

2022 Product Testing Event Results

Public Health—Seattle & King County (PHSKC) partnered with ten community-based organizations to offer Product Testing Events in 2022. Community members were invited to bring household items to the events and get them tested for lead. The events were held in community spaces such as farmers markets, health fairs, and parenting classes.

Methods

Public Health- Seattle & King County used two types of testing to identify the levels of lead in an object: X-ray Fluorescence (XRF) analysis and lab analysis using inductively coupled plasma mass spectrometry (ICP-MS). These articles have more information about [XRF analysis](#) and [ICP-MS](#). ICP-MS is considered the gold standard for testing lead content in materials; however, it requires the item be destroyed. XRF analysis was used to screen items that could not be destroyed for lab testing. XRF machines can only reliably detect lead in products down to 90 ppm. Participants were notified of this limitation and advised to still seek blood lead testing for any children using items that are at increased risk of containing lead, such as aluminum cookware or imported ceramics.

The test results from the Product Testing Events represent only the amount of lead present in the specific item brought to the event by a community member. The amount of lead in other similar products may vary because of manufacturer changes in ingredients, the variations in the manufacturing process, and potential contamination from lead dust or paint after purchase

Interpreting the results




The **Lab Testing Results and XRF Testing Results tables** (starting on page 3) show results for products that were found to contain levels of lead above the limits selected by Public Health – Seattle & King County. See the **Lead Limit by Product Type table** on the next page for the lead limits by product type and details on supporting laws and regulations. Lead limits vary based on the testing tool used, existing laws and regulations, and the product type (how it's used, who uses it, how often, etc.). For instance, the limit for candy is lower than toys or crafts, since candy is directly consumed, often by children.

The amount of lead in an item is given in parts per million (ppm). We use ppm because even a very small amount of lead, such as 2 ppm or 0.0002% lead in a child's food, can have serious health effects. [This Ted-Ed video](#) helps visualize one part per million.

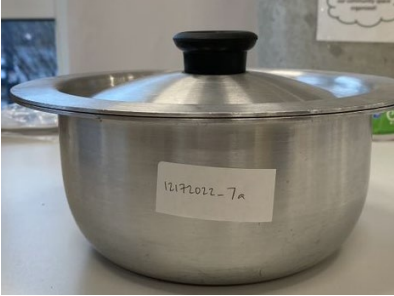

Lead Limit by Product Type

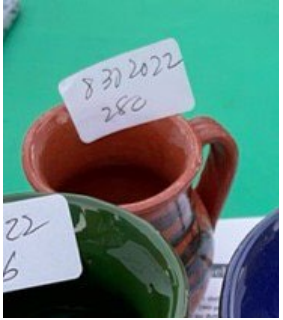
PRODUCT TYPE	LEAD LIMIT	SUPPORTING LAWS and REGULATIONS
Candy	0.1 ppm	Food and Drug Administration (FDA) limit in sugar based on manufacturing controls.
Spices, food, traditional medicines	2 ppm	Health based limit defined by Public Health—Seattle & King County from modeling and sampling.
Cosmetics, religious powders	10 ppm	FDA's draft guidance for industry on lead in cosmetic lip products and externally applied cosmetics.
Children's products, jewelry, craft supplies, other household items	90 ppm	The 2008 Consumer Product Safety Improvement Act sets a limit for lead in paint and applies generally to consumer product coatings.
Dishware and cookware	90 ppm	The FDA has set a limit for the amount of lead that may leach from food contact surfaces; this type of lab analysis is not possible at testing events. Therefore, we used the lowest limit that the handheld XRF machine can reliably detect, 90 ppm . Product testing participants were notified of the limitations of the XRF screening tool for cookware and dishware and encouraged to get a blood lead if they were using any items of potential concern.

XRF Testing Results



ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
PRODUCT TYPE: COOKWARE LEAD LIMIT: 90 PPM					
11192022_7 b	Coated aluminum pan Imusa Tested on handle	NA	NA	88 (63 – 113)	
	Coated aluminum pan Imusa Tested inside	NA	NA	107 (83 – 131)	
12172022_14 a	Medium pot	NA	NA	108 (88 – 128)	Photo not available
11192022_10 a	Coffee pot	NA	NA	115 (93 – 137)	
8202022_7 a	Terra cotta bean pot La Medo	Mexico	NA	151 (118 – 184)	

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
11192022_4 b	Aluminum pot	USA	Purchased in King County	230 (200 – 260)	
11192022_17 a	Metal spoon	NA	NA	592 (548 – 636)	
9102022_1 b	Injera Griddle	NA	NA	250 (223-277)	

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
12172022_7 a	Pot with lid	NA	NA	1,138 (1,081 – 1195)	
PRODUCT TYPE: DISHWARE LEAD LIMIT: 90 PPM					
8302022_28 a	Handmade ceramic bowl	NA	NA	108 (89 – 127)	

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
8302022_28 c	Handmade ceramic pitcher	NA	NA	354 (324 – 384)	
9032022_15 a	Silver bowl	NA	NA	396 (359 – 433)	Photo not available
11062022_14 b	Ceramic blue bowl Greenbrier International Royal Norfolk Tested outside of bowl	China	NA	761 (267 – 1,255)	



ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
8042022_25 a	Bowl Ikea	Thailand	NA	834 (386 – 1,282)	
11062022_15 a	Ceramic pot A Nizhoni Original Tested on white glaze	NA	NA	2,728 (2,651 – 2,805)	
	Ceramic pot A Nizhoni Original Tested on gold glaze	NA	NA	4,664 (4,572 – 4,756)	



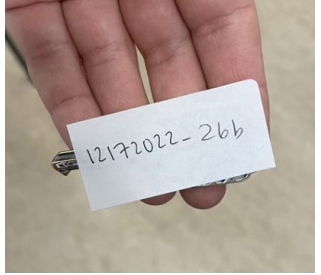

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
10012022_13 a	Teacup server	Thailand	NA	5,167 (4,499 – 5,835)	
08302022_22 a	Decorative bowl	China	NA	32,000 (30,993 – 33,007)	
11192022_8 a	Ceramic brown glazed lid World Market	NA	Purchased at World Market	136,000 (135,647 – 136,353)	





ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
11162022_3 a	Blue mug Tested on lip glaze (Blue)	NA	NA	457,000 (451,429 – 462,571)	
	Blue mug Tested on matte glaze (grey)	NA	NA	25,000 (24,832 – 25,168)	
8202022_3 a	Handmade decorated ceramic cup	NA	Purchased in Mexico	577,000 (571,704 – 582,296)	No photo available
8202022_2 a	Handmade bowl	NA	Purchased in Mexico	800,000 (NA)	
PRODUCT TYPE: JEWELRY LEAD LIMIT: 90 PPM					
8202022_1 a	Tibetan silver bracelet	Nepal	Purchased in King County	239 (60 – 418)	






ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
8042022_22 b	Bracelet	NA	NA	317 (76 – 558)	
10012022_17 a	Ring – gold colored	NA	NA	802 (541 – 1,063)	Photo unavailable
9102022_8 e	Earrings with crystals and metal Kaitin	NA	NA	3,810 (3,714 – 3,906)	
8202022_13 a	Earring	NA	NA	34,000 (33,754 – 34,246)	



ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
PRODUCT TYPE: KEY LEAD LIMIT: 90 PPM					
12172022_26 b	Key Minute Key	NA	NA	806 (748 – 864)	
8302022_24 a	Key Kwikset	NA	NA	6,348 (5,805 – 6,891)	
9162022_11 a	Key	NA	NA	6,576 (6,566 – 6,586)	No photo available





ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
11062022_3 b	Key	NA	NA	6,676 (6,190 – 7,162)	
9102022_17 c	Key Medeco	NA	NA	7,213 (6,732 - 7,694)	No photo available
11062022_2 a	Key	NA	NA	7,337 (6,824 – 7,850)	No photo available
8042022_9 b	Key	NA	NA	7,611 (7,106 – 8,116)	No photo available
10012022_1 d	Key	NA	NA	7,818 (7,336 – 8,300)	




ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
8042022_26 a	Key	NA	NA	9,698 (9,080 – 10,316)	
8042022_8 b	Key Minute Key	NA	NA	10,000 (9,418 – 10,582)	
9162022_4 a	Key	NA	NA	11,000 (NA)	No photo available
8042022_8 c	Key	NA	NA	12,000 (11,249 – 12,751)	

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
10012022_3 b	Key	NA	NA	14,000 (13,168 – 14,832)	
8302022_2 b	House keys	NA	NA	15,000 (14,568 – 15,432)	Photo not available
PRODUCT TYPE: OTHER LEAD LIMIT: 90 PPM					
8302022_1 c	Hat Royal Road	NA	NA	90 (64 – 116)	Photo not available
8042022_30 a	Key Fob	NA	NA	279 (142 – 416)	
10012022_7 a	Key chain	NA	NA	1,769 (1,487 – 2,051)	Photo not available
8202022_1 b	Chinese Urn	NA	NA	2,869(2,775 – 2,963)	No photo available

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	XRF, PPM MEDIAN (RANGE)	PHOTO
6252022_10 b	Braided purse strap	NA	NA	3,696 (2,388 – 5,004)	
11062022_9 c	Kajal container	NA	NA	72,000 (70,174 – 73,826)	

Lab Testing Results




ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	PPM	PHOTO
PRODUCT TYPE: COSMETICS AND RELIGIOUS POWDERS LEAD LIMIT: 10 PPM					
10152022_1 c	Clinique black mascara	NA	NA	15	
8202022_16 c	Lipstick	NA	NA	16	

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	PPM	PHOTO
8202022_14 a	Mac Eyeshadow Color: Unwind	EU	NA	30	
11192022_13 b	Eye liner pens	NA	Purchased in USA	36	
9032022_16 d	Make-up, foundation Studio Fix MAC Studio	USA	NA	82	


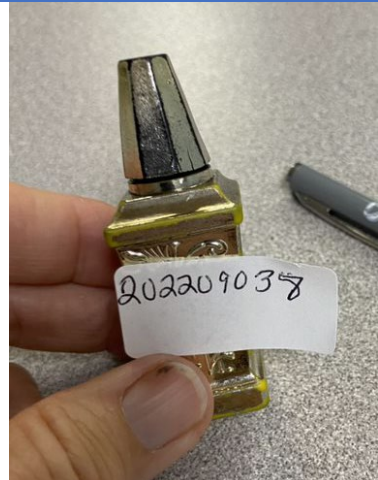


ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	PPM	PHOTO
8202022_14 b	Eyeshadow Sephora	NA	NA	94	
11062022_9 a	Al-Asmad Alharman Kouhl Zam Zam and Rose Water	NA	NA	110	
9102022_5 a	Hashmi Surma Special	NA	NA	390,000	



ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	PPM	PHOTO
9242022_5 d	Kohl powder	NA	NA	410,000	
9032022_18 a	Surma, Kajal	NA	NA	450,000	
9102022_12 b	Kohl loose powder	NA	NA	470,000	



ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	PPM	PHOTO
11192022_10 c	Kohl powder	NA	NA	630,000	
9242022_2 f	Eye makeup -powder	NA	NA	750,000	No photo available
9032022_7 a	Kohl eyeliner	NA	NA	810,000	

ID#	DESCRIPTION	COUNTRY OF ORIGIN	PURCHASE DETAILS	PPM	PHOTO
8042022_7 a	Rose Water and Zam Zam Kohl Al Asmad Alharmain	Saudi Arabia	NA	840,000	No photo available
PRODUCT TYPE: CANDY LEAD LIMIT: 0.1 PPM					
8202022_3 b	Candy	NA	NA	2.6	

Acknowledgements

The Product Testing Events were a collaborative effort that could not have happened without the hard work of many individuals and organizations.

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- Cultivate South Park
- First Five Years and Beyond
- Horn of Africa Services
- Immigrant Women Community Center
- Indian American Community Services
- King County Medical Society
- Mother Africa
- Muslimahs Against Abuse Center
- Somali Health Board
- Teniel Sabin Training and Consulting

 Immigrant Women's
Community Center



Cultivate
south
park



King County 
Medical Society

Horn of Africa Services



IAACS
Indian American
Community Services

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