

Contents

Preface	vii
PAWLOWSKY-GLAHN, V. & EGOZCUE, J. J. Compositional data and their analysis: an introduction	1
Applications to the solution of real geological problems	
Ó.KOVÁCS, L., KOVÁCS, G. P., MARTÍN-FERNÁNDEZ, J. A. & BARCELÓ-VIDAL, C. Major-oxide compositional discrimination in Cenozoic volcanites of Hungary	11
THOMAS, C. W. & AITCHISON, J. Log-ratios and geochemical discrimination of Scottish Dalradian limestones: a case study	25
GORELIKOVA, N., TOLOSANA-DELGADO, R., PAWLOWSKY-GLAHN, V., KHANCHUK, A. & GONEVCHUK, V. Discriminating geodynamical regimes of tin ore formation using trace element composition of cassiterite: the <i>Sikhote'Alin</i> case (Far Eastern Russia)	43
REYMENT, R. A. On stability of compositional canonical variate vector components	59
BUCCIANTI, A., TASSI, F. & VASELLI, O. Compositional changes in a fumarolic field, Vulcano Island, Italy: a statistical case study	67
WELTJE, G. J. Ternary sandstone composition and provenance: an evaluation of the 'Dickinson model'	79
Software and related issues	
THIÓ-HENESTROSA, S. & MARTÍN-FERNÁNDEZ, J. A. Detailed guide to CoDaPack: a freeware compositional software	101
VAN DER BOOGAART, K. G. & TOLOSANA-DELGADO, R. Compositional data analysis with 'R' and the package 'compositions'	119
BREN, M., BATAGELJ, V. Visualization of three- and four-part (sub)compositions with R	129
General theory and methods	
EGOZCUE, J. J. & PAWLOWSKY-GLAHN, V. Simplicial geometry for compositional data	145
DAUNIS-I-ESTADELLA, J., BARCELÓ-VIDAL, C. & BUCCIANTI, A. Exploratory compositional data analysis	161

BUCCIANTI, A., MATEU-FIGUERAS, G. & PAWLOWSKY-GLAHN, V. Frequency distributions and natural laws in geochemistry	175
MARTÍN-FERNÁNDEZ, J. A. & THIÓ-HENESTROSA, S. Rounded zeros: some practical aspects for compositional data	191
BARRABÉS, E. & MATEU-FIGUERAS, G. Is the simplex open or closed? (some topological concepts)	203
Index	207