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Reference Manual Book 5: Laboratory Policies and Procedures

Part B: Test Method Section

**Method M00.3: Sharp Points**

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**1 SCOPE**

- 1.1 This method describes procedures for testing sharp points on products or components of products captured under the *Canada Consumer Product Safety Act* (CCPSA). Specifically, the method is intended to verify whether the points on products or components thereof are sharp and could cause injury to a child. Sharp points that are required for the product to function as intended are generally excluded from the testing.
- 1.2 Since the numerical values of performance measures are based upon regulatory requirements, the tolerances for these values have been chosen such that no test parameter is applied to the product that results in a more severe condition than that specified in the regulations, with the understanding that uncertainty of measurement is always present.

**2 APPLICABLE DOCUMENTS**

- 2.1 *Canada Consumer Product Safety Act* (CCPSA) (S.C. 2010, c.21)
- 2.2 *Carriages and Strollers Regulations* (SOR/2016-167)
- 2.3 *Cribs, Cradles and Bassinets Regulations* (SOR/2016-152)
- 2.4 *Expansion Gates and Expandable Enclosures Regulations* (SOR/2016-179)
- 2.5 *Pacifiers Regulations* (SOR/2016-184)
- 2.6 *Playpens Regulations* (SOR/2018-186)
- 2.7 *Toys Regulations* (SOR/2011-17)
- 2.8 SOP 36: Verification of Engineering Section Test Equipment
- 2.9 SOP 09: Initializing The Sharp Point Tester

**3 SAMPLING**

- 3.1 The following test procedure shall be conducted on the number of sample elements provided or received, unless otherwise requested by the client or noted in the test method related to the specific product.



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**4 APPARATUS**

- 4.1 A sharp point tester (Figure 1) or other suitable test device yielding equivalent results and having the following equivalent specifications:
- (i) Gauging cap slot opening: 1.02 mm ( $\pm 0.10$  mm) by 1.14 mm ( $\pm 0.10$  mm) by 0.38 mm ( $\pm 0.01$  mm) deep;
  - (ii) Travel of sensing head to light indicator lamp: 0.12 mm ( $\pm 0.01$  mm);
  - (iii) Sensing head spring resistance force: 2.22 N ( $\pm 0.20$  N); and
  - (iv) Total mass of 449 g ( $\pm 5$  g).

**5 TESTING PROCEDURE**

- 5.1 The procedure shall be as follows:
- 5.1.1 Identify and locate projections, corners and any surface deformations on the product that are exposed and may present a hazardous sharp point (note: sharp points that are required for the product to function as intended are exempt). The product can be disassembled or broken down to facilitate testing and confirm the sharpness of the point, but only after all other required tests have been performed. Note the applicability of the testing procedure depending on the following material and product characteristics:
    - 5.1.1.1 Metal, wood, glass and plastic points on all products that are exposed upon initial visual and tactile examination.
    - 5.1.1.2 Plastic points on toys that are exposed under the conditions of reasonably foreseeable use<sup>1</sup>.
    - 5.1.1.3 Cut edges of metal tubing on all products except toys which are unprotected and exposed upon initial visual and tactile examination, or cut edges of metal tubing that have become exposed when protective caps have been removed by a force of up to 90 N applied in any direction.
    - 5.1.1.4 Wire ends on toys that are exposed under reasonably foreseeable use testing<sup>1</sup>.
  - 5.1.2 Adjust the sharp point tester or other suitable test device in accordance with SOP 09: Initializing the Sharp Point Tester.

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<sup>1</sup> The conditions of reasonably foreseeable use are described in Test Method M01.1: Reasonably Foreseeable Use – Toys.



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- 5.1.3 Insert the test point of the product into the slot opening of the sharp point tester and apply the full mass of the sharp point tester onto the test point ( $449\text{ g} \pm 5\text{ g}$ ). Care must be taken not to damage or deform the test point during application of the force.
- 5.1.4 Observe whether or not the indicator lamp lights up.
- 5.1.5 Repeat steps 5.1.3 and 5.1.4 for each projection, corner and surface deformation that was identified and located in step 5.1.1.

## 6 RESULTS

- 6.1 Record the location on the product of any projections, corners and any surface deformations that activated the sharp point tester.

## 7 QUALITY ASSURANCE/ QUALITY CONTROL PROCEDURES

- 7.1 Ensure that all measuring instruments are functional, verified and calibrated with traceability to national or international standards.

## 8 TEST REPORT

- 8.1 The test report shall contain, at a minimum, the following information:
  - 8.1.1 The number and title of the test method used and its revision number or effective date.
  - 8.1.2 A description of the product to include (where available) brand, style, country of origin, photo, UPC, and other pertinent information found both on the product and its packaging.
  - 8.1.3 The number of sample elements tested.
  - 8.1.4 The results of the tests (conducted in the sequence presented in section 5 of this test method) with specific details for any potential problems observed.
  - 8.1.5 The analyst's name and signature, as well as the name(s) and signature(s) of the reviewer(s).



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Figure 1 - Typical Sharp Point Tester