

Discrimination efficiency of thermogravimetry and differential scanning calorimetry in soil forensics

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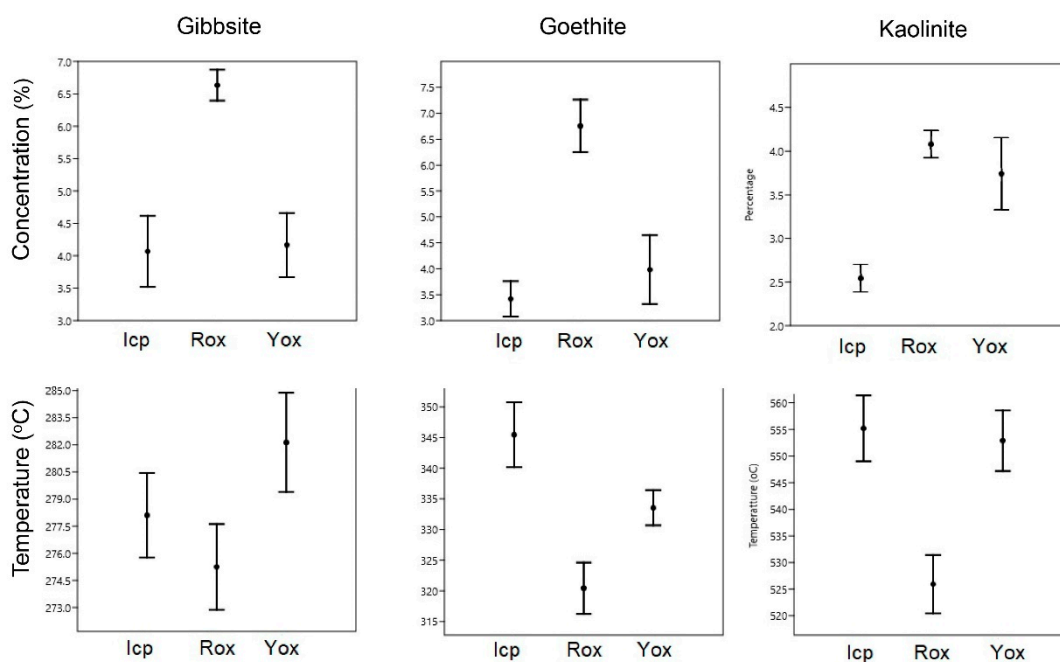


Figure S1. Means (dots) and standard deviations (bars) of Gibbsite, Goethite, Kaolinite, and respective decomposition temperatures of these minerals in Inceptisol (Icp), Reddish Oxisol (Rox), and Yellowish Oxisol (Yox) submitted to thermal analysis.

Table S1. Principal Component Analysis (PCA), Non-metric Multidimensional Scale (NMDS), and Cluster data for selected samples, illustrating the discrimination efficiency (DE) of thermogravimetry (TG) technique.

Test/Sample	Sample at wrong position	Discrimination efficiency (DE)
PCA - variance		
Icp-4, Yox-8, Rox-8	Yox-8c	88.9%
Icp-8, Yox-7, Rox-10		100%
Icp-9, Yox-9, Rox-5		100%
Icp-6, Yox-6, Rox-7		100%
Icp-7, Yox-4, Rox-3		100%
Icp-10, Yox-1, Rox-2		100%
Icp-5, Yox-5, Rox-9	Icp-5c	88.9%
Icp-3, Yox3, Rox-6	Yox-3a,b,c	66.7%
Icp-2, Yox-10, Rox-1		100%
Icp-1, Yox-2, Rox-4		100%
NMDS - Euclidean		
Icp-4, Yox-8, Rox-8	Yox-8c	88.9%
Icp-8, Yox-7, Rox-10		100%
Icp-9, Yox-9, Rox-5		100%
Icp-6, Yox-6, Rox-7		100%
Icp-7, Yox-4, Rox-3		100%
Icp-10, Yox-1, Rox-2		100%
Icp-5, Yox-5, Rox-9	Icp-5c	88.9%
Icp-3, Yox3, Rox-6	Yox-3a	88.9%
Icp-2, Yox-10, Rox-1		100%
Icp-1, Yox-2, Rox-4		100%
Cluster UPGMA - K-means		
Icp-4, Yox-8, Rox-8		100%
Icp-8, Yox-7, Rox-10		100%
Icp-9, Yox-9, Rox-5	Yox-9c	88.9%
Icp-6, Yox-6, Rox-7		100%
Icp-7, Yox-4, Rox-3		100%
Icp-10, Yox-1, Rox-2		100%
Icp-5, Yox-5, Rox-9		100%
Icp-3, Yox3, Rox-6		100%
Icp-2, Yox-10, Rox-1		100%
Icp-1, Yox-2, Rox-4		100%
PCA - variance		
Icp-2, Yox-10, Rox-1		100%
Icp-8, Yox-1, Rox-5		100%
Icp-10, Yox-8, Rox-2		100%
Icp-9, Yox-2, Rox-7		100%
Icp-6, Yox-5, Rox-3		100%
Icp-4, Yox-3, Rox-6	Yox-3a,b,c	66.7%
Icp-3, Yox-4, Rox-9		100%
Icp-7, Yox-6, Rox-8		100%
Icp-1, Yox-7, Rox-10		100%
Icp-5, Yox-9, Rox-4	Icp-5c, Yox-9c	77.8%
NMDS - Euclidean		
Icp-2, Yox-10, Rox-1		100%
Icp-8, Yox-1, Rox-5		100%
Icp-10, Yox-8, Rox-2	Yox-8a	88.9%
Icp-9, Yox-2, Rox-7		100%
Icp-6, Yox-5, Rox-3		100%
Icp-4, Yox-3, Rox-6	Yox-3a,b,c	66.7%
Icp-3, Yox-4, Rox-9		100%
Icp-7, Yox-6, Rox-8		100%

Icp-1, Yox-7, Rox-10		100%
Icp-5, Yox-9, Rox-4	Icp-5c, Yox-9c	77.8%
Cluster UPGMA - K-means		100%
Icp-2, Yox-10, Rox-1		100%
Icp-8, Yox-1, Rox-5		100%
Icp-10, Yox-8, Rox-2	Yox-8b	88.9%
Icp-9, Yox-2, Rox-7		100%
Icp-6, Yox-5, Rox-3		100%
Icp-4, Yox-3, Rox-6	Yox-3b	88.9%
Icp-3, Yox-4, Rox-9		100%
Icp-7, Yox-6, Rox-8		100%
Icp-1, Yox-7, Rox-10		100%
Icp-5, Yox-9, Rox-4		100%
PCA - variance		
Yox-3, Yox-8, Yox-9	Yox-3a, Yox-9c	77.8%
Icp-5, Yox-3, Yox-8, Yox-9	Icp-5c, Yox-3a, Yox-9c	66.7%
NMDS - Euclidean		
Yox-3, Yox-8, Yox-9	Yox-3a, Yox-9c	77.8%
Icp-5, Yox-3, Yox-8, Yox-9	Icp-5c, Yox-3a, Yox-8c, Yox-9c	66.7%
Cluster UPGMA - K-means		
Yox-3, Yox-8, Yox-9	Yox-9c	88.9%
Icp-5, Yox-3, Yox-8, Yox-9	Icp-5c, Yox-3a, Yox-9c	66.7%
PCA - variance		
Icp-6, Icp-9, Yox-7, Yox-9, Rox-9, Rox-6	Yox-9c	94.4%
Icp-4, Icp-5, Yox-4, Yox-5, Rox-1, Rox-8	Icp-5c	94.4%
Icp-1, Icp-8, Yox-3, Yox-6, Rox-3, Rox-10	Yox-3a,b,c	83.3%
Icp-7, Icp-10, Yox-1, Yox-8, Rox-2, Rox-5		100%
Icp-2, Icp-3, Yox-2, Yox-10, Rox-4, Rox-7	Yox-2c	94.4%
NMDS - Euclidean		
Icp-6, Icp-9, Yox-7, Yox-9, Rox-9, Rox-6	Yox-9c	94.4%
Icp-4, Icp-5, Yox-4, Yox-5, Rox-1, Rox-8	Icp-5c	94.4%
Icp-1, Icp-8, Yox-3, Yox-6, Rox-3, Rox-10	Yox-3a,b,c	83.3%
Icp-7, Icp-10, Yox-1, Yox-8, Rox-2, Rox-5		100%
Icp-2, Icp-3, Yox-2, Yox-10, Rox-4, Rox-7		100%
Cluster UPGMA - K-means		
Icp-6, Icp-9, Yox-7, Yox-9, Rox-9, Rox-6		100%
Icp-4, Icp-5, Yox-4, Yox-5, Rox-1, Rox-8	Icp-5c	94.4%
Icp-1, Icp-8, Yox-3, Yox-6, Rox-3, Rox-10	Yox-3a, Yox-6a	88.9%
Icp-7, Icp-10, Yox-1, Yox-8, Rox-2, Rox-5	Icp-7b	94.4%
Icp-2, Icp-3, Yox-2, Yox-10, Rox-4, Rox-7	Yox-10a	94.4%
PCA - variance		
Icp-2, Icp-7, Icp-9, Yox-1, Yox-6, Yox-10, Rox-1, Rox-3, Rox-8	Icp-7b, Icp-9c, Yox-6a, Rox-3a	85.2%

Icp-4, Icp-8, Icp-10, Yox-2, Yox-8, Yox-9, Rox-9, Rox-7, Rox-10	Yox-9c, Rox-9c, Rox-7b	88.9%
Icp-1, Icp-3, Icp-6, Yox-4, Yox-5, Yox-7, Rox-2, Rox-4, Rox-6	Icp-3b, Rox-2a, Rox-6c	88.9%
NMDS - Euclidean		
Icp-2, Icp-7, Icp-9, Yox-1, Yox-6, Yox-10, Rox-1, Rox-3, Rox-8	Icp-7b, C-25-c, LA-22a, LE-3a	85.2%
Icp-4, Icp-8, Icp-10, Yox-2, Yox-8, Yox-9, Rox-9, Rox-7, Rox-10	Icp-10a,b,c, Yox-9c, Rox-9c	81.5%
Icp-1, Icp-3, Icp-6, Yox-4, Yox-5, Yox-7, Rox-2, Rox-4, Rox-6	Rox-6a,b	92.6%
Cluster UPGMA - K-means		
Icp-2, Icp-7, Icp-9, Yox-1, Yox-6, Yox-10, Rox-1, Rox-3, Rox-8	Icp-7a,b,c	88.9%
Icp-4, Icp-8, Icp-10, Yox-2, Yox-8, Yox-9, Rox-9, Rox-7, Rox-10	Rox-7a,b,c, Rox-10b	85.2%
Icp-1, Icp-3, Icp-6, Yox-4, Yox-5, Yox-7, Rox-2, Rox-4, Rox-6	Rox-6a,b,c	88.9%
PCA - variance		
All the samples	Icp-3b, Icp-4a, Icp-5c, Icp-7b, Icp-8c, Icp-9c, Icp-10b, Rox-3a, Rox-5c, Rox-6c, Rox-7a, Yox-3a, Yox-4c, Yox-5b, Yox-6a, Yox-8a,c Yox-9c	80.0%
NMDS - Euclidean		
All the samples	Icp-5c, Icp-7b, Icp-10b, Rox-1c, Rox-3a, Rox-5c, Rox-6c Yox-3a,b,c, Yox-1b, Yox-7a, Yox-9c,	85.6%
Cluster UPGMA - K-means		
All the samples	Icp-5c, Icp-9c, Icp-10a,b,c, Yox-3a, Yox-5b, Yox-10a, Rox-2a, Rox-3a, Rox-9c, Rox-7b, Rox-10c,	85.6%

Table S2. Principal Component Analysis (PCA), Non-metric Multidimensional Scale (NMDS), and Cluster data for selected samples, illustrating the discrimination efficiency (DE) of thermogravimetry (TG) and differential scanning calorimetry (DSC) techniques.

Test/Sample	Sample at wrong position	TG Discrimination efficiency (DE)	DSC Discrimination efficiency (DE)	TG + DSC Discrimination efficiency (DE)
PCA - variance				
Icp-6, Yox-9, Rox-3	Yox-9c	88.9%	0.0%	22.2%
Icp-1, Yox-3, Rox-2		100%	77.8%	100%
Icp-9, Yox-6, Rox-10	Icp-9c	88.9%	22.2%	22.2%
Icp-2, Yox-8, Rox-7		100%	100%	100%
Icp-3, Yox-2, Rox-4	Yox-2b	100%	88.9%	88.9%
Icp-10, Yox-4, Rox-1	Rox-1c	88.9%	88.9%	88.9%
Icp-8, Yox-5, Rox-6	Yox-5c, Rox-6c	77.8%	55.6%	66.7%
Icp-7, Yox-10, Rox-5	Yox-10a, Rox-5c	77.8%	22.2%	33.3%
Icp-5, Yox-1, Rox-9		100%	22.2%	66.7%
Icp-4, Yox-7, Rox-8	Yox-7b	88.9%	66.7%	66.7%
NMDS - Euclidean				
Icp-6, Yox-9, Rox-3	Yox-9c	88.9%	0.0%	22.2%
Icp-1, Yox-3, Rox-2		100%	77.8%	44.4%
Icp-9, Yox-6, Rox-10	Icp-9c	88.9%	22.2%	22.2%
Icp-2, Yox-8, Rox-7		100%	100%	100%
Icp-3, Yox-2, Rox-4		100%	88.9%	88.9%

Icp-10, Yox-4, Rox-1	Rox-1c	88.9%	88.9%	88.9%
Icp-8, Yox-5, Rox-6	Yox-5c, Rox-6c	77.8%	55.6%	77.8%
Icp-7, Yox-10, Rox-5	Yox-10a, Rox-5c	77.8%	55.6%	77.8%
Icp-5, Yox-1, Rox-9	Icp-5c	88.9%	33.3%	66.7%
Icp-4, Yox-7, Rox-8		100%	66.7%	66.7%
Cluster UPGMA - K-means				
Icp-6, Yox-9, Rox-3		100%	66.7%	44.4%
Icp-1, Yox-3, Rox-2		100%	55.6%	55.6%
Icp-9, Yox-6, Rox-10		77.8%	88.9%	77.8%
Icp-2, Yox-8, Rox-7		100%	100%	100%
Icp-3, Yox-2, Rox-4		77.8%	88.9%	88.9%
Icp-10, Yox-4, Rox-1		100%	66.7%	100%
Icp-8, Yox-5, Rox-6		77.8%	55.6%	66.7%
Icp-7, Yox-10, Rox-5		100%	55.6%	100%
Icp-5, Yox-1, Rox-9		55.6%	77.7%	88.9%
Icp-4, Yox-7, Rox-8		100%	55.6%	55.5%
PCA - variance				
Icp-6, Icp-7, Yox-3, Yox-7, Rox-5, Rox-10	Icp-7b	94.4%	77.8%	94.4%
Icp-2, Icp-8, Yox-1, Yox-4, Rox-1, Rox-9	Rox-1c	94.4%	94.4%	100%
Icp-1, Icp-9, Yox-7, Yox-9, Rox-2, Rox-8	Icp-9c, Yox-9c, Rox-2a	83.3%	11.1%	38.9%
Icp-4, Icp-10, Yox-6, Yox-8, Rox-3, Rox-6	Icp-10b, Yox-6a	88.9%	0.0%	16.7%
Icp-3, Icp-5, Yox-2, Yox-10, Rox-4, Rox-7		100%	0.0%	11.1%
NMDS - Euclidean				
Icp-6, Icp-7, Yox-3, Yox-7, Rox-5, Rox-10	Icp-6a	94.4%	77.8%	88.9%
Icp-2, Icp-8, Yox-1, Yox-4, Rox-1, Rox-9		94.4%	83.3%	94.4%
Icp-1, Icp-9, Yox-7, Yox-9, Rox-2, Rox-8	Rox-2a	94.4%	27.8%	38.9%
Icp-4, Icp-10, Yox-6, Yox-8, Rox-2, Rox-6		77.8%	0.0%	16.7%
Icp-3, Icp-5, Yox-2, Yox-10, Rox-4, Rox-7		100%	0.0%	0.0%
Cluster UPGMA - K-means				
Icp-6, Icp-7, Yox-3, Yox-7, Rox-5, Rox-10	Rox-5c, Yox-7c	88.9%	88.9%	88.9%
Icp-2, Icp-8, Yox-1, Yox-4, Rox-1, Rox-9		94.4%	83.3%	88.9%
Icp-1, Icp-9, Yox-7, Yox-9, Rox-2, Rox-8	Icp-1b, Yox-9c,	88.9%	83.3%	83.3%
Icp-4, Icp-10, Yox-6, Yox-8, Rox-2, Rox-6		83.3%	50.0%	66.7%
Icp-3, Icp-5, Yox-2, Yox-10, Rox-4, Rox-7	Yox-2c, Yox-10a	88.9%	55.6%	50%
PCA - variance				
Icp-3, Icp-4, Icp-7, Yox-4, Yox-6, Yox-7, Rox-2, Rox-5, Rox-8	Icp-3b, Icp-7b, Yox-6a, Yox-4c, Yox-7b, Rox-2a, Rox-5c,	74.1%	11.1%	11.1%
Icp-2, Icp-5, Icp-10, Yox-2, Yox-8, Yox-10, Rox-4, Rox-6, Rox-9	Icp-10b, Rox-6c, Rox9c	88.9%	11.1%	11.1%

Icp-1, Icp-6, Icp-8, Yox-3, Yox-5, Yox-9, Rox-1, Rox-3, Rox-10	Yox-5c, Rox-1c	92.6%	0.0%	0.0%
NMDS - Euclidean				
Icp-3, Icp-4, Icp-10, Yox-4, Yox-6, Yox-7, Rox-2, Rox-5, Rox-8		74.1%	11.1%	33.3%
Icp-2, Icp-5, Icp-7, Yox-2, Yox-8, Yox-10, Rox-4, Rox-6, Rox-9		96.3%	11.1%	22.2%
Icp-1, Icp-6, Icp-8, Yox-3, Yox-5, Yox-9, Rox-1, Rox-3, Rox-10		33.3%	22.2%	22.2%
Cluster UPGMA - K-means				
Icp-3, Icp-4, Icp-10, Yox-4, Yox-6, Yox-7, Rox-2, Rox-5, Rox-8		88.9%	85.2%	85.2%
Icp-2, Icp-5, Icp-7, Yox-2, Yox-8, Yox-10, Rox-4, Rox-6, Rox-9		92.6%	77.8%	74.1%
Icp-1, Icp-6, Icp-8, Yox-3, Yox-5, Yox-9, Rox-1, Rox-3, Rox-10		88.9%	63.0%	74.1%
PCA - variance				
Icp-1, Icp-3, Icp-6, Icp-5 Yox-1, Yox-4, Yox-7, Yox-8, Rox-2, Rox-3, Rox-5, Rox-9		33.3%	0.0%	0.0%
Icp-2, Icp-4, Icp-7, Icp-10, Yox-3, Yox-5, Yox-6, Yox-9, Rox-4, Rox-6, Rox-8, Rox-10		41.7%	0.0%	0.0%
NMDS - Euclidean				
Icp-1, Icp-3, Icp-5, Icp-6 Yox-1, Yox-4, Yox-7, Yox-8, Rox-2, Rox-3, Rox-5, Rox-9		25.0%	0.0%	0.0%
Icp-2, Icp-4, Icp-7, Icp-10, Yox-3, Yox-5, Yox-6, Yox-9, Rox-4, Rox-6, Rox-8, Rox-10		41.7%	0.0%	0.0%
Cluster UPGMA - K-means				
Icp-1, Icp-3, Icp-6, Icp-5 Yox-1, Yox-4, Yox-7, Yox-8, Rox-2, Rox-3, Rox-5, Rox-9		94.4%	69.4%	80.6%
Icp-2, Icp-4, Icp-7, Icp-10, Yox-3, Yox-5, Yox-6, Yox-9, Rox-4, Rox-6, Rox-8, Rox-10		97.2%	75.0%	83.3%
PCA - variance				
Icp-1, Icp-2, Icp-3, Icp-4, Icp-5, Yox-6, Yox-7, Yox-8, Yox-9, Yox-10, Rox-1, Rox-2, Rox-3, Rox-4, Rox-5		86.7%	0.0%	0.0%
Icp-6, Icp-7, Icp-8, Icp-9, Icp-10, Yox-1, Yox-2, Yox-3, Yox-4, Yox-5,		97.8%	0.0%	0.0%

Rox-6, Rox-7, Rox-8, Rox-9, Rox-10				
NMDS - Euclidean				
Icp-1, Icp-2, Icp-3, Icp-4, Icp-5, Yox-6, Yox-7, Yox-8, Yox-9, Yox-10, Rox-1, Rox-2, Rox-3, Rox-4, Rox-5		91.1%	0.0%	0.0%
Icp-6, Icp-7, Icp-8, Icp-9, Icp-10, Yox-1, Yox-2, Yox-3, Yox-4, Yox-5, Rox-6, Rox-7, Rox-8, Rox-9, Rox-10		93.3%	0.0%	0,0%
Cluster UPGMA - K-means				
Icp-1, Icp-2, Icp-3, Icp-4, Icp-5, Yox-6, Yox-7, Yox-8, Yox-9, Yox-10, Rox-1, Rox-2, Rox-3, Rox-4, Rox-5		86.7%	64.4%	62.2%
Icp-6, Icp-7, Icp-8, Icp-9, Icp-10, Yox-1, Yox-2, Yox-3, Yox-4, Yox-5, Rox-6, Rox-7, Rox-8, Rox-9, Rox-10		91.1%	73.3%	84.4%
Inceptisol (Icp)				
PCA - variance				
Icp-4, Icp-6		100%	66.7%	66.7%
Icp-2, Icp-5		100%	83.3%	83.3%
Icp-3, Icp-8		100%	100%	100%
Icp-7, Icp-10		100%	100%	100%
Icp-1, Icp-9		100%	83.3%	83.3%
Icp-1, Icp-5, Icp-7		100%	33.3%	33.3%
Icp-2, Icp-8, Icp-10		100%	100%	100%
Icp-3, Icp-6, Icp-9		100%	77.8%	77.8%
Icp-1, Icp-2, Icp-6, Icp-7		100%	83.3%	91.7%
Icp-4, Icp-8, Icp-9, Icp-10		83.3%	25.0%	25.0%
Icp-2, Icp-3, Icp-4, Icp-8, Icp-9		91.7%	41.7%	16.7%
Icp1, Icp-5, Icp-6, Icp-7, Icp-10		100%	41.7%	41.7%
All Icp samples		83.3%	10.0%	10.0%
NMDS - Euclidean				
Icp-4, Icp-6		100%	66.7%	66.7%
Icp-2, Icp-5		100%	83.3%	83.3%
Icp-3, Icp-8		100%	100%	100%
Icp-7, Icp-10		100%	100%	100%
Icp-1, Icp-9		100%	83.3%	83.3%
Icp-1, Icp-5, Icp-7		100%	33.3%	66.7%
Icp-2, Ico-8, Icp-10		100%	88.9%	88.9%
Icp-3, Icp-6, Icp-9		100%	66.7%	77.8%
Icp-1, Icp-2, Icp-6, Icp-7		100%	83.3%	91.7%
Icp-4, Icp-8, Icp-9, Icp-10		83.3%	25.0%	25.0%
Icp-2, Icp-3, Icp-4, Icp-8, Icp-9		100%	41.7%	66.7%
Icp1, Icp-5, Icp-6, Icp-7, Icp-10		83.3%	66.7%	75.0%
All Icp samples		86.7%	6.7%	6.7%
Cluster UPGMA - K-means				
Icp-4, Icp-6		100%	66.7%	83.3%

Icp-2, Icp-5		100%	83.3%	83.3%
Icp-3, Icp-8		100%	100%	100%
Icp-7, Icp-10		100%	100%	100%
Icp-1, Icp-9		100%	83.3%	83.3%
Icp-1, Icp-5, Icp-7		100%	88.9%	66.7%
Icp-2, Ico-8, Icp-10		100%	88.9%	100%
Icp-3, Icp-6, Icp-9		100%	88.9%	77.8%
Icp-1, Icp-2, Icp-6, Icp-7		91.7%	83.3%	91.7%
Icp-4, Icp-8, Icp-9, Icp-10		91.7%	83.3%	58.3%
Icp-2, Icp-3, Icp-4, Icp-8, Icp-9		100%	66.7%	58.3%
Icp1, Icp-5, Icp-6, Icp-7, Icp-10		75%	58.3%	66.7%
All Icp samples		80.0%	60.0%	70.0%
Reddish Oxisol (Rox)				
PCA - variance				
Rox-2, Rox-10		66.7%	66.7%	66.7%
Rox-1, Rox-6		66.7%	66.7%	66.7%
Rox-4, Rox-8		33.3%	50.0%	33.3%
Rox-5, Rox-7		33.3%	33.3%	33.3%
Rox-3, Rox-9		66.7%	50.0%	50.0%
Rox-4, Rox-5, Rox-7		77.8%	66.7%	100%
Rox-1, Rox-3, Rox-10		88.9%	66.7%	33.3%
Rox-2, Rox-6, Rox-9		100%	100%	100%
Rox-3, Rox-5, Rox-6, Rox-7		58.3%	0.0%	0.0%
Rox-1, Rox-2, Rox-4, Rox-9		88.9%	41.7%	66.7%
Rox-4, Rox-6, Rox-7, Rox-8, Rox-10		33.3%	53.3%	60.0%
Rox-1, Rox-2, Rox-3, Rox-5, Rox-9		60.0%	0.0%	0.0%
All Rox samples		30.0%	0.0%	0.0%
NMDS - Euclidean				
Rox-2, Rox-10		66.7%	66.7%	66.7%
Rox-1, Rox-6		66.7%	66.7%	33.3%
Rox-4, Rox-8		33.3%	50.0%	33.3%
Rox-5, Rox-7		33.3%	0.0%	33.3%
Rox-3, Rox-9		83.3%	50.0%	50.0%
Rox-4, Rox-5, Rox-7		66.7%	66.7%	100%
Rox-1, Rox-3, Rox-10		88.9%	33.3%	22.2%
Rox-2, Rox-6, Rox-9		100%	88.9%	88.9%
Rox-3, Rox-5, Rox-6, Rox-7		16.7%	0.0%	25.0%
Rox-1, Rox-2, Rox-4, Rox-9		88.9%	75.0%	66.7%
Rox-4, Rox-6, Rox-7, Rox-8, Rox-10		40.0%	40.0%	73.3%
Rox-1, Rox-2, Rox-3, Rox-5, Rox-9		60.0%	0.0%	0.0%
All Rox samples		33.3%	0.0%	0.0%
Cluster UPGMA - K-means				
Rox-2, Rox-10		100%	100%	100%
Rox-1, Rox-6		100%	83.3%	83.3%
Rox-4, Rox-8		100%	100%	100%
Rox-5, Rox-7		100%	100%	100%
Rox-3, Rox-9		100%	83.3%	83.3%
Rox-4, Rox-5, Rox-7		100%	88.9%	33.3%

Rox-1, Rox-3, Rox-10		100%	66.7%	66.7%
Rox-2, Rox-6, Rox-9		100%	88.9%	66.7%
Rox-3, Rox-5, Rox-6, Rox-7		83.3%	25.0%	25.0%
Rox-1, Rox-2, Rox-4, Rox-9		58.3%	83.3%	83.3%
Rox-4, Rox-6, Rox-7, Rox-8, Rox-10		93.3%	73.3%	86.7%
Rox-1, Rox-2, Rox-3, Rox-5, Rox-9		86.7%	40.0%	73.3%
All Rox samples		80.0%	70.0%	83.3%
Yelowish Oxisol (Yox)				
PCA - variance				
Yox-5, Yox-7	Yox-5c	83.3%	83.3%	83.3%
Yox-1, Yox-3	Yox-3c	83.3%	0.0%	83.3%
Yox-4, Yox-6	Yox-4c, Yox-6a	66.7%	66.7%	66.7%
Yox-2, Yox-9	Yox-2c, Yox-9c	66.7%	0.0%	66.7%
Yox-8, Yox-10	Yox-8b, Yox-10c	66.7%	33.3%	83.3%
Yox-2, Yox-3, Yox-9		100%	55.6%	55.6%
Yox-5, Yox-7, Yox-10	Yox-5c	88.9%	77.8%	55.6%
Yox-1, Yox-4, Yox-6		100%	66.7%	100%
Yox-1, Yox-3, Yox-4, Yox-10		100%	0.0%	0.0%
Yox-2, Yox-5, Yox-6, Yox-7		33.3%	16.7%	16.7%
Yox-4, Yox-5, Yox-6, Yox-7, Yox-10		86.7%	26.7%	40.0%
Yox-1, Yox-2, Yox-3, Yox-8, Yox-9		93.3%	13.3%	0.0%
All Yox samples		56.7%	20.0%	16.7%
NMDS - Euclidean				
Yox-5, Yox-7	Yox-5c	83.3%	83.3%	83.3%
Yox-1, Yox-3	Yox-3c	83.3%	0.0%	83.3%
Yox-4, Yox-6	Yox-4c, Yox-6a	66.7%	66.7%	66.7%
Yox-2, Yox-9	Yox-9c	83.3%	0.0%	0.0%
Yox-8, Yox-10	Yox-8a, Yox-10c	66.7%	0.0%	33.3%
Yox-2, Yox-3, Yox-9		66.7%	33.3%	55.6%
Yox-5, Yox-7, Yox-10	Yox-5c	88.9%	77.8%	55.6%
Yox-1, Yox-4, Yox-6		100%	55.6%	66.7%
Yox-1, Yox-3, Yox-4, Yox-10		100%	91.7%	91.7%
Yox-2, Yox-5, Yox-6, Yox-7,		41.7%	16.7%	16.7%
Yox-4, Yox-5, Yox-6, Yox-7, Yox-10		86.7%	46.7%	26.7%
Yox-1, Yox-2, Yox-3, Yox-8, Yox-9		86.7%	20.0%	73.3%
All Yox samples		60.0%	20.0%	16.7%
Cluster UPGMA - K-means				
Yox-5, Yox-7	Yox-5c	83.3%	100%	100%
Yox-1, Yox-3		100%	100%	100%
Yox-4, Yox-6		100%	100%	100%
Yox-2, Yox-9		100%	100%	83.3%
Yox-8, Yox-10		100%	100%	83.3%
Yox-2, Yox-3, Yox-9		100%	88.9%	55.6%

Yox-5, Yox-7, Yox-10		88.9%	88.9%	77.8%
Yox-1, Yox-4, Yox-6		55.6%	100%	100%
Yox-1, Yox-3, Yox-4, Yox-10		91.7%	66.7%	66.7%
Yox-2, Yox-5, Yox-6, Yox-7		91.7%	66.7%	66.7%
Yox-4, Yox-5, Yox-6, Yox-7, Yox-10		80.0%	60.0%	60.0%
Yox-1, Yox-2, Yox-3, Yox-8, Yox-9		100%	73.3%	60.0%
All Yox samples		86.7%	63.3%	73.3%