

DIN EN 1811:2023-04 (E)

Reference test method for release of nickel from all post assemblies which are inserted into pierced parts of the human body and articles intended to come into direct and prolonged contact with the skin

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Principle of the procedure	7
5	Reagents	7
6	Apparatus	8
7	Samples	9
7.1	Number of test samples	9
7.2	Sample area	9
7.2.1	Definition of sample area	9
7.2.2	Determination of sample area	9
7.2.3	Masking of areas other than sample area	9
7.3	Sample degreasing before testing	10
8	Procedure	10
8.1	Preparation of test solution	10
8.2	Release procedure	10
8.3	Blank tests	11
8.4	Determination of nickel	11
8.4.1	General	11
8.4.2	Calibration solutions	11
8.4.3	Detection limit and quantification limit	11
8.4.4	Number of replicate measurements	12
9	Calculations	12
9.1	Nickel release	12
9.2	Interpretation of results	12
9.2.1	General	12
9.2.2	Conformity assessment	12
9.2.3	Uncertainty budget	13
10	Test report	13
Annex A (informative)	Expanded measurement uncertainty of the test procedure and compliance assessment	15
Annex B (informative)	Preparation of all post assemblies which are inserted into pierced parts of the human body and of articles intended to come into direct and prolonged contact with the skin prior to nickel testing	16

B.1	General	16
B.2	Principle	16
B.3	Determination of the nickel release test method	16
B.4	Determination of surfaces coming into direct and prolonged contact with the skin or pierced parts of the body	16
B.4.1	Procedures for homogeneous and inhomogeneous articles	16
B.4.2	Jewellery products and watches	21
B.4.3	Other articles such as textiles, footwear, garments, leather goods and mobile phones ...	26
B.5	Methods of determining the surface areas	27
B.5.1	Surface area measurements	27
B.5.2	Minimum surface area	27
B.5.3	Simplification of surface area determination using common shapes of consumer products	27
	Annex C (informative) Articles made from dissimilar materials	28
	Bibliography	29