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## Data S1

**Linear discriminant function analysis (LDA) of  $\delta^{13}\text{C}$  in essential amino acids of resources and consumers ( $^{13}\text{C}$  fingerprinting).**

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## File list (files found within DataS1.zip)

LDA\_trophic\_chains.Rmd

## Description

LDA\_trophic\_chains.Rmd – R code using the MASS package for performing LDA analysis with amino acid  $\delta^{13}\text{C}$  values of consumers and their resources. For this analysis, we selected the four most informative essential amino acids, Ile, Leu, Phe, and Val, for separating the three classifier groups; plants, fungi and bacteria. This classifier model is used to predict group-membership of the consumer samples. The confidence ellipses are calculated from the means and standard deviations of LDA data points for each class, and decision boundaries are created by finding the set of points in which the probabilities of belonging to one or the other class is equal. These possible pairs are then transformed into a data frame. The visualization package ggplot is used to visualize the LDA scores of consumers and their resources, the 95% confidence intervals, and decision boundaries.

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