

# DIN EN 1811:2015-10 (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 (includes Amendment A1:2015)

---

<b>Contents</b>		<b>Page</b>
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	Sample area .....	9
7.1.1	Definition of sample area .....	9
7.1.2	Determination of sample area .....	9
7.1.3	Masking of areas other than sample area .....	9
7.2	Sample degreasing before testing .....	9
7.3	Quality control samples .....	9
8	Procedure .....	10
8.1	Preparation of test solution .....	10
8.2	Release procedure .....	10
8.3	Determination of nickel .....	11
8.3.1	General .....	11
8.3.2	Calibration solutions .....	11
8.3.3	Detection limit and quantification limit .....	11
8.3.4	Number of test samples .....	11
8.3.5	Number of replicate measurements .....	11
8.4	Blank tests .....	11
9	Calculations .....	11
9.1	Nickel release .....	11
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 .....		14
Annex B (normative) Requirements for quality control material .....		16

<b>Annex C (normative) Requirements for preparation of 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 prior to nickel testing .....</b>	<b>18</b>
<b>C.1 General .....</b>	<b>18</b>
<b>C.2 Requirements and principle .....</b>	<b>18</b>
<b>C.3 Determination of the nickel release test method .....</b>	<b>18</b>
<b>C.4 Determination of surfaces coming into direct and prolonged contact with the skin or pierced parts of the body .....</b>	<b>18</b>
<b>C.4.1 Procedures for homogeneous and inhomogeneous articles .....</b>	<b>18</b>
<b>C.4.1.1 General .....</b>	<b>18</b>
<b>C.4.1.2 Homogeneous articles and all post assemblies .....</b>	<b>19</b>
<b>C.4.1.3 Procedure for inhomogeneous articles .....</b>	<b>19</b>
<b>C.4.1.3.1 General .....</b>	<b>19</b>
<b>C.4.1.3.2 Situation 1 .....</b>	<b>19</b>
<b>C.4.1.3.2.1 .....</b>	<b>General 19</b>
<b>C.4.1.3.2.2 .....</b>	<b>Procedure 1 19</b>
<b>C.4.1.3.2.3 .....</b>	<b>Result 19</b>
<b>C.4.1.3.3 Situation 2 .....</b>	<b>19</b>
<b>C.4.1.3.3.1 .....</b>	<b>General 19</b>
<b>C.4.1.3.3.2 .....</b>	<b>Procedure 2 19</b>
<b>C.4.1.3.3.3 .....</b>	<b>Result 20</b>
<b>C.4.1.3.4 Situation 3 .....</b>	<b>20</b>
<b>C.4.1.3.4.1 .....</b>	<b>General 20</b>
<b>C.4.1.3.4.2 .....</b>	<b>Procedure 3 20</b>
<b>C.4.2 Jewellery products .....</b>	<b>20</b>
<b>C.4.2.1 General .....</b>	<b>20</b>
<b>C.4.2.2 Post assemblies and associated parts .....</b>	<b>20</b>
<b>C.4.2.2.1 Parts coming into direct and prolonged contact with the skin and/or pierced parts of the body .....</b>	<b>20</b>
<b>C.4.2.2.2 Decorative attachments of post assemblies .....</b>	<b>21</b>
<b>C.4.2.3 Necklaces, bracelets, chains and anklets .....</b>	<b>22</b>
<b>C.4.2.4 Bangles .....</b>	<b>23</b>
<b>C.4.2.5 Rings .....</b>	<b>23</b>
<b>C.4.2.6 Watches .....</b>	<b>24</b>
<b>C.4.2.6.1 General .....</b>	<b>24</b>
<b>C.4.2.6.2 Parts to be tested .....</b>	<b>24</b>
<b>C.4.2.6.3 Parts to be removed from watch before testing .....</b>	<b>25</b>
<b>C.4.3 Other articles such as textiles, footwear, garments, leather goods and mobile phones ....</b>	<b>25</b>
<b>C.5 Methods of determining the surface areas .....</b>	<b>26</b>
<b>C.5.1 Surface area measurements .....</b>	<b>26</b>
<b>C.5.2 Minimum surface area .....</b>	<b>26</b>
<b>C.5.3 Simplification of surface area determination using common shapes of consumer products .....</b>	<b>26</b>
<b>C.6 Testing apparatus prior to nickel release testing .....</b>	<b>26</b>
<b>Annex D (informative) Articles made from composite materials .....</b>	<b>28</b>
<b>Bibliography .....</b>	<b>29</b>