

# ISO 16087:2013-10 (E)

## Implants for surgery - Roentgen stereophotogrammetric analysis for the assessment of migration of orthopaedic implants

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Terms and definitions .....	1
3	Measurement .....	3
3.1	Size of markers .....	3
3.2	Virtual markers .....	3
3.3	Number and distribution of markers .....	4
3.4	Mean error of rigid body fitting .....	4
3.5	Condition number .....	4
3.6	Three-dimensional implant models .....	4
4	Radiographic arrangement .....	4
5	Calibration cages and reference plates .....	4
6	Radiographs .....	5
6.1	General .....	5
6.2	Double examinations .....	5
7	Software .....	5
8	Coordinate systems .....	5
8.1	Global coordinate system .....	5
8.2	Implant coordinate system .....	5
8.3	Reference rigid body .....	6
9	Migration .....	6
9.1	Translations .....	6
9.2	Rotations .....	6
10	Maximum total point motion .....	7
10.1	General .....	7
10.2	Signed versus unsigned values .....	8
11	Validation .....	8
11.1	Accuracy .....	8
11.2	Precision .....	8
12	Practical issues .....	8
12.1	Weight bearing .....	8
12.2	Follow-up intervals .....	9
12.3	Radiation dose .....	9
12.4	Exclusion of patients .....	9
13	Standardised output .....	9

<b>Annex A (informative) Relevant formulae .....</b>	<b>11</b>
<b>Bibliography .....</b>	<b>12</b>