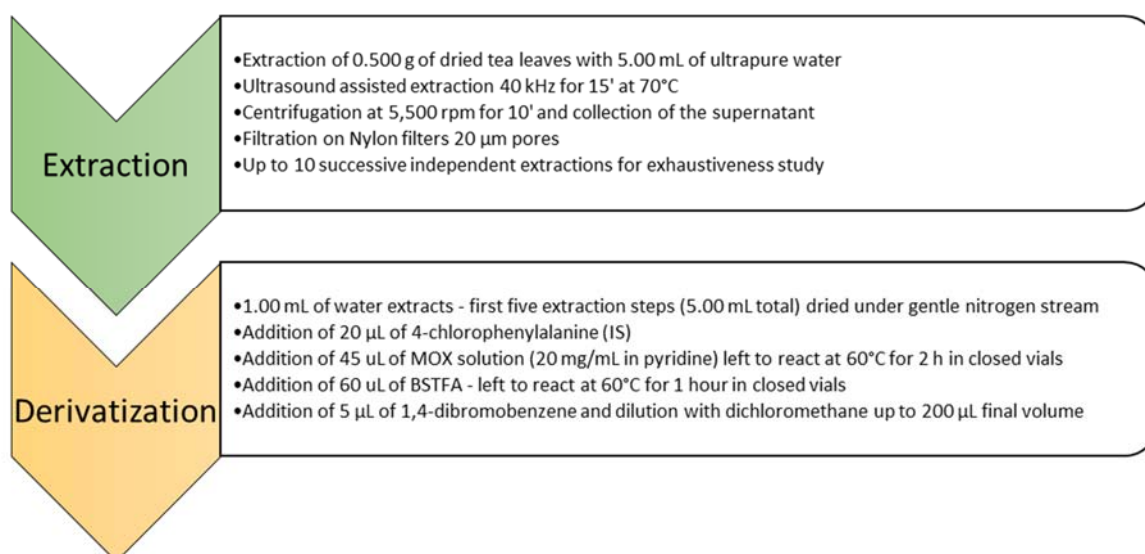


Figure S2. schematic diagram of the extraction and derivatization procedure.

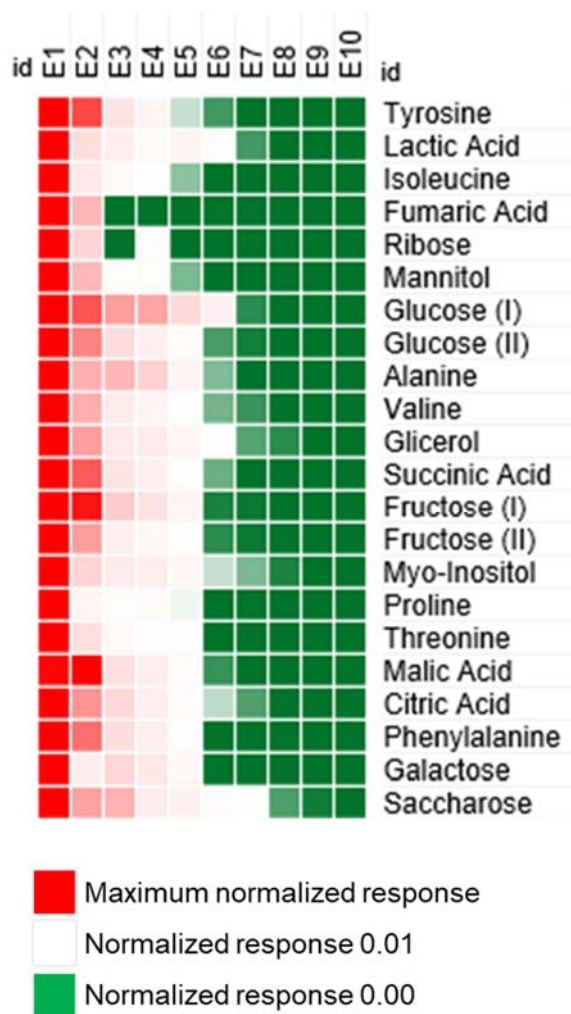


Figure S3. extraction yield results according to Figure S2 process; rows indicate relative metabolite concentration, while each column shows the relative amount by extraction step (from 1 to 10). All targeted compounds were extracted completely by step #9.

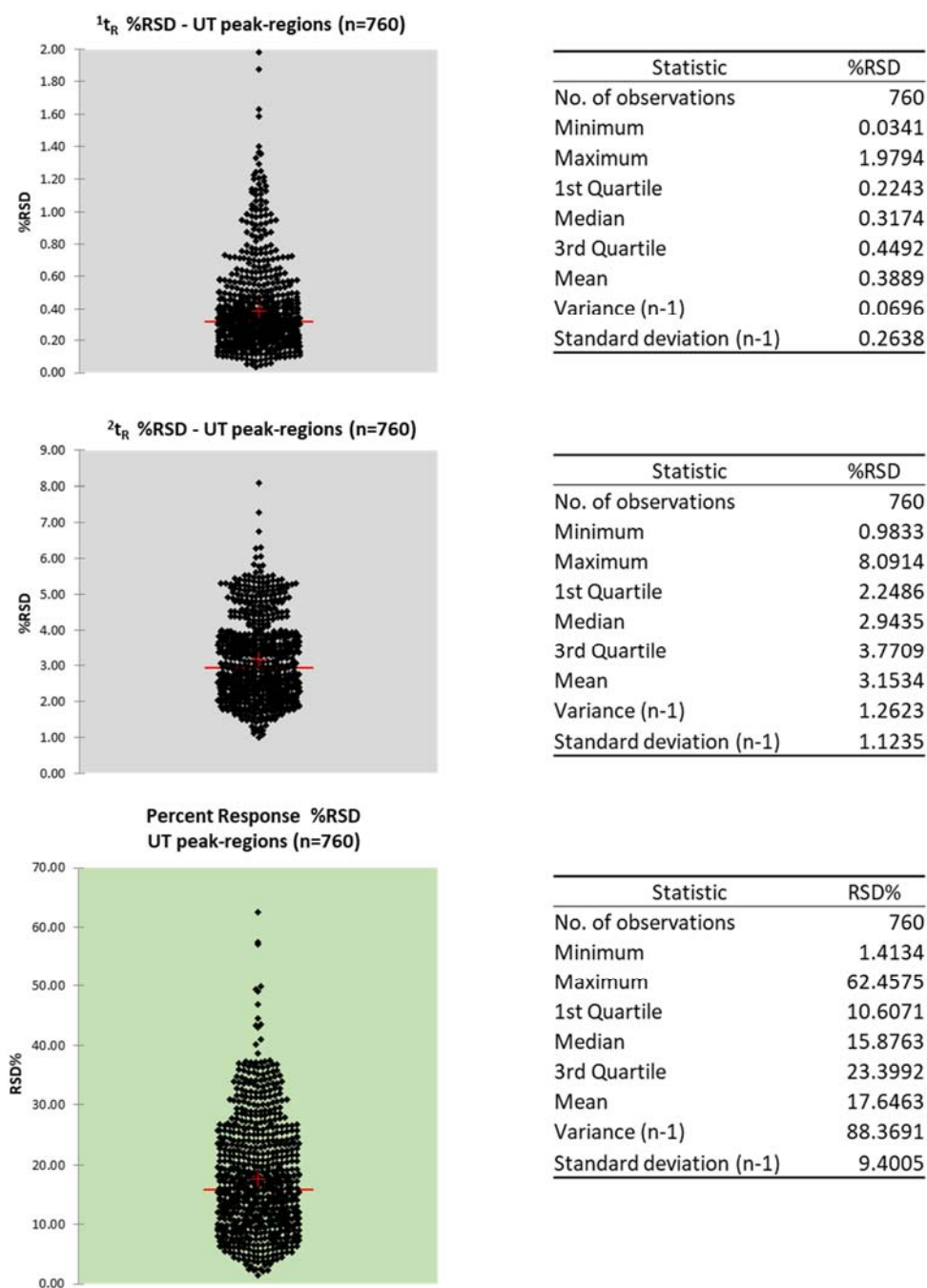


Figure S4. method repeatability is indicated in terms of % relative standard deviation (%RSD) for both chromatographic dimensions ($1t_R$ and $2t_R$) and for % response, collected from UT peak-regions.

