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1 SCOPE

- 1.1 This method describes a general procedure for the determination of leakage in child resistant containers of consumer products, as applicable to item 7 (Schedule 3) of *Consumer Chemicals and Containers Regulations*, 2001, SOR/2001-269, P.C. 2001-1343.

2 APPLICABLE DOCUMENTS

- 2.1 Canadian Standards Association Standard CAN/CSA-Z76.1-M99, Reclosable Child Resistant Packages, published January 1999.
- 2.2 International Standards Organization ISO 8317, Child-resistant packaging - Requirements and testing procedures for reclosable packages, First Edition, dated January 7, 1989.
- 2.3 P. Lambert, Test Method For Determining Whether A Container Leaks For Child Resistant Containers (CRC), Product Safety Project Report #2000-0576.
- 2.4 M. Charette, Revision of Method C-29: Determination of Leakage in Child Resistant Containers, Project Report #2002-0718.

3 APPARATUS


- 3.1 45° sample support
- 3.2 Thermal paper (*Note 1*) or blotting paper
- 3.3 Hot-wire anemometer
- 3.4 Draft-free area

4 EXPERIMENTAL PROCEDURE

4.1 Sample Preparation

- 4.1.1 Open the test sample.
- 4.1.2 Remove any seal that is present under the closure in accordance with the manufacturer's instructions or, if no instructions are provided, puncture the seal.

Note 1: Such as a heat sensitive paper from Chromatographic Specialties product number C13610 or equivalent.

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4.1.3 Re-close the sample as tightly as possible (hands tight) without stripping the threads of the closure.

4.1.4 Place the test sample in a test location with a constant temperature of $23 \pm 2^{\circ}\text{C}$ for at least four hours to permit the container and its content to reach the temperature of the test location.

4.2 Testing for Leaks

4.2.1 Use a draft-free area for testing the samples and measure the air velocity using a hot-wire anemometer. The air velocity should be 0.3 m/s or less.

4.2.2 Position the test sample:

- (a) over a clean piece of blotting paper such as a white filter paper or a paper that stains on contact with a liquid (thermal paper);
- (b) in an inverted position at a 45° angle below the horizontal; and
- (c) with the closure in the lowest possible position and free of any obstruction.

4.3 Examine Paper

4.3.1 After a period of one hour, remove the test sample and examine the paper for evidence that any of the contents have leaked from the sample.

5 REPORTING

5.1 Fail


If an examination of the paper discloses any trace of the contents of the test sample, the sample has failed the leak test and a container of the same type as the test sample must not be used for a chemical product.

5.2 Pass

If no trace of the contents of the test sample is found on the paper, the sample has passed the leak test and a container of the sample type as the test sample may be used for a chemical product.

5.3 Report the results of the test in the following format:

<i>Sample no.</i>	<i>Specimen no.</i>	<i>Leak test</i>
1	A	pass or fail

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6 PRECISION AND BIAS

6.1 The property being measured can be defined only in terms of the experimental conditions of the test method. Therefore no statement concerning bias or precision can be made.

..... END

