

PERMANOVA

Permutational MANOVA

Resemblance worksheet

Name: Resem3

Data type: Similarity

Selection: All

Transform: Square root

Resemblance: S17 Bray Curtis similarity

Sums of squares type: Type III (partial)

Fixed effects sum to zero for mixed terms

Permutation method: Unrestricted permutation of raw data

Number of permutations: 999

Factors

Name	Abbrev.	Type	Levels
time	ti	Random	7

PERMANOVA table of results

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
ti	6	26755	4459.2	1.4527	0.026	996
Res	56	1.719E5	3069.7			
Total	62	1.9866E5				

Details of the expected mean squares (EMS) for the model

Source	EMS
ti	$1 \cdot V(\text{Res}) + 8.9841 \cdot V(\text{ti})$
Res	$1 \cdot V(\text{Res})$

Construction of Pseudo-F ratio(s) from mean squares

Source	Numerator	Denominator	Num.df	Den.df
ti	$1 \cdot \text{ti}$	$1 \cdot \text{Res}$	6	56

Estimates of components of variation

Source	Estimate	Sq.root
V(ti)	154.67	12.436
V(Res)	3069.7	55.405