

1 Clifford A. Chanler (State Bar No. 135534)
2 CHANLER LAW GROUP
3 71 Elm Street, Suite 8
4 New Canaan, CT 06840
Telephone: (203) 966-9911
Facsimile: (203) 801-5222

5 Attorneys for Plaintiff
6 Russell Brimer

7 Raymond F. Lynch (State Bar No. 119065)
8 HANSON BRIDGETT MARCUS VLAHOS & RUDY, LLP
9 333 Market Street, 21st Floor
San Francisco, CA 94105-2173
Telephone: (415) 777-3200
Facsimile: (415) 541-9366

10 Attorneys for Defendants
11 PTS America, Inc. and PTS International, Inc.

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14 SUPERIOR COURT OF THE STATE OF CALIFORNIA
15 CITY AND COUNTY OF SAN FRANCISCO
16 UNLIMITED JURISDICTION
17

18 RUSSELL BRIMER,

19 Plaintiff,

20 v.

21 PTS INTERNATIONAL, INC.; PTS AMERICA,
22 INC.; TJX COMPANIES, INC.; HOMEGOODS,
INC.; and DOES 1 through 150,

23 Defendants.

Case No. CGC 04-435226

**STIPULATION AND [PROPOSED]
ORDER RE: CONSENT JUDGMENT**

24
25 **1. INTRODUCTION**

26 1.1 **Plaintiff and Settling Defendant.** This Consent Judgment is entered into by and
27 between plaintiff Russell Brimer (hereafter "Brimer" or "Plaintiff") and PTS AMERICA, INC.
28

1 (hereafter “PTS”), with Plaintiff and PTS collectively referred to as the “Parties” and Brimer and
2 PTS each being a “Party.” Plaintiff has also named PTS International, Inc. as a defendant in this
3 suit. To the best of PTS’ knowledge, no legal corporate entity with the name PTS International,
4 Inc. exists. Rather, the words PTS International represent a brand name, which appears on PTS’
5 products. Therefore, PTS International, Inc. is not a separate party to this suit.

6 1.2 **Plaintiff.** Brimer is an individual residing in Alameda County, California who
7 seeks to promote awareness of exposures to toxic chemicals and improve human health by
8 reducing or eliminating hazardous substances contained in consumer and industrial products.

9 1.3 **General Allegations.** Plaintiff alleges that PTS has manufactured, distributed
10 and/or sold in the State of California ceramic mugs and other ceramicware intended to hold
11 beverages with colored artwork, designs or markings on the exterior surface with materials that
12 contain lead and/or cadmium that are listed pursuant to the Safe Drinking Water and Toxic
13 Enforcement Act of 1986, California Health & Safety Code §§ 25249.5 et seq., also known as
14 Proposition 65, to cause cancer and birth defects (or other reproductive harm). Lead and
15 cadmium shall be referred to herein as “Listed Chemicals.”

16 1.4 **Product Descriptions.** The products that are covered by this Consent Judgment
17 are defined as follows: All ceramic mugs, other ceramic tableware, and glassware manufactured,
18 sold and/or distributed by PTS with colored artwork, designs or markings on the exterior surface
19 including, by way of example and without limitation, the ceramicware listed on Exhibit A. Such
20 products collectively are referred to herein as the “Products.” Currently, PTS distributes and sells
21 Products under the following brand names: PTS International, 222 5th, Coventry, Westbury Court,
22 and Interiors.

23 1.5 **Notices of Violation.** Beginning on July 30, 2004, Brimer served PTS and various
24 public enforcement agencies with documents, entitled “60-Day Notice of Violation” (“Notice”)
25 that provided PTS and such public enforcers with notice that alleged that PTS was in violation of
26 Health & Safety Code § 25249.6 for failing to warn purchasers that certain products that it sold
27 exposed users in California to lead and/or cadmium.
28

1 1.6 **Complaint.** On October 5, 2004, Brimer, in the interest of the general public in
2 California, filed a complaint (hereafter referred to as the “Complaint” or the “Action”) in the
3 Superior Court for the City and County of San Francisco against PTS and Does 1 through 150,
4 alleging violations of Health & Safety Code § 25249.6 based on the alleged exposures to one or
5 more of the Listed Chemicals contained in certain products sold by PTS.

6 1.7 **No Admission.** PTS denies the material factual and legal allegations contained in
7 Plaintiff’s Notice and Complaint and maintains that all products that it has sold and distributed in
8 California including the Products have been and are in compliance with all laws. Nothing in this
9 Consent Judgment shall be construed as an admission by PTS of any fact, finding, issue of law, or
10 violation of law, nor shall compliance with this Agreement constitute or be construed as an
11 admission by PTS of any fact, finding, conclusion, issue of law or violation of law. However,
12 this section shall not diminish or otherwise affect the obligations, responsibilities and duties of
13 PTS under this Consent Judgment.

14 1.8 **Consent to Jurisdiction.** For purposes of this Consent Judgment only, the Parties
15 stipulate that this Court has jurisdiction over the allegations of violations contained in the
16 Complaint and personal jurisdiction over PTS as to the acts alleged in the Complaint, that venue
17 is proper in the County of San Francisco, and that this Court has jurisdiction to enter this Consent
18 Judgment and to enforce the provisions thereof.

19 1.9 **Effective Date.** For purposes of this Consent Judgment, “Effective Date” shall
20 mean the date upon which this Consent Judgment is approved and entered as a judgment by the
21 Court.

22 1.10 **Execution Date.** For purposes of this Consent Judgment, the term “Execution
23 Date” shall mean May 13, 2005.

24 **2. INJUNCTIVE RELIEF: PROPOSITION 65**

25 2.1 **WARNINGS AND REFORMULATION OBLIGATIONS**

26 (a) **Required Warnings.** After the Effective Date PTS shall not sell, ship, or
27 cause to be shipped for sale in California any Products containing the Listed Chemicals, unless
28 warnings are given in accordance with one or more provisions in section 2.2 below.

1 (b) **Exceptions.** The warning requirements set forth in subsection 2.1(a) and
2 section 2.2 below shall not apply to:

3 (i) Any Products manufactured before July 1, 2005 or

4 (ii) Reformulated Products as defined in sections 2.3 through 2.7

5 below.

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7 ///

8 ///

9 2.2 **CLEAR AND REASONABLE WARNINGS**

10 (a) **Product Labeling.** A warning is affixed to the packaging, labeling or
11 directly to or on a Product by PTS, its agent, or the manufacturer, importer, or distributor of the
12 Product that states:

13 **WARNING: The materials used as colored decorations on the**
14 **exterior of this product contain lead and/or**
15 **cadmium, chemicals known to the State of**
16 **California to cause birth defects or other**
17 **reproductive harm.**

18 or

19 **WARNING: The materials used as colored decorations on the**
20 **exterior of these products contain chemicals**
21 **known to the State of California to cause birth**
22 **defects or other reproductive harm.**

23 Warnings issued for Products pursuant to this subsection shall be prominently placed with
24 such conspicuousness as compared with other words, statements, designs, or devices as to render
25 them likely to be read and understood by an ordinary individual under customary conditions of
26 use or purchase. Any changes to the language or format of the warning required by this
27 subsection shall only be made following: (1) approval of Plaintiff; (2) approval from the
28 California Attorney General's Office, provided that written notice of at least fifteen (15) days is
given to Plaintiff for the opportunity to comment; or (3) Court approval.

1 (b) **Point-of-Sale Warnings.** PTS may execute its warning obligations,
2 where applicable, through arranging for the posting of signs at retail outlets in the State of
3 California at which Products are sold, in accordance with the terms specified in
4 subsections 2.2(b)(i), 2.2(b)(ii) and 2.2(b)(iii) or subsection 2.2(b)(v).

5 (i) Point of Sale warnings may be provided through one or more signs
6 posted at or near the point of sale or display of the Products that state:

7 ///

8 ///

9 ///

10 **WARNING: The materials used as colored decorations on the**
11 **exterior of this product contain lead and/or**
12 **cadmium, chemicals known to the State of**
13 **California to cause birth defects or other**
14 **reproductive harm.**

15 or

16 **WARNING: The materials used as colored decorations on the**
17 **exterior of the following ceramicware products**
18 **sold in this store contain lead and/or cadmium,**
19 **chemicals known to the State of California to**
20 **cause birth defects or other reproductive harm:**

21 (ii) In lieu of displaying warning signs with the language set forth
22 above, a retailer selling PTS' Products in California may elect to combine any point-of-sale
23 warning signs required under this Consent Judgment with any warnings it provides for ceramic
24 tableware (as defined in the Consent Judgment in *People v. Josiah Wedgwood & Sons, Inc.*)
25 (hereafter the "*Wedgwood* Consent Judgment") or lead crystal (as defined in the Consent
26 Judgment in *Mateel Environmental Justice Foundation v. T.J. Maxx*), through use of the warning
27 signs in the form of Exhibits B or C. If a retailer selling PTS' Products agrees in writing to
28 provide combined warnings through use of Exhibit B, then the retailer shall place the Designated
Symbol (hereafter the term "Designated Symbol" means the yellow triangle shown in Exhibit B)
next to each display of the specific Product, ceramic tableware, and lead crystal for which a

1 warning is to be given. If a retailer selling PTS' Products agrees in writing to provide combined
2 warnings through use of Exhibit C, then the Products and other products for which the warning is
3 to be given shall be identified by manufacturer and product description in the warning sign, and
4 Designated Symbols need not be displayed. If a retailer selling PTS' Products agrees to combine
5 PTS' Products and other product warnings under this subsection, display of warnings for PTS'
6 Products and the other products in the manner set forth in this subsection shall constitute
7 compliance with Proposition 65 for PTS' Products and the other products.

8
9 (iii) A point of sale warning provided pursuant to subsection 2.2(b)(i)
10 shall be prominently placed with such conspicuousness as compared with other words,
11 statements, designs, or devices as to render it likely to be read and understood by an ordinary
12 individual under customary conditions of use or purchase and shall be placed or written in a
13 manner such that the consumer understands to which *specific* Products the warning applies so as
14 to minimize if not eliminate the chances that an overwarning situation will arise. Any changes to
15 the language or format of the warning required for Products by this subsection shall only be made
16 following: (1) approval of Plaintiff; (2) approval from the California Attorney General's Office,
17 provided that written notice of at least fifteen (15) days is given to Plaintiff for the opportunity to
18 comment; or (3) Court approval.

19 (iv) If PTS intends to utilize point of sale warnings to comply with this
20 Consent Judgment, it must provide notice in the manner set forth in section 10 of this Consent
21 Judgment to each retailer to whom PTS ships the Products for sale in California and obtain the
22 written consent of such retailer before shipping the Products. Such notice shall include a copy of
23 this Consent Judgment, identification of Products requiring a warning, and any required warning
24 materials (hereafter the term "warning materials" refers to signs and/or Designated Symbols).
25 When PTS introduces new Products requiring a warning, PTS shall identify such Products to its
26 retail sellers by any reasonable written or electronic means. If PTS has obtained the written
27 consent of a retailer, PTS shall not be found to have violated this Consent Judgment if it has
28

1 complied with the terms of this Consent Judgment and has proof that it transmitted the requisite
2 notice and identification of the Products in the manner provided herein.

3 (v) For ceramicware Products, which require a warning pursuant to both
4 section 2.1 above and the California Attorney General's program expanding the *Wedgwood*
5 Consent Judgment warning program to cover all ceramicware manufacturers, PTS may use the
6 point-of-sale warning method set forth in the *Wedgwood* Consent Judgment, without obtaining
7 the retailer's written consent. When PTS introduces new ceramicware Products, for which a
8 warning is permitted under this subsection, PTS shall identify such ceramicware Products to each
9 retailer, to whom PTS is selling the new ceramicware Products, by any reasonable written or
10 electronic means. For retailers to whom PTS has sold ceramicware Products prior to the Effective
11 Date, if PTS has proof that it has transmitted the requisite identification of Products in the manner
12 provided herein and has stated that such Products require a warning, then PTS shall not be found
13 to have violated this Consent Judgment. For customers to whom PTS' first sale of ceramicware
14 Products comes after the Effective Date, if PTS has proof that it has transmitted the requisite
15 notice and identification of Products in the manner provided herein and has stated that such
16 Products require a warning, then PTS shall not be found to have violated this Consent Judgment.

17 (c) **Mail Order And Internet Sales:** For sales of Products made to California
18 residents through mail order catalogs/brochures or internet websites, PTS may execute its
19 warning obligations in one of the following ways: (1) By affixing a label on the Product as
20 specified in subsection 2.2(a) above, (2) by arranging for the mail order house to provide a
21 Warning Message, as defined below, in its catalog/brochure in the manner specified in subsection
22 2.2(c)(i) below, (3) by arranging for the internet seller to provide a Warning Message, as defined
23 below, on its website in the manner specified in subsection 2.2(c)(ii) below, or (4) by arranging
24 for both mail order house and internet sellers to provide a Warning Message, as defined below, by
25 use of a package "insert" or label in the manner specified in subsection 2.2(c)(iii) below. For
26 purposes of this subsection 2.2(c), the term "Warning Message" means either of the alternative
27 warning statements set out in subsection 2.2(a) above and naming the *specific* Product or Products
28 which are subject of the warning. For ceramicware Products, which require a warning pursuant to

1 both section 2.1 above and the California Attorney General’s program expanding the *Wedgwood*
2 Consent Judgment warning program to cover all ceramicware manufacturers, the “Warning
3 Message” may use the warning language appearing on Exhibits B or C. PTS shall instruct its
4 customers, who resell to California residents via mail order catalogs/brochures or internet
5 websites, to provide Warning Messages only for the *specific* Product or Products which require a
6 warning and not for other PTS products so as to minimize, if not eliminate, the chances that an
7 overwarning situation may arise. Alternatively, the Warning Message, rather than naming the
8 *specific* Products, for which a warning is required, may display the Designated Symbol and state
9 that the *specific* Products, requiring a warning, are identified by the Designated Symbol. If this
10 alternative Warning Message is used, the Designated Symbol, in the same type-size as the
11 surrounding, non-heading text, shall be displayed next to each *specific* Product for which a
12 warning is being given.

13 (i) **Mail Order Catalog/Brochure:** The Warning Message shall be
14 stated within the catalog/brochure, either (1) on the inside front cover of the catalog, (2) on the
15 same page as any order form, or (3) on the same page as the price, in the same type size as the
16 surrounding, non-heading text.

17 (ii) **Internet Web Site:** The Warning Message or a link to a page
18 containing the Warning Message shall be displayed either (1) on the same page on which the
19 Product is displayed, (2) on the same page as any order form for the Product, (3) on the same
20 page as the price for the Product, (4) on one or more pages displayed to the purchaser over the
21 internet or via electronic mail during the checkout and the order confirmation process for sale of
22 the Product, or (5) in any manner such that the Warning Message is likely to be read and
23 understood by an ordinary individual under the customary conditions of purchase of the Product.
24 If a link is used, it shall state “Warning information for California residents” and shall be of equal
25 size to the other links on the page.

26 (iii) **Package Insert Or Label:** Alternatively, the Warning Message
27 may be provided with the Product when it is shipped directly to a consumer in California by one
28 of the following: (1) Affixing a label to the Product as specified in subsection 2.2(a) above, (2)

1 inserting a card or slip of paper, measuring at least 4" x 6" and containing the Warning Message,
2 in the shipping carton, or (3) including the Warning Message on the packing slip or customer
3 invoice, accompanying the Product, in lettering of the same size as the description of the Product.
4 When given in the manner provided by this subsection 2.2(c)(iii), the Warning Message shall
5 inform the consumer that he or she may return the Product for a full refund within 30 days of
6 receipt.

7 (iv) **Compliance With Consent Judgment:** If PTS intends to utilize
8 any of the warning methods set forth in subsections 2.2(c)(i), (ii), or (iii) to comply with this
9 Consent Judgment, PTS must provide notice, in the manner set forth in section 10 of this Consent
10 Judgment, to each mail order house or internet seller to whom PTS ships the Products for sale in
11 California before shipping such Products. Such notice shall include a copy of this Consent
12 Judgment and identification of the Products requiring a warning. When PTS introduces new
13 Products requiring a warning, PTS shall identify such Products to each mail order house and
14 internet seller by any reasonable written or electronic means. PTS shall not be found to have
15 violated this Consent Judgment if it has complied with the terms of this Consent Judgment and
16 has proof that it transmitted the required notice and identification of Products in the manner
17 provided herein and stated that such Products required a warning.

18
19 2.3 **REFORMULATION STANDARDS:** Products satisfying the conditions of
20 sections 2.4, 2.5, 2.6 or 2.7 are referred to as "Reformulated Products".

21 **2.4 INTERIM REFORMULATION STANDARDS FOR ALL GLASSWARE**
22 **PRODUCTS MANUFACTURED BETWEEN JULY 1, 2005 AND DECEMBER 31, 2007:**

23 All glassware products manufactured between July 1, 2005 and December 31, 2007, that are
24 reasonably likely to be sold in California shall either:

25 (a) use decorating materials containing less than 0.06% lead and/or 0.24%
26 cadmium by weight as measured at PTS' option, either before or after the material is fired onto (or
27 otherwise affixed to) the glassware, using a sample size of the materials in question measuring
28

1 approximately 50-100 mg and a test method of sufficient sensitivity to establish a limit of
2 quantitation of less than 600 ppm; or

3 (b) achieve a result of 1.5 ppm or less for lead and/or 6.0 ppm or less for
4 cadmium when tested under the protocol attached as Exhibit D.

5 **2.5 FINAL REFORMULATION REQUIREMENTS FOR ALL GLASSWARE**
6 **PRODUCTS MANUFACTURED AFTER DECEMBER 31, 2007:** All glassware Products
7 manufactured after December 31, 2007, that are reasonably likely to be sold in California shall
8 only use decorating materials containing less than 0.06% lead and/or 0.24% cadmium by weight
9 as measured, at PTS' option, either before or after the material is fired onto (or otherwise affixed
10 to) the glassware, using a sample size of the materials in question measuring approximately 50-
11 100 mg and a test method of sufficient sensitivity to establish a limit of quantitation of less than
12 600 ppm.

13 **2.6 INTERIM AND FINAL REFORMULATION REQUIREMENTS**
14 **CONCERNING DECORATIONS WITHIN THE LIP AND RIM AREA:** All Products
15 manufactured after June 30, 2005 that are reasonably likely to be sold in California shall not
16 contain *any* designs or decorations within the top twenty (20) millimeters of the exterior surface
17 as measured by the protocol attached as Exhibit E, ASTM test method C927-80, except:

18 (a) metallic-based designs or decorations containing no detectable lead or
19 cadmium. For purpose of this subsection, "no detectable lead or cadmium" shall mean that
20 neither lead nor cadmium is detected at a level above .02% (for lead) and/or .08% (for cadmium)
21 by weight, respectively, using a sample size of the materials in question measuring approximately
22 50-100 mg and a test method of sufficient sensitivity to establish a limit of quantitation of less
23 than 200 ppm; and

24 (b) drinkware that has less than a total of sixty (60) millimeters of decorating
25 area below the external rim and which is not "intended or marketed primarily for use by children"
26 (e.g., shot glasses); provided, however, that to be so excluded, such drinkware shall, as of June
27 30, 2005, only be manufactured with decorating materials containing less than 0.06% lead and/or
28 0.24% cadmium by weight as measured, at PTS' option, either before or after the material is fired

1 onto (or otherwise affixed to) the glassware, using a sample size of the materials in question
2 measuring approximately 50-100 mg and a test method of sufficient sensitivity to establish a limit
3 of quantitation of less than 600 ppm.

4 **2.7 INTERIM AND FINAL REFORMULATION REQUIREMENTS FOR**
5 **CERAMICWARE:** Ceramicware shall be subject to the requirements of this section and section
6 2.6 and shall not be subject to the requirements of sections 2.4 and 2.5 above. Ceramicware
7 manufactured after June 30, 2005 which is reasonably likely to be sold in California shall either:

8 (a) use decorating materials containing less than 0.06% lead and/or 0.24%
9 cadmium by weight as measured at PTS' option, either before or after the material is fired onto (or
10 otherwise affixed to) the ceramicware, using a sample size of the materials in question measuring
11 approximately 50-100 mg and a test method of sufficient sensitivity to establish a limit of
12 quantitation of less than 600 ppm; or

13 (b) achieve a result of .99 ppm or less for lead and/or 3.96 ppm or less for
14 cadmium when tested under the protocol attached as Exhibit D.

15 **2.8 ALTERNATIVE STANDARDS:** In any future case, involving either ten or
16 more settlement defendants or three or more companies which each represent more than .5% of
17 the California market for decorated glassware or ceramicware, whichever is applicable, (1)
18 brought by (a) Brimer or any other party represented by the Chanler Law Group or (b) the People
19 of the State of California and (2) primarily involving ceramicware or glassware with colored
20 artwork, designs or markings on the exterior surface, if the court enters a final judgment, which
21 establishes warning standards for lead and/or cadmium release, which standards are less stringent
22 than those set forth in sections 2.4 through 2.7 above (hereafter "Alternative Standards"), PTS
23 shall be entitled to seek a modification of this Consent Judgment so as to enable PTS to utilize
24 and rely on such Alternative Standards in lieu of those set forth in sections 2.4 through 2.7 above.
25 If the California Attorney General's Office or the Office of Environmental Health Hazard
26 Assessment ("OEHHA") provides a written endorsement (i.e. a writing circulated by the Attorney
27 General or OEHHA which is not intended for the purpose of soliciting further input or comments)
28 of Alternative Standards, PTS shall be entitled to seek a modification of this Consent Judgment so

1 as to enable PTS to utilize and rely on such Alternative Standards in lieu of those set forth in
2 sections 2.4 through 2.7 above. In either of these situations, Brimer shall not unreasonably
3 contest any proposed application to modify this Consent Judgment.

4 **2.9 REFORMULATION COMMITMENT.** By entering into this Stipulation and
5 Consent Judgment, PTS hereby commits that, as a continuing matter of corporate policy, PTS
6 intends to undertake good faith efforts, taking into consideration PTS' operational and product
7 licensing restrictions, to ensure that as many Products as reasonably possible shall qualify as
8 Reformulated Products, with the commitment to reach 80% (eighty percent) or more
9 Reformulated Products for Products manufactured, licensed, or offered for sale by PTS on or after
10 January 1, 2006, and the commitment to make commercially reasonable efforts thereafter to reach
11 100% (one-hundred percent) Reformulated Products.

12 **3. MONETARY PAYMENTS.**

13 3.1 **Penalties Pursuant to Health & Safety Code § 25249.7(b).** Pursuant to
14 Health & Safety Code Section 25249.7(b), PTS shall pay \$2,000.00 in civil penalties. The
15 penalty payment shall be made payable to "Chanler Law Group in Trust For Russell Brimer," and
16 shall be delivered to Plaintiff's counsel on or before the Execution Date, at the following address:

17
18 CHANLER LAW GROUP
19 Attn: Clifford A. Chanler
20 71 Elm Street, Suite 8
21 New Canaan, CT 06840

22 (a) In the event that PTS pays any penalty and the Consent Judgment is not
23 thereafter approved and entered by the Court, Brimer shall return any penalty funds paid under
24 this Stipulation within fifteen (15) days of receipt of a written request from PTS following notice
25 of the issuance of the Court's decision.

26 (b) The Parties agree that PTS' potential interest in and ability to acquire and
27 market Reformulated Products is to be accounted for in this section and, since it is not a remedy
28 provided for by law, the absence of PTS previously acquiring, manufacturing, marketing or

1 selling Reformulated Products is not relevant to the establishment of a penalty amount pursuant to
2 this section.

3 (c) **Apportionment of Penalties Received.** After Court approval of this
4 Consent Judgment pursuant to section 6, all penalty monies received shall be apportioned by
5 Plaintiff in accordance with Health & Safety Code § 25192, with 75% of these funds remitted to
6 the State of California's Office of Environmental Health Hazard Assessment and the remaining
7 25% of these penalty monies retained by Plaintiff as provided by Health & Safety Code
8 § 25249.12(d). Plaintiff shall bear all responsibility for apportioning and paying to the State of
9 California the appropriate civil penalties paid in accordance with this section.

10 **4. REIMBURSEMENT OF FEES AND COSTS**

11 4.1 The Parties acknowledge that Plaintiff and his counsel offered to resolve this
12 dispute without reaching terms on the amount of fees and costs to be reimbursed to them, thereby
13 leaving this fee issue to be resolved after the material terms of the agreement had been settled.
14 PTS then expressed a desire to resolve the fee and cost issue shortly after the other settlement
15 terms had been finalized. The Parties then attempted to (and did) reach an accord on the
16 compensation due to Plaintiff and his counsel under the private attorney general doctrine codified
17 at Code of Civil Procedure § 1021.5 for all work performed through the Effective Date of the
18 Agreement. Under the private attorney general doctrine codified at Code of Civil Procedure
19 § 1021.5, PTS shall reimburse Plaintiff and his counsel for fees and costs, incurred as a result of
20 investigating, bringing this matter to PTS' attention, litigating and negotiating a settlement in the
21 public interest. PTS shall pay Plaintiff and his counsel \$17,200.00 for all attorneys' fees, expert
22 and investigation fees, and litigation costs. The payment shall be made payable to the "Chanler
23 Law Group" and shall be delivered to Plaintiff's counsel on or before the Execution Date, at the
24 following address:

25 CHANLER LAW GROUP
26 Attn: Clifford A. Chanler
27 71 Elm Street, Suite 8
28 New Canaan, CT 06840

1 4.2 Except as specifically provided in this Consent Judgment, PTS shall have no
2 further obligation with regard to reimbursement of Plaintiff's attorneys' fees and costs with
3 regard to the Products covered in this Action.

4 **5. RELEASE OF ALL CLAIMS**

5 5.1 **Plaintiff's Release of PTS.** In further consideration of the promises and
6 agreements herein contained, and for the payments to be made pursuant to sections 3 and 4,
7 Plaintiff, on behalf of himself, his past and current agents, representatives, attorneys, successors
8 and/or assignees, and in the interest of the general public, hereby waives all rights to institute or
9 participate in, directly or indirectly, any form of legal action and releases all claims, including,
10 without limitation, all actions, causes of action, in law or in equity, suits, liabilities, demands,
11 obligations, damages, costs, fines, penalties, losses or expenses (including, but not limited to,
12 investigation fees, expert fees and attorneys' fees) of any nature whatsoever, whether known or
13 unknown, fixed or contingent (collectively "Claims"), against PTS and each of its manufacturers,
14 distributors, wholesalers, licensors, licensees, auctioneers, retailers, dealers, customers, owners,
15 purchasers, users, parent companies, corporate affiliates, subsidiaries and their respective officers,
16 directors, attorneys, representatives, shareholders, agents, and employees (collectively, "PTS
17 Releasees") arising under Proposition 65, Business & Professions Code §§ 17200 et seq. and
18 Business & Professions Code §§ 17500 et seq., related to PTS' or PTS Releasees' alleged failure
19 to warn about exposures to or identification of Listed Chemicals contained in the Products. The
20 term "PTS Releasees" in the preceding sentence is expressly intended to include, but is not
21 limited to, The TJX Companies, Inc. and HomeGoods, Inc.

22 The Parties further agree and acknowledge that this Consent Judgment is a full, final, and
23 binding resolution of any violations of Proposition 65, Business & Professions Code §§ 17200
24 et seq. and Business & Professions Code §§ 17500 et seq., that have been or could have been
25 asserted in the Complaint against PTS for its alleged failure to provide clear and reasonable
26 warnings of exposure to or identification of Listed Chemicals in the Products.

27 In addition, Plaintiff, on behalf of himself, his attorneys, and their agents, waives all rights
28 to institute or participate in, directly or indirectly, any form of legal action and releases all Claims

1 against the PTS Releasees arising under Proposition 65, Business & Professions Code §§ 17200
2 et seq. and Business & Professions Code §§ 17500 et seq., related to each of the PTS Releasees'
3 alleged failures to warn about exposures to or identification of Listed Chemicals contained in the
4 Products and for all actions or statements made by PTS or its attorneys or representatives, in the
5 course of responding to PTS' alleged violations of Proposition 65, Business & Professions Code
6 §§ 17200 or Business & Professions Code §§ 17500. Provided however, Plaintiff shall remain
7 free to institute any form of legal action to enforce the provisions of this Consent Judgment.

8 It is specifically understood and agreed that the Parties intend that PTS' compliance with
9 the terms of this Consent Judgment resolves all issues and liability, now and in the future (so long
10 as PTS complies with the terms of the Consent Judgment) concerning PTS and the PTS
11 Releasees' compliance with the requirements of Proposition 65, Business and Professions Code
12 §§ 17200 *et. seq.* and Business & Professions Code §§ 17500 *et seq.*, as to the Listed Chemicals
13 in the Products.

14 5.2 **PTS' Release of Plaintiff.** PTS waives all rights to institute any form of legal
15 action against Plaintiff, or his attorneys or representatives, for all actions taken or statements
16 made by Plaintiff and his attorneys or representatives, in the course of seeking enforcement of
17 Proposition 65, Business & Professions Code §§ 17200 et seq. or Business & Professions Code
18 §§ 17500 et seq. in this Action.

19 **6. COURT APPROVAL**

20 This Consent Judgment is not effective until it is approved and entered by the Court and
21 shall be null and void if, for any reason, it is not approved and entered by the Court within one
22 year after the Execution Date, in which event any monies that have been provided to Plaintiff or
23 his counsel pursuant to section 3 and/or section 4 above, shall be refunded within fifteen (15)
24 days.

25 **7. SEVERABILITY**

26 If, subsequent to court approval of this Consent Judgment, any of the provisions of this
27 Consent Judgment are held by a court to be unenforceable, the validity of the enforceable
28 provisions remaining shall not be adversely affected.

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8. ATTORNEYS' FEES

In the event that a dispute arises with respect to any provision(s) of this Consent Judgment, the prevailing party shall, except as otherwise provided herein, be entitled to recover reasonable and necessary costs and reasonable attorneys' fees incurred from the resolution of such dispute.

9. GOVERNING LAW

The terms of this Consent Judgment shall be governed by the laws of the State of California and apply within the State of California. In the event that Proposition 65 is repealed or is otherwise rendered inapplicable by reason of law generally, or as to the Products specifically, then PTS shall have no further obligations pursuant to this Consent Judgment with respect to, and to the extent that, those Products are so affected.

10. NOTICES

All correspondence and notices required to be provided pursuant to this Consent Judgment shall be in writing and personally delivered or sent by: (1) first-class, registered or certified mail, return receipt requested or (ii) overnight courier on either Party by the other at the following addresses. (Either Party, from time to time, may, pursuant to the methods prescribed above, specify a change of address to which all future notices and other communications shall be sent.)

To PTS:

Sapto Hidajat, President
PTS America, Inc.
222 5th Avenue
New York, NY 10001

With a copy to:

Patrick F. O'Leary, Esq.
Vanderpool Frostick & Nishanian
9200 Church Street
Suite 400
Manassas, VA 20110

and

1
2 Raymond F. Lynch, Esq.
3 Hanson Bridgett Marcus Vlahos & Rudy, LLP
4 333 Market Street, 21st Floor
5 San Francisco, CA 94105-2173
6

7 To Plaintiff:

8 Clifford A. Chanler, Esq.
9 Chanler Law Group
10 71 Elm Street, Suite 8
11 New Canaan, CT 06840

11 **11. NO ADMISSIONS**

12 Nothing in this Consent Judgment shall constitute or be construed as an admission by PTS
13 of any fact, finding, conclusion, issue of law, or violation of law, nor shall compliance with this
14 Consent Judgment constitute or be construed as an admission by PTS of any fact, finding,
15 conclusion, issue of law, or violation of law, such being specifically denied by PTS. PTS
16 reserves all of its rights and defenses with regard to any claim by any party under Proposition 65
17 or otherwise. However, this section shall not diminish or otherwise affect PTS' obligations,
18 responsibilities and duties under this Consent Judgment.

19 **12. COUNTERPARTS; FACSIMILE SIGNATURES**

20 This Consent Judgment may be executed in counterparts and by facsimile, each of which
21 shall be deemed an original, and all of which, when taken together, shall constitute one and the
22 same document.

23
24 **13. COMPLIANCE WITH HEALTH & SAFETY CODE § 25249.7(F)**

25 Plaintiff agrees to comply with the reporting form requirements referenced in Health &
26 Safety Code § 25249.7(f). Pursuant to regulations promulgated under that section, Plaintiff shall
27 present this Consent Judgment to the California Attorney General's Office within two (2) days
28 after receiving all of the necessary signatures. A noticed motion to enter the Consent Judgment

1 will then be served on the Attorney General's Office at least forty-five (45) days prior to the date
2 a hearing is scheduled on such motion in the Superior Court for the City and County of
3 San Francisco unless the Court allows a shorter period of time.

4 **14. ADDITIONAL POST EXECUTION ACTIVITIES**

5 The Parties shall mutually employ their best efforts to support the entry of this Stipulation
6 as a Consent Judgment and obtain approval of the Consent Judgment by the Court in a timely
7 manner. The Parties acknowledge that, pursuant to Health & Safety Code § 25249.7, a noticed
8 motion is required to obtain judicial approval of this Consent Judgment. Accordingly, the Parties
9 agree to file a Joint Motion to Approve the Agreement ("Joint Motion"), the first draft of which
10 PTS' counsel shall prepare, within a reasonable period of time after the Execution Date (*i.e.*, not
11 to exceed thirty (30) days unless otherwise agreed to by the Parties' counsel based on
12 unanticipated circumstances). Plaintiff's counsel shall prepare a declaration in support of the
13 Joint Motion, which shall, inter alia, set forth support for the fees and costs to be reimbursed
14 pursuant to section 4. PTS shall have no additional responsibility to Plaintiff's counsel pursuant
15 to C.C.P. § 1021.5 or otherwise with regard to reimbursement of any fees and costs incurred with
16 respect to the preparation and filing of the Joint Motion and its supporting declaration or with
17 regard to Plaintiff's counsel appearing for a hearing or related proceedings thereon.

18 **15. MODIFICATION**

19 This Consent Judgment may be modified only by: (1) written agreement of the Parties
20 and upon entry of a modified Consent Judgment by the Court thereon, or (2) motion of any Party
21 as provided by law and upon entry of a modified Consent Judgment by the Court. The Attorney
22 General shall be served with notice of any proposed modification to this Consent Judgment at
23 least fifteen (15) days in advance of its consideration by the Court.

24 **16. DISMISSAL OF CO-DEFENDANT AND LIMITED RELEASE**

25 After notice of entry of the Consent Judgment and after receipt of the monetary payments
26 required by sections 3 and 4, the Plaintiff shall dismiss The TJX Companies, Inc. and
27 HomeGoods, Inc., without prejudice, and Plaintiff shall provide to counsel for PTS a copy of the
28 executed dismissal. This dismissal shall have no effect whatsoever on any potential liability of

The TIX Companies, Inc. or HomeGoods, Inc. for any decorated ceramic or glass tableware items besides those distributed and sold by PTS.

17. AUTHORIZATION

The undersigned are authorized to execute this Consent Judgment on behalf of their respective Parties and have read, understood and agree to all of the terms and conditions of this Consent Judgment.

AGREED TO:

AGREED TO:

Date: 5-17-05

Date:

By: 
Plaintiff Russell Brimer

By:
Defendant PTS AMERICA, INC.

APPROVED AS TO FORM:


APPROVED AS TO FORM:

Date: 5/17/05

Date:

CHANLER LAW GROUP

Hanson Bridgett Marcus Vlahos & Rudy, LLP

By: 

By:
Raymond F. Lynch, Esq.
Attorney for Defendant
PTS AMERICA, INC.

Clifford A. Chanler
Attorneys for Plaintiff
RUSSELL BRIMER

IT IS SO ORDERED.

Date: _____

JUDGE OF THE SUPERIOR COURT

1 The TJX Companies, Inc. or HomeGoods, Inc. for any decorated ceramic or glass tableware items
2 besides those distributed and sold by PTS.

3 **17. AUTHORIZATION**

4 The undersigned are authorized to execute this Consent Judgment on behalf of their
5 respective Parties and have read, understood and agree to all of the terms and conditions of this
6 Consent Judgment.

7 AGREED TO:

AGREED TO:

8
9 Date:

Date: 5/11/05

10
11 By:
Plaintiff Russell Brimer

By: 
Defendant PTS AMERICA, INC.

12
13 APPROVED AS TO FORM:

APPROVED AS TO FORM:

14
15 Date:

Date:

16
17 CHANLER LAW GROUP

Hanson Bridgett Marcus Vlahos & Rudy, LLP

18 By:

By:

19 Clifford A. Chanler
Attorneys for Plaintiff
20 RUSSELL BRIMER

Raymond F. Lynch, Esq.
Attorney for Defendant
PTS AMERICA, INC.

21
22 **IT IS SO ORDERED.**

23
24 Date: _____

JUDGE OF THE SUPERIOR COURT

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1 The TJX Companies, Inc. or HomeGoods, Inc. for any decorated ceramic or glass tableware items
2 besides those distributed and sold by PTS.

3 **17. AUTHORIZATION**

4 The undersigned are authorized to execute this Consent Judgment on behalf of their
5 respective Parties and have read, understood and agree to all of the terms and conditions of this
6 Consent Judgment.

7 **AGREED TO:**
8
9 **Date:**
10
11 **By:**
12 Plaintiff Russell Brimer

AGREED TO:

Date:

By:
Defendant PTS AMERICA, INC.

13 **APPROVED AS TO FORM:**
14
15 **Date:**

APPROVED AS TO FORM:

Date: *May 25, 2005*

Hanson Bridgett Marcus Vlahos & Rudy, LLP
By: *Raymond F. Lynch*
Raymond F. Lynch, Esq.
Attorney for Defendant
PTS AMERICA, INC.

16 CHANLER LAW GROUP
17
18 **By:**
19 Clifford A. Chanler
20 Attorneys for Plaintiff
RUSSELL BRIMER

21
22
23 **IT IS SO ORDERED.**

24 **Date:** _____

JUDGE OF THE SUPERIOR COURT

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Exhibit A

All ceramic mugs, other ceramic tableware, and glassware manufactured, sold and/or distributed by PTS America, Inc. with colored artwork, designs or markings on the exterior surface including, but not limited to:

Masai Mug (#31 530784 2 2115)

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Exhibit B

Combined Point of Sale Warnings [Yellow Triangle]

**PROP 65
WARNING**

Use of certain tableware in this store will expose you to lead and/or cadmium, chemicals known to the State of California to cause birth defects and other reproductive harm.

The products for which this warning is given are identified with this symbol:



displayed on or next to the product

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Exhibit C

Combined Point of Sale Warnings

**PROP 65
WARNING**

Use of the following tableware products will expose you to lead and/or cadmium, chemicals known to the State of California to cause birth defects or other reproductive harm: [List each manufacturer and pattern or product name for which a warning is given].

1
2 Exhibit D

3
4 **TEST PROTOCOL FOR LEAD AND CADMIUM RELEASE**

5 Externally Decorated Glassware
6 Externally Decorated Ceramicware
7

8 Decorated Glassware

- 9
- 10 1. Wash glass and dry.
 - 11 2. Totally immerse glass in beaker of acetic acid for 24 hours.
 - 12 3. Measure ppm lead and cadmium in acid, compare to internal volume of glass.
 - 13 4. This procedure is attached.

14 Ceramicware: Use the ASTM C 738-94 test method modified for total immersion and
15 comparison to internal volume.

16 Lip and Rim Testing: This is not done as such. Since all drinking vessels are totally
17 immersed, the lip and rim area is tested as part of the whole.
18

19 Samples: Six samples of each article, i.e. six randomly selected samples of each type
20 decorated sample article. If the manufacturer wishes to distribute multiple different designs,
21 six sample articles of each design should be submitted for testing. Six sample articles of each
22 type of design will be subjected to total immersion in acetic acid only.

23 Reagents:

- 24 1. Deionized or distilled deionized water.
- 25 2. Acetic acid 4% solution by volume: 1 volume of glacial acetic acid to 24 volumes of
26 distilled deionized water.
27
28

1 Sample Preparation:

2
3 Thoroughly cleanse each sample to be tested by immersing in a detergent rinse of a
4 suitable household alkaline detergent. Rinse several times with deionized water followed by
5 several rinses with distilled deionized water. Place the sample articles in a clean aluminum
6 basket, (covered with clean paper towels), or suitable clean rack and allow to air dry. Reduce
7 contamination to a minimum at all times.

8 Procedure For Leaching Lead Or Cadmium (4% Acetic Acid Solution):

9
10 Once all the samples have been properly immersed in a suitable household alkaline
11 detergent, subjected to proper rinses and air-dried, place each sample individually into an
12 appropriately sized acid cleaned, (lead and cadmium free), glass beaker or clean Nalgene
13 plastic beaker. Using pre-numbered labels, label the outside of each beaker containing a
14 sample and record this number on the worksheet. Add 4% acetic acid solution to each beaker
15 containing a sample, filling the sample and the space between the sample and the beaker
16 while covering the rim of the sample with the acetic acid solution. Record the volume of
17 leaching solution used in milliliters next to the sample number on the worksheet. (Cover each
18 beaker completely with aluminum foil to shield the contents from light). Record the time and
19 allow the beakers to remain undisturbed for a period of 24 hours at 20 to 24 ° C (68 to 75° F).
20 At the end of the 24-hour period, mix the contents of each beaker well. To avoid
21 contamination. wear disposable gloves and working with one beaker at a time, lift up the
22 sample and pour the contents of the sample into the respective beaker. Using a clean
23 disposable plastic pipet, swirl the contents of the beaker to properly mix the contents, drain
24 the pipet into the solution and draw off an aliquot of sample and place it into the
25 corresponding specifically numbered clean plastic snap cap test tube. The number on the
26 outside of the beaker and the number on the test tube should correspond. Once the aliquot of
27 sample has been drawn off, rinse the sample under running water, dry the bottom of the
28 sample with a paper towel, and transfer the pre-numbered label from the outside of the
respective beaker to the bottom of the sample.

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Testing:

Perform testing for lead and cadmium using atomic absorption spectrophotometry as prescribed in ASTM methodology C 738-94 or C 927-80. Run each sample in duplicate along with appropriate standards as well as aliquots of 4% acetic acid solution and distilled deionized water in plastic test tubes. Correct for the blank if necessary. If a sample of unknown goes off scale, make necessary dilutions using 4% acetic acid from the same batch prepared for leaching. Record results in ppm using the following calculations:

$$\text{ug/dl} \times \text{dilution} = \text{ug/dl} \div 100 = \text{ug/ml Pb or Cd} \times \text{volume of leaching solution used (ml)} =$$
$$\text{Total ug/Pb or Cd} \div \text{internal volume of the article to 7 mm(ml)} = \text{ppm leachable lead or cadmium relative to the internal volume.}$$

See attached laboratory report forms.

To Determine The Internal Volume:

Mark each unit 7 mm (1/4") below the rim on the outside of the sample. Fill each unit from a graduated cylinder to approximately 1/4" (6 to 7 mm) of overflowing. Measure and record the internal volume of each unit in milliliters.

When Reporting The Final Results Include The Following:

1. The amount of leachable lead or cadmium in ppm relative to the internal volume of the sample, average of six if possible.
2. The distance of the decoration below the rim in mm.

Materials Used In The Testing Procedure:

1. Beakers – Nalgene, polypropylene, graduated 2000 ml

- 1 2. Test tubes – Polystyrene with friction fit snap cap, sterile, 17 x 100 m
- 2 3. Pipets – Kimble, serological, polystyrene, sterile, 10 ml x 1/10.
- 3 4. Carboys – Nalgene, 20 liter, for mixing acetic acid solution
- 4 5. Aluminum baskets
- 5 6. Utility bath – 18-8 stainless steel, deep drawn, seamless construction with cover, holds
31 quarts. Overall dimensions length 21 ¾”, width 13 ¾”, depth 8”
- 6 7. Utility bath – same as above, holds 20 quarts
- 7 8. Gloves – vinyl, disposable
- 8 9. Hot plate – VWR Scientific, Thermolyne, Type 2200. length 24”, width 12”
- 9 10. Aluminum foil – to cover samples during the 24 hour period

10 References:

11
12 1982 Annual Book of ASTM Standards, Part 17, Refractories, Glass, Ceramic Materials,

13 Carbon And Graphite Products:

- 14 1. Pgs 757 – 759 ASTM Designation C 738-81
- 15 2. Pgs 999 – 1002 ASTM Designation C 927-80
- 16 3. Pg 682 ASTM Designation C 676-74 (reapproved 1980)

17 Lead And Cadmium In Decorated Glass Tumblers – Interagency Task Force Report,
18 November 13. 1978

EXHIBIT D

Laboratory Report Form

EXHIBIT E



Standard Test Method for Lead and Cadmium Extracted from the Lip and Rim Area of Glass Tumblers Externally Decorated with Ceramic Glass Enamels¹

This standard is issued under the fixed designation C 927; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the determination of lead and cadmium extracted by acetic acid from the lip and rim area of glassware used for drinking and which is exteriorly decorated with ceramic glass enamels. The procedure of extraction may be expected to accelerate the release of lead and cadmium from the decorated area and to serve, therefore, as a severe test that is unlikely to be matched under the actual conditions of usage of such glassware. This test method is specific for lead and cadmium.

NOTE 1—For additional information see Test Method C 738.

1.2 The values stated in acceptable metric units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety concerns associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

C 738 Test Method for Lead and Cadmium Extracted from Glazed Ceramic Surfaces²

3. Terminology

3.1 Definitions:

3.1.1 *ceramic glass decorations*—ceramic glass enamels fused to glassware at temperatures above 425°C (800°F) to produce a decoration.

3.1.2 *ceramic glass enamels (also ceramic enamels or glass enamels)*—predominately colored, silicate glass fluxes used to decorate glassware.

¹ This test method is under the jurisdiction of ASTM Committee C-14 on Glass and Glass Products and is the direct responsibility of Subcommittee C14.10 on Glass Decoration. It was developed jointly by ASTM Committee C-14 and C-21 on Ceramic Whitewares and Related Products, the Society of Glass Decorators A-20 Subcommittee on Ceramic Enamelled Decorated Glass Tumblers, and an Interagency Task Force consisting of FDA, EPA, and CPSC of the U.S. Government. Current edition approved Jan. 25, 1980. Published April 1980. Originally published as C 927 - 80. Last previous edition C 927 - 80 (1993)¹.

² *Annual Book of ASTM Standards*, Vol. 15.02.

3.1.3 *lip and rim area*—that part of a drinking vessel which extends 20 mm below the rim on the outside of the specimen.

4. Summary of Test Method

4.1 Lead and cadmium are extracted from the lip and rim area of the article under test by leaching with a 4 % acetic acid solution at 20 to 24°C (68 to 75°F) for 24 h and are measured by atomic absorption spectrophotometry using specific hollow cathode or electrodeless discharge lamps for lead and cadmium respectively. Results are reported as micrograms per millilitre (ppm) extracted relative to the internal volume of the glass article.

5. Significance and Use

5.1 The heavy metals, lead and cadmium, are known to cause serious health effects in man if consumed in excess. It is, therefore, important to measure the amount that may be extracted from an area of the glass drinking vessel in contact with the lip. Even though the amount of lead and cadmium extracted by this test method is in no way representative of the amount of the metals extracted by actual lip contact, the relative magnitude of metals extracted from one test specimen in relation to another test specimen provides an effective tool for discrimination.

6. Interferences

6.1 Since specific hollow cathode lamps or electrodeless discharge lamps for lead and cadmium are used, there are no interferences.

7. Apparatus

7.1 *Atomic Absorption Spectrophotometer (AAS)*, equipped with a 102-mm (4-in.) single slot or Belling burner head and digital concentration readout attachment (DCR) if available. This instrument should have a sensitivity of about 0.5 µg/mL of lead for 1 % absorption and a sensitivity of about 0.025 µg/mL of cadmium for 1 % absorption. Use the operating conditions as specified in the instrument manufacturer's analytical methods manual.

7.2 *Hollow Cathode or Electrodeless Discharge Lead Lamp*, set at 283.3 nm.

7.3 *Hollow Cathode or Electrodeless Discharge Cadmium Lamp*, set at 228.8 nm.

7.4 *Glassware* of chemically resistant borosilicate glass for use in preparing and storing reagents and solutions, and for use as test specimen containers.

7.5 Detection limits of lead and cadmium shall be determined and reported for individual instruments. In this test method, the detection limit shall be defined as twice the mean noise level at 0 $\mu\text{g/mL}$. Representative detection limits would be approximately 0.01 to 0.03 $\mu\text{g/mL}$ for lead and 0.0005 to 0.0010 $\mu\text{g/mL}$ for cadmium.

8. Reagents

8.1 *Purity of Reagents*—Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available.³ Other grades may be used provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination. Analyze each new batch of reagents for lead and cadmium.

8.2 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean distilled or deionized water.

8.3 *Acetic Acid* (4 volume %)—Mix 1 volume of glacial acetic acid with 24 volumes of water.

8.4 *Cadmium Standard Stock Solution* (1000 $\mu\text{g/mL}$ of cadmium)—Dissolve 0.9273 g of anhydrous cadmium sulfate in 250 mL of 1 % HCl (8.6) and dilute to 500 mL with 1 % HCl. Commercially available standard cadmium solutions may also be used.

8.5 *Detergent Rinse*—Add 2 mL of hand dishwashing detergent to 1 L of lukewarm tap water.

8.6 *Hydrochloric Acid* (1 weight %)—Mix 1 volume of concentrated hydrochloric acid (HCl, sp gr 1.19) with 37 volumes of water.

8.7 *Lead Standard Stock Solution* (1000 $\mu\text{g/mL}$)—Dissolve 1.598 g of lead nitrate ($\text{Pb}(\text{NO}_3)_2$) in 4 % acetic acid and dilute to 1 L with 4 % acetic acid. Commercially available standard lead solutions may also be used.

9. Sampling

9.1 *Continuous Process*—Since the amount of metal released from a decoration can be affected by the firing conditions, which may not be uniform across the width of thelehr, a minimum of six samples should be taken representing both sides and the center of the lehr.

9.2 *Load or Pile*—A minimum of six samples should be randomly selected from throughout the load.

10. Preparation of Standards

10.1 *Lead Standard Working Solutions*—Dilute lead nitrate solution (8.7) with acetic acid (8.3) to obtain working standards having final lead concentrations of 0, 5, 10, 15, and 20 $\mu\text{g/mL}$.

10.2 *Cadmium Standard Working Solutions*—Dilute cadmium stock solution (8.4) with acetic acid (8.3) to obtain working standards having final cadmium concentrations of 0.0, 0.3, 0.5, 1, 1.5, and 2.0 $\mu\text{g/mL}$.

10.3 Fresh working solutions should be prepared daily.

11. Procedure

11.1 *Preparation of Sample*—Take six identical units and cleanse each with a detergent rinse. Then rinse with tap water followed by distilled water followed by air drying. Mark each unit 7 mm below the rim. Record the internal volume of each article in millilitres by filling from a graduated cylinder to approximately 6 to 7 mm ($\frac{1}{4}$ in.) of overflowing. Mark each article, in a nondecorated area (if possible), 20 mm below the rim on the outside. Invert the article in an appropriate laboratory glassware container whose diameter is a minimum of 1.25 times and a maximum of 2.0 times the diameter of the test specimen at the rim. Carefully add 4 % acetic acid leaching solution from a graduated cylinder to the 20-mm mark. Record the volume of solution used. Cover the glassware containers, if possible, to prevent evaporation and to protect them from contamination. Let stand for 24 h at room temperature (20 to 24°C) in the dark. Remove the article after the 24-h leaching period and determine the lead and cadmium by atomic absorption. Record the lead and cadmium found in micrograms per millilitre.

NOTE 2—The possibility of a significant amount of evaporation exists. The analyst should determine whether the acetic acid leaching is noticeably below the 20-mm mark before removing the article. If it is, sufficient acetic acid solution should be added to restore the leaching solution to the 20-mm mark.

11.2 *Determination of Lead*—Set the instrument (7.1) for maximum signal at 283.3 nm using the lead hollow cathode lamp (7.2) (Note 3) and air/acetylene (C_2H_2) flow rates recommended by the manufacturer. Stir the sample (leaching) solution and pour off a portion into a clean flask or aspirate from the extraction container if suitable. Flush the burner with water and check zero point between readings. Determine lead from a standard curve of absorbance against $\mu\text{g/mL}$ of lead or calibrate the direct concentration reading (DCR) unit in the concentration mode with lead working solutions (11.1) and read and record the sample concentration directly. Bracket the sample solution with the next higher and lower working solutions. Dilute samples containing more than 20 $\mu\text{g/mL}$ of lead with 4 % acetic acid and reanalyze.

NOTE 3—Electrodeless discharge lamps may be substituted for hollow cathode lamps.

11.3 *Determination of Cadmium*—Proceed as in 11.2 using the cadmium hollow cathode lamp (7.3) and cadmium standards (10.2). If the sample (leaching) solution contains more than 2 $\mu\text{g/mL}$ of cadmium, dilute with 4 % acetic acid and reanalyze.

12. Calculation

12.1 Use the following equations to calculate the total amount of lead or cadmium metal released from the lip and rim area of the article expressed (1) in total micrograms and (2) parts per million of lead or cadmium metal leached relative to the internal volume of the article.

³ *Reagent Chemicals, American Chemical Society Specifications*, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analar Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmacopeial Convention, Inc. (USPC), Rockville, MD.

12.1.1 Determine lead or cadmium, A , in micrograms as follows:

$$A = C \times V_1 \quad (1)$$

12.1.2 Determine lead or cadmium, A , in parts per million as follows:

$$A = \frac{C \times V_1}{V_2} \quad (2)$$

where:

- C = concentration of lead or cadmium in leaching solution, $\mu\text{g/mL}$;
- V_1 = volume of leaching solution, mL; and
- V_2 = internal volume of article, mL (Note 4).

NOTE 4—The internal volume of the article expressed in millilitres of water closely approximates its weight in grams. Therefore, in this instance microgram per millilitre equals microgram per gram which equals parts per million.

13. Report

13.1 A suggested report form is given in Fig. 1.

14. Precision and Bias

14.1 Precision for the analytical method for single or multiple operator within a single laboratory is within the sensitivity of the AAS used and as specified is about $0.5 \mu\text{g/mL}$ for lead and $0.25 \mu\text{g/mL}$ for cadmium.

14.2 The accuracy and between-laboratory precision are dependent upon the ability to obtain representative samples for the statistical universe being sampled.

15. Keywords

15.1 atomic absorption; cadmium; ceramic glass enamels; glaze; heavy metals; lead

LABORATORY TEST DATA

Lead and Cadmium Released from Lip and Rim Area of Drinking Glassware Decorated Externally with Ceramic Glass Enamels

Date _____

Manufacturer _____ Laboratory _____

Pattern _____

Detection Limit Lead _____ Reagent Blank Lead _____

Cadmium _____

Internal Volume, mL _____

Sample	Volume of Leaching Solution, mL	Concentration, $\mu\text{g/mL}$ Lead,	Total μg	ppm Relative to Internal Volume
1				
2				
3				
4				
5				
6				
Avg				
		Cadmium		
1				
2				
3				
4				
5				
6				
Avg				

FIG. 1 Report Form

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

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