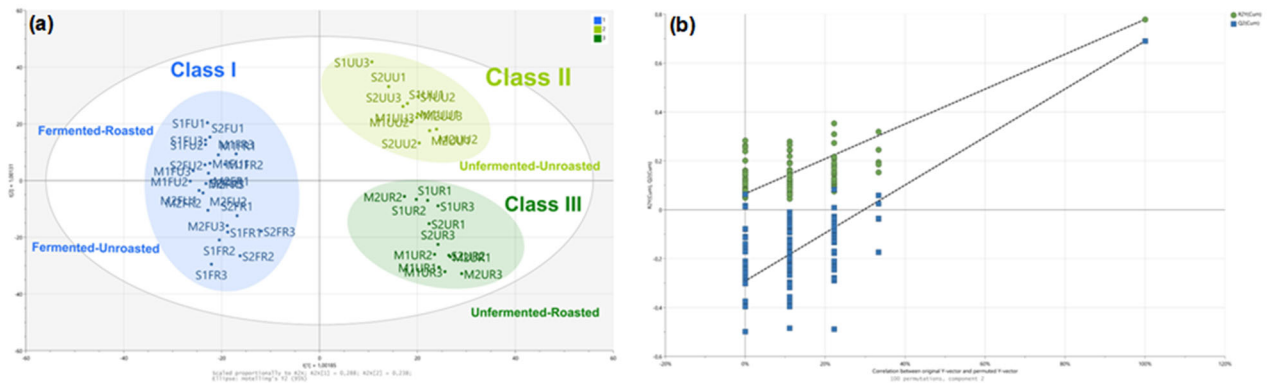


Supplementary Data

This supplementary data is a part of a paper entitled “Effect of Genotypic and Processing on Antioxidant and Chemical Characteristics of Indonesian Cocoa Beans as Revealed by ATR-FTIR Fingerprint and Multivariate Data Analysis”.



Fig S1. Cocoa plant of (a) Sul 1, (b) Sul 2, (c) MCC 01, and (d) MCC 02 genotypes



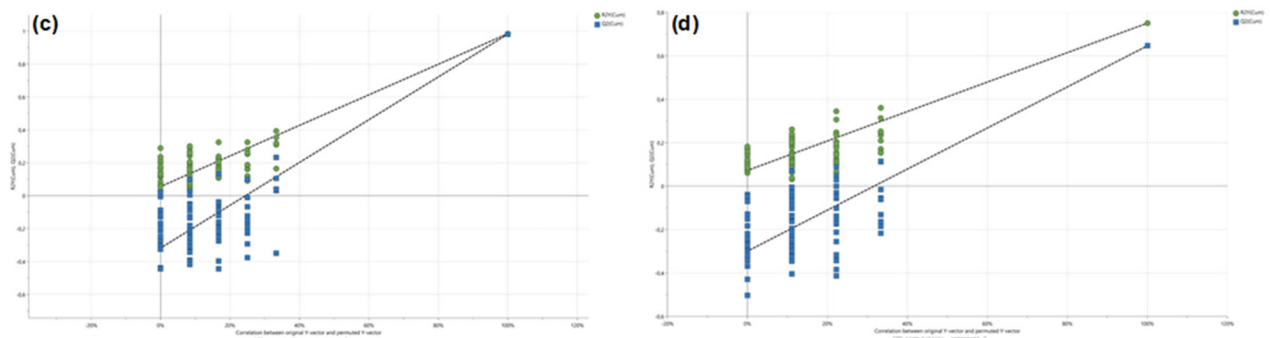


Fig S2. Detail OPLS-DA model in differentiating class: (a) OPLS-DA score plot of cacao bean samples and OPLS-DA permutation model test for differentiating (b) fermented cacao beans, (c) unfermented-unroasted cacao beans, and (d) unfermented-roasted cacao beans

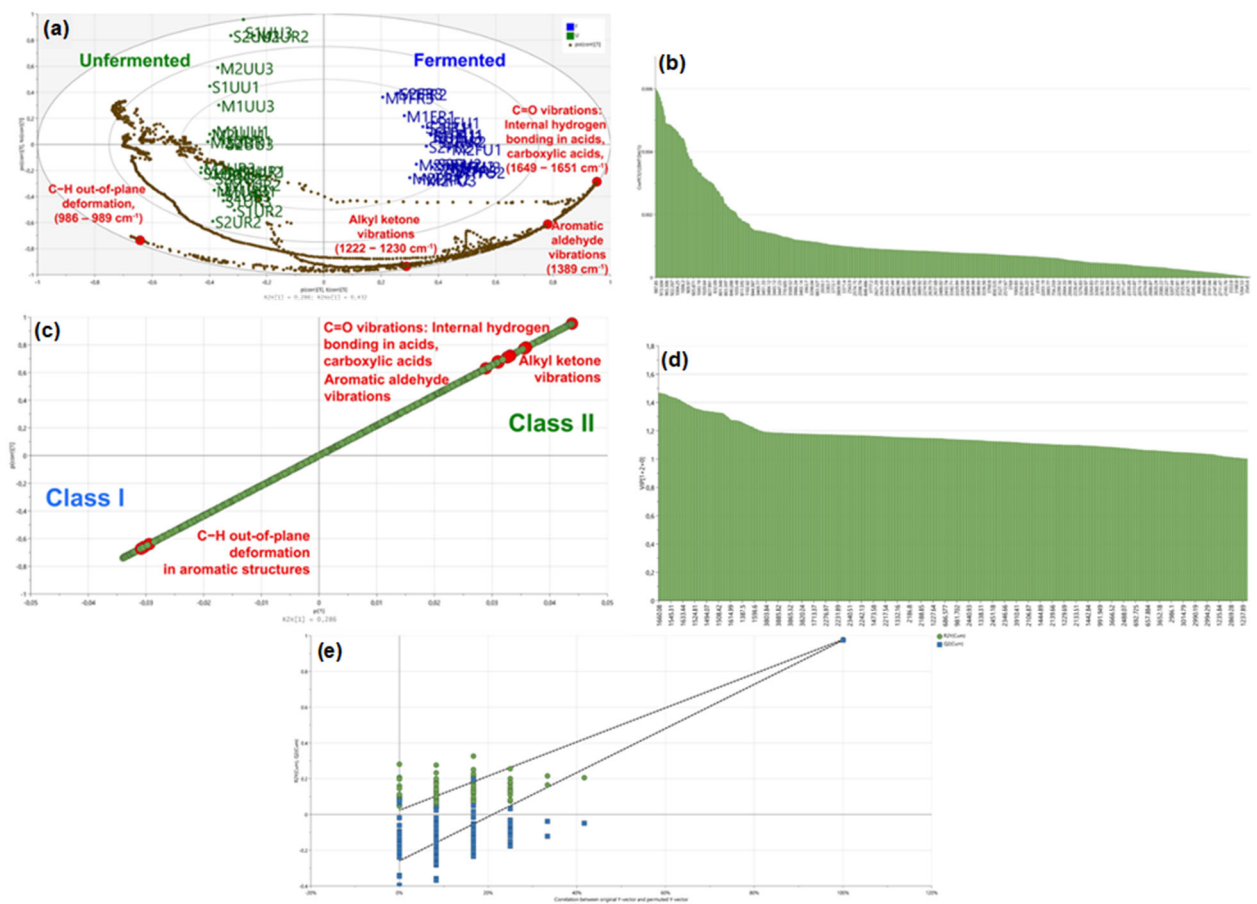


Fig S3. Detail information for OPLS-DA analysis to identify IR unfermented and fermented spectral markers (a) OPLS-DA Score biplot, (b) Coefficient plot, (c) S-Plot of cocoa bean samples, (d) VIP plot, and (E) Permutation and CV-Anova test

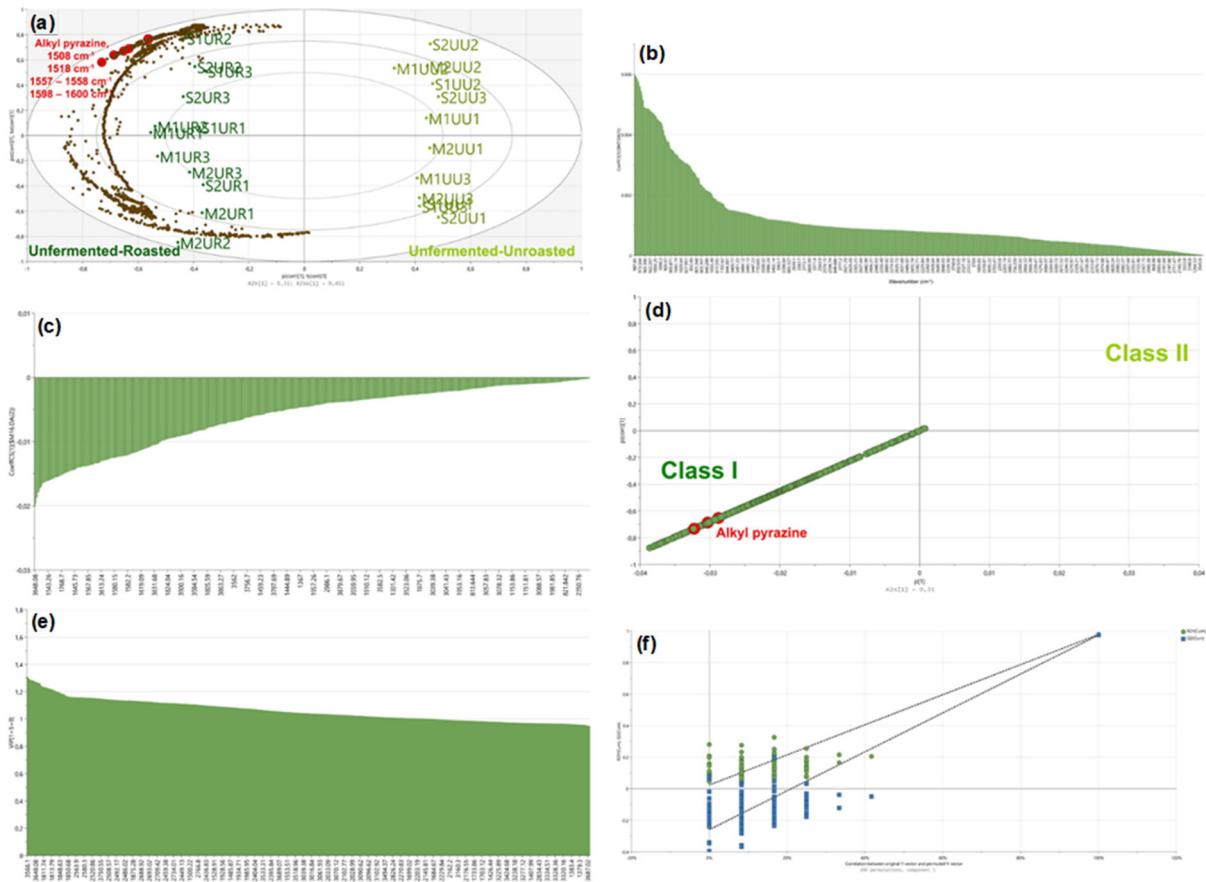
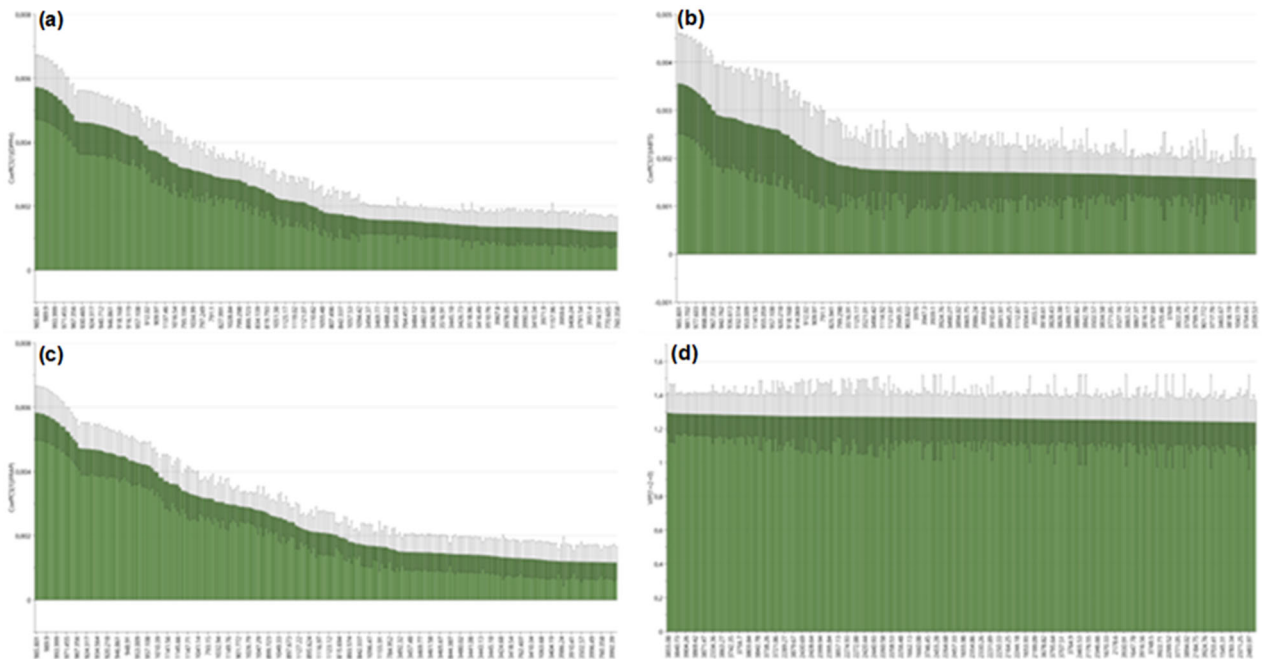
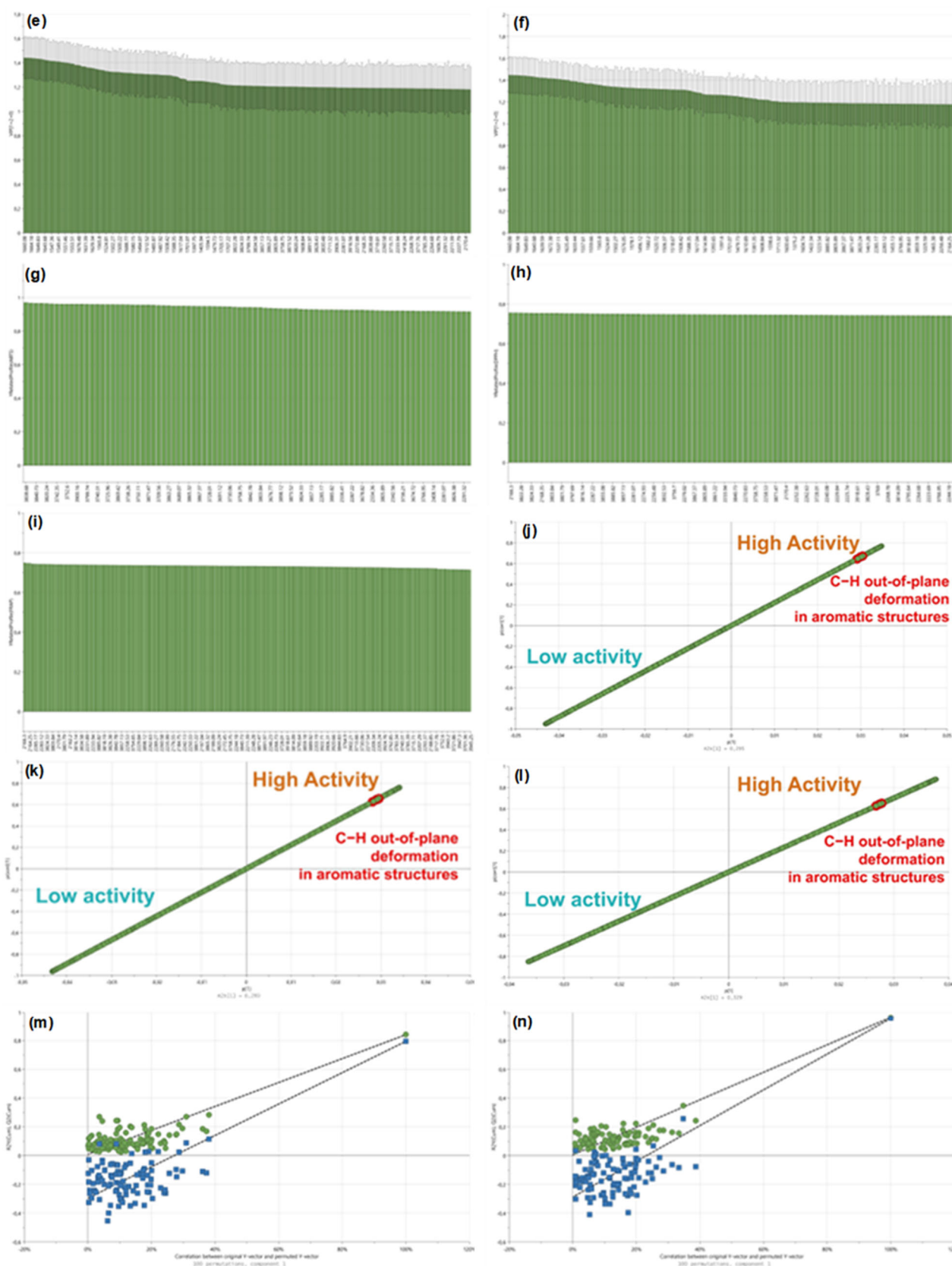


Fig S4. Detail information in OPLS-DA analysis to identify IR unfermented-roasted and unfermented-unroasted spectral markers: (a) OPLS-DA Score biplot, (b) Coefficient plot, (c) S-Plot, (d) VIP plot, and (e) Permutation and CV-Anova test





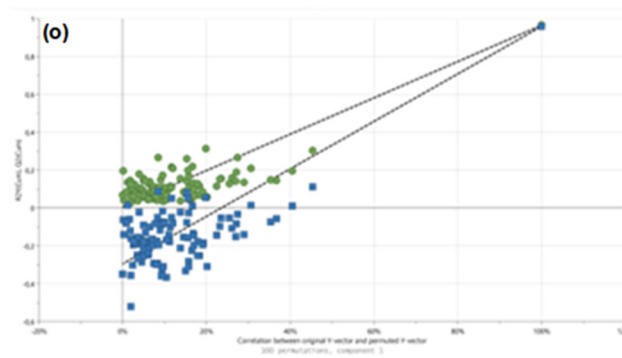


Fig S5. Detail information in OPLS analysis to identify high antioxidant activity spectra markers in DPPH, FRAP, and ABTS assays were based on (a, b, c) Coefficient plot, (d, e, f) VIP plot, (g, h, i) Y-related profile plot, (j, k, l) S-plot, and (m, n, o) Permutation test