

# ISO 13099-2:2012-06 (E)

## Colloidal systems - Methods for zeta-potential determination - Part 2: Optical methods

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms, definitions and symbols .....</b>	<b>1</b>
<b>3.1</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>3.2</b>	<b>Symbols .....</b>	<b>2</b>
<b>4</b>	<b>Principles .....</b>	<b>3</b>
<b>5</b>	<b>Microscopic methods .....</b>	<b>4</b>
<b>6</b>	<b>Electrophoretic light-scattering (ELS) method .....</b>	<b>5</b>
<b>6.1</b>	<b>General .....</b>	<b>5</b>
<b>6.2</b>	<b>Cell design .....</b>	<b>5</b>
<b>6.3</b>	<b>Reference beam optical arrangement .....</b>	<b>6</b>
<b>6.4</b>	<b>Cross-beam optical arrangement .....</b>	<b>6</b>
<b>6.5</b>	<b>Signal processing .....</b>	<b>7</b>
<b>6.6</b>	<b>Determination of electrophoretic mobility .....</b>	<b>9</b>
<b>7</b>	<b>Calculation of zeta-potential .....</b>	<b>9</b>
<b>8</b>	<b>Operational procedures .....</b>	<b>10</b>
<b>8.1</b>	<b>Requirements .....</b>	<b>10</b>
<b>8.2</b>	<b>Verification .....</b>	<b>12</b>
<b>8.3</b>	<b>Sources of measurement error .....</b>	<b>13</b>
<b>8.4</b>	<b>Test report .....</b>	<b>15</b>
	<b>Annex A (informative) Electroosmosis within capillary cells .....</b>	<b>16</b>
	<b>Bibliography .....</b>	<b>19</b>