**Supplementary File 2**

Appendix A1: Code of general linear models.

proc glm data = *SOURCE.FILE*;

class co2 Nitrogen ring ;

model *RESPONSE.VARIABLE* = co2 ring(co2) Nitrogen

specrich

co2\*Nitrogen

co2\*specrich

Nitrogen\*specrich

co2\*Nitrogen\*specrich

/ss3;

random ring(co2)/test;

run; quit;