ISO 13099-3:2014-07 (E)

Colloidal systems - Methods for zeta potential determination - Part 3: Acoustic methods

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms,definitionsandsymbols 1
3.1 Electric double layer (EDL) 1
3.2 Electrokinetic phenomena 3
3.3 Electroacoustic phenomena 4

4 Symbols 6

5 Principle 7

6 Zetapotentialprobedesignelements 8

7 Determinationofthedynamicelectrophoreticmobility 8
7.1 Subtracting background electroacoustic signal generated by ions 9

8 Calculation of zeta potential 10
8.1 General 10
8.2 Isolated double layers 10
8.3 Overlapped double layers 13

9 Operational procedures 13
9.1 Requirements 13
9.2 Verification 14
9.3 Sources of measurement error 15

Annex A (informative)Electroacoustics:highfrequencyelectrokinetics 16

Annex B (informative)Verificationofelectroacoustictheories 17

Bibliography 20