

CONSUMER PRODUCTS SERVICES DIVISION

# **CRAYON ROCKS**

Technical Report: Date Received:	(5117)249-0169 September 06, 2017		September 12, 2017 PAGE 1 OF 11
BARBARA LEE CRAYON ROCKS 7053 VERNON ROAD HESTAND, KY 42151 UNITED STATES			
Sample Description:	CRAYON ROCKS - SOY WAX CRA	YONS	
Vendor:	N/A	Sample Size:	1
Manufacturer:	N/A	Style No(s):	N/A
Buyer:	N/A	SKN/SKU No.:	N/A
Labeled Age Grade:	NOT PRESENT	PO No.:	8312017
Appropriate Age Grade:	NOT REQUESTED	Ref #:	N/A
Client Specified Age Grade:	NOT REQUESTED	Country of Origin:	N/A
Tested Age Grade:	N/A	Assortment No.:	N/A
UPC Code:	N/A		

#### EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- The migration of certain elements in Category I Dry, brittle, powder-like or pliable toy material requirements of the European Standard, "Safety of Toys", EN 71 Part 3: 2013+A1:2014.
- The soluble heavy metals content in substrate requirements of ASTM F963-16, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.2(2)(b).
- The total lead content of 100ppm requirements in substrate materials (Consumer Products Safety Improvement Act (CPSIA) of 2008).
- Note: Data has been transferred from Bureau Veritas Technical Reports (5116)356-0008 dated January 17, 2017, (5117)198-0172 dated July 27, 2017 and (5117)226-0157 dated August 29, 2017.

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Bureau Veritas Consumer Products Services, Inc. 100 Northpointe Parkway Buffalo, New York 14228 Telephone: (716) 505-3300 Fax: (716) 505-3301 website: www.bureauveritas.com/cos This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <a href="http://www.bureauveritas.com/cps">http://www.bureauveritas.com/cps</a> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth out findings solely with respect to the test samples identified herein. The results set torth in this report are not indicative or representative of the quality or characteristics of the lot from which a test samples was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence; provided, however; that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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#### **RESULTS:**

# TOTAL LEAD CONTENT IN SUBSTRATE BY COMPOSITE TESTING (100PPM) (Consumer Product Safety Improvement Act (CPSIA) of 2008)

Test Method: U.S. CPSC-CH-E1001-08.1 (June 21, 2010) or U.S. CPSC-CH-E1002-08.1 (June 21, 2010).

Ana	lyte	Lead			
Rec	uirement: Maximum allowable limit:			100 mg/kg	
Ana		Lead (Pb)			
	•	Description		Result	Conclusion
	Color / Component	Location	Style	(mg/kg)	
(A)	dark yellow crayon	-	1	LT 10	Pass
	green crayon		2		
	gold crayon		3		
(B)	turquoise crayon	-	4	LT 10	Pass
	tan crayon		5		
	white crayon		6		
(C)	brown crayon	-	7	LT 10	Pass
	black crayon		8		
	blue crayon		9		
(D)	purple crayon	-	10	LT 10	Pass
	red crayon		11		
(E)	silver crayon	-	12	LT 10	Pass
	orange crayon		13		

LT = Less Than

*mg/kg* = *milligrams per kilogram* (*ppm* = *parts per million*)

\* = Average of duplicate analyses



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# SOLUBLE HEAVY METALS CONTENT IN SUBSTRATE (ASTM F963-16, Section 4.3.5.2(2)(b))

Test Method: ASTM International Standard ASTM F963-16, Section 8.3.5 (Excluding 8.3.5.5(3))

Sample Identity	Color	Location	Style
Type I: Sub	strate other than modeling clay		
А	dark yellow crayon	-	1
В	green crayon	-	2
С	gold crayon	-	3
D	turquoise crayon	-	4
E	tan crayon	-	5
F	white crayon	-	6
G	brown crayon	-	7
Н	black crayon	-	8
I	blue crayon	-	9
J	purple crayon	-	10
K	red crayon	-	11
L	silver crayon	-	12
М	orange crayon	-	13



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Analyte	As	Ва	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit Type I (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type II (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

### SOLUBLE HEAVY METALS CONTENT IN SUBSTRATE (ASTM F963-16, Section 4.3.5.2(2)(b))

Analyte	As	Ва	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample				Result	(mg/kg)				(g)	
А	LT 2	2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
В	LT 2	4	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
С	LT 2	2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
D	LT 2	4	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
E	LT 2	245	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
F	LT 2	26	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
G	LT 2	208	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
Н	LT 2	6	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
I	LT 2	11	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
J	LT 2	3	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
К	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
L	LT 2	6	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS
М	LT 2	6	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	PASS

mg/kg = milligrams per kilogram (ppm=parts per million)

CR = adjusted analytical result

LT = Less Than ND = None Detected As = Arsenic, Ba = Barium, Cd = Cadmium, Cr = Chromium, Hg = Mercury, Pb = Lead, Sb = Antimony, Se = Selenium Detection limit (mg/kg): Each element 2

Remark:

Textiles (natural or synthetic) are exempted for lead content requirement according to clarification of Toy Industry Association for ASTM F963-16. The lead content analysis result of corresponding material herein is for client's reference only.



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# MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A1:2014)

Test Method : European Standard EN 71 Part 3: 2013+A1:2014, Annex E.

Class: Category I - Dry, brittle, powder-like or pliable toy material

Sample Identity	Color	Location	Style	
Α.	dark yellow crayon	-	1	
В.	green crayon	-	2	
C.	gold crayon	-	3	
D.	turquoise crayon	-	4	
E.	tan crayon	-	5	
F.	white crayon	-	6	
G.	brown crayon	-	7	
Η.	black crayon	-	8	
I.	blue crayon	-	9	
J.	purple crayon	-	10	
K.	red crayon	-	11	
L.	silver crayon	-	12	
М.	orange crayon	-	13	



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# RESULTS:

# MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A1:2014)

	Requirement		Result (mg/kg)						
Analyte	(mg/kg)	Sample ID							
	Category I	Α.	В.	C.	D.	E.	F.		
Aluminium (Al)	5625	4	1950	13	24	13	19		
Arsenic (As)	3.8	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15		
Boron (B)	1200	LT 2	11	LT 2	LT 2	LT 2	LT 2		
Barium (Ba)	1500	2	4	2	4	245	26		
Cadmium (Cd)	1.3	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15		
Cobalt (Co)	10.5	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Chromium III (Cr III)	37.5	LT 0.002	LT 0.002	LT 0.002	LT 0.002	LT 0.002	LT 0.002		
Chromium VI (Cr VI)	0.02	LT 0.002	LI 0.002	LI 0.002	LT 0.002	LT 0.002	LT 0.002		
Copper (Cu)	622.5	LT 2	LT 2	LT 2	2	LT 2	LT 2		
Mercury (Hg)	7.5	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15		
Manganese (Mn)	1200	3	3	2	4	48	4		
Nickel (Ni)	75	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Lead (Pb)	13.5	LT 0.5	LT 0.5	LT 0.5	LT 2	LT 2	LT 2		
Antimony (Sb)	45	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Selenium (Se)	37.5	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Tin (Sn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Organic tin	0.9	LT 0.04	LT 0.04	LT 0.04	LT 0.04	LT 0.04	LT 0.04		
Strontium (Sr)	4500	15	20	10	26	56	22		
Zinc (Zn)	3750	2	6	12	6	6	6		
Mass of trace am	ount (gram)	-	-	-	-	-	-		
Conclusi	on	Pass	Pass	Pass	Pass	Pass	Pass		



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# RESULTS:

# MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A1:2014)

	Requirement			Result	(mg/kg)				
Analyte	(mg/kg)	Sample ID							
	Category I	G.	H.	Ι.	J.	K.	L.		
Aluminium (Al)	5625	12	4	4040	16	11	38		
Arsenic (As)	3.8	LT 0.15	LT 0.15	1	LT 0.15	LT 0.15	LT 0.15		
Boron (B)	1200	LT 2	LT 2	19	LT 2	LT 2	LT 2		
Barium (Ba)	1500	208	6	12	3	830	6		
Cadmium (Cd)	1.3	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15		
Cobalt (Co)	10.5	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Chromium III (Cr III)	37.5	LT 0.002	LT 0.002	LT 0.15	LT 0.002	LT 0.15	LT 0.002		
Chromium VI (Cr VI)	0.02	LT 0.002	LT 0.002	LT 0.002	LT 0.002	LT 0.002	LT 0.002		
Copper (Cu)	622.5	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Mercury (Hg)	7.5	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15		
Manganese (Mn)	1200	6	6	LT 2	4	2	3		
Nickel (Ni)	75	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Lead (Pb)	13.5	LT 0.5	LT 0.5	LT 0.5	LT 0.5	LT 0.5	LT 0.5		
Antimony (Sb)	45	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Selenium (Se)	37.5	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Tin (Sn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		
Organic tin	0.9	LT 0.04	LT 0.04	LT 0.04	LT 0.04	LT 0.04	LT 0.04		
Strontium (Sr)	4500	21	20	16	27	52	18		
Zinc (Zn)	3750	3	6	LT 2	7	LT 2	3		
Mass of trace am	ount (gram)	-	-	-	-	-	-		
Conclusi	on	Pass	Pass	Pass	Pass	Pass	Pass		



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## **RESULTS:**

#### MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A1:2014)

	Requirement	Result (mg/kg)								
Analyte	(mg/kg)		Sample ID							
	Category I	М.	-	-	-	-	-			
Aluminium (Al)	5625	7	-	-	-	-	-			
Arsenic (As)	3.8	LT 0.15	-	-	-	-	-			
Boron (B)	1200	LT 2	-	-	-	-	-			
Barium (Ba)	1500	6	-	-	-	-	-			
Cadmium (Cd)	1.3	LT 0.15	-	-	-	-	-			
Cobalt (Co)	10.5	LT 2	-	-	-	-	-			
Chromium III (Cr III)	37.5	LT 0.002	-			-				
Chromium VI (Cr VI)	0.02	LT 0.002		-	-		-			
Copper (Cu)	622.5	LT 2	-	-	-	-	-			
Mercury (Hg)	7.5	LT 0.15	-	-	-	-	-			
Manganese (Mn)	1200	3	-	-	-	-	-			
Nickel (Ni)	75	LT 2	-	-	-	-	-			
Lead (Pb)	13.5	LT 0.5	-	-	-	-	-			
Antimony (Sb)	45	LT 2	-	-	-	-	-			
Selenium (Se)	37.5	LT 2	-	-	-	-	-			
Tin (Sn)	15000	LT 2	-	-	-	-	-			
Organic tin	0.9	LT 0.04	-	-	-	-	-			
Strontium (Sr)	4500	20	-	-	-	-	-			
Zinc (Zn)	3750	LT 2	-	-	-	-	-			
Mass of trace am	ount (gram)	-	-	-	-	-	-			
Conclusi	on	Pass	-	-	-	-	-			

mg/kg = milligrams per kilogram (ppm=parts per million) LT = Less Than \* = Average of duplicate analysis

FR = Failed Result

Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg

# = Verified results (see note)

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.

- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.

Note:

If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method

- Chromium VI: In house lon-chromatography analysis.
- Organic tin: EN71 part 3:2013+A1:2014, Annex G by Gas Chromatography Mass Spectroscopy analysis. \_



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EXHIBIT #1

SAMPLE PRODUCT



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EXHIBIT # 2

SAMPLE PRODUCT



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EXHIBIT # 3

SAMPLE PRODUCT