

# DIN EN ISO 10111:2019-04 (E)

## Metallic and other inorganic coatings - Measurement of mass per unit area - Review of gravimetric and chemical analysis methods (ISO 10111:2019)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		3
Foreword .....		4
1	Scope .....	5
2	Normative references .....	5
3	Terms and definitions .....	5
4	Principle .....	6
5	Special equipment .....	6
6	Preparation of test specimen .....	6
6.1	Size .....	6
6.2	Shape .....	6
6.3	Edge condition .....	6
6.4	Heat treatment .....	6
7	Measurement of coated area .....	7
7.1	Measurement method .....	7
7.2	Surface measuring equipment .....	7
7.2.1	Geometrical (projected) surface area .....	7
7.2.2	Surface area increase due to roughness (optional) .....	7
7.3	Number of measurements .....	7
8	Determination of mass of coating by chemical analysis .....	8
8.1	General .....	8
8.2	Restrictions .....	8
9	Gravimetric determination of mass of coating .....	8
9.1	Specimen size .....	8
9.2	Limitations .....	8
9.3	Restrictions .....	8
9.4	Gravimetric analysis equipment .....	8
9.5	Procedure .....	9
9.5.1	General .....	9
9.5.2	Difference method with dissolution of the coating .....	9
9.5.3	Direct weighing method with dissolution of the substrate .....	9
9.5.4	Difference method without dissolution .....	9
10	Calculations .....	10
10.1	Surface density .....	10
10.2	Thickness .....	10
Annex A (informative) Reagents for selective dissolution of metal layers .....		11
Bibliography .....		15