

Contents

1	Introduction to Archaeological Ceramic Analysis & Thin Section Petrography	
1.1	Thin Section Ceramic Petrography	4
1.2	A Brief History of Ceramic Petrography	10
1.3	Publications & Academic Forums	16
2	Sampling, Thin Section Preparation & Analysis	
2.1	Sampling Archaeological Ceramics	21
2.2	Thin Section Preparation	23
2.3	Analytical Equipment	33
2.4	Other Resources	35
3	Composition of Archaeological Ceramics in Thin Section	
3.1	The Clay Matrix	39
3.2	Particulate Inclusions	44
3.3	Voids	61
4	Grouping & Characterization of Archaeological Ceramics in Thin Section	
4.1	Visual Classification & Description	71
4.1.1	Grouping	73
4.1.2	Description	79
4.1.3	A Modification of the Whitbread Descriptive System	80
4.1.3.1	Inclusions	83
4.1.3.2	Clay Matrix	93
4.1.3.3	Voids	97
4.1.3.4	Comments Section/Fabric Summary	100
4.2	Quantitative Characterization & Statistical Grouping	102
4.2.1	Textural Analysis	103
4.2.2	Modal Analysis	105
4.2.3	Data Collection	106
4.2.4	Statistical Classification	111
5	Interpreting Ceramic Raw Materials & Provenance	
5.1	The Underlying Principle	117
5.2	Interpreting Ceramic Raw Materials	119
5.3	Resolution & Accuracy of Provenance Determination	122
5.4	Objectives & Sampling	129
5.5	Geological Literature	131
5.6	Raw Material Prospecting & Analysis	131
5.7	Quantitative Data	137
5.8	Micropalaeontology	140
5.9	Interpreting Provenance Data	142

6 Reconstructing Ceramic Technology	
6.1 Raw Material Selection	153
6.2 Raw Material Processing & Paste Preparation	154
6.2.1 Crushing, Cleaning, Sieving & Levigation	154
6.2.2 Temper & Clay Mixing	156
6.2.3 Ageing & Working	171
6.3 Forming Methods	174
6.4 Finishing	181
6.5 Drying	185
6.6 Firing	188
6.6.1 Firing Temperature	190
6.6.2 Atmosphere of Firing	198
6.6.3 Firing Regime	200
6.7 Ceramic Use & Function	203
6.8 Post-Depositional Alteration of Archaeological Ceramics	204

7 Petrography of Ceramic Building Materials, Metallurgical Ceramics & Plaster	
7.1 Ceramic Building Materials	213
7.2 Earthen Construction Materials	217
7.3 Refractory Ceramics	219
7.4 Other Ceramic Objects	221
7.5 Petrography of Cementitious Materials	224
7.6 Stoneware, Fritware & Porcelain	231

Appendix Petrographic Fabric Descriptions	
A.1 Unimodal Fabric Description	237
A.2 Bimodal Fabric Description	239
A.3 Fabric Summary	242