



Cote d'Ivoire Lead Paint Data

In 2014-15, Jeunes Volontaires pour l'Environnement (JVE) purchased a total of 53 paints from retail stores located in Abidjan especially in the districts of Cocody, Treichville, Koumassi, and Marcory in Côte d'Ivoire. The paints were from 19 paint brands.

- Forty-four were solvent-based, enamel decorative paints.
- Five were anticorrosive paints intended for use on metal doors and windows in housing, metal toys, playground equipment and other domestic uses.
- Three were mixed enamel decorative paints, i.e., colored, solvent-based, enamel paints mixed with a white acrylic base paint, a common practice among painters in Côte d'Ivoire.
- In addition, the white acrylic paint used as a base for the mixed paints was analyzed for its lead content.

Samples from all the paints were analyzed for their total lead content (dry weight) using the EPA 3050B/7420 method reference by the Forensic Analytical Laboratories, an accredited laboratory in the USA.

At the time this data was collected and analyzed Cote d'Ivoire had no regulation limiting the manufacture, sale, import or use of paint with high lead content.

Lead Levels in Paint

- Thirty-three of the 44 solvent-based, enamel decorative paints (75%) had lead concentrations higher than 90 ppm and 600 ppm. Sixteen (16) paints (36%) contained lead at levels higher than 10,000 ppm. The highest lead concentration detected was 190,000 ppm.
- 4 of the 5 anticorrosive paints (80%) had lead concentrations above 90 ppm and 3 anticorrosive paints (60%) had lead content higher than 600 ppm. The highest lead concentration detected in the anticorrosive paints was 2,200 ppm.
- The white acrylic base paint had a lead concentration below 90 ppm, but 1 of the 3 mixed paints had a lead content higher than 90 ppm. The lead concentration in the green mixed paint was 17,000 ppm.

Lead Levels by Brand

The brands with highest lead content were ULTRALAC, AUTOLAC, DELUX, PEROLAC, TRAPLINE, KIMILAC, EMAIL BRILLANT, KIMIMAT, SPECIAL 7, TOPLINE and TOPFER.

Of these brands, the most popular and commonly used for domestic purposes are DELUX, KIMILAC and PEROLAC.

- One or more enamel decorative paints from 9 brands (69%) had lead content above 90 ppm as well as above 600 ppm. One or more paints from 8 brands (62%) had a lead concentration higher than 10,000 ppm. The brand of enamel decorative paint with the highest lead concentration was Ultralac with a yellow paint containing 190,000 ppm.
- The 5 anticorrosive paints were produced by 5 brands. Paints from 4 of 5 brands (80%) had a lead concentration higher than 90 ppm. Paints from 3 brands (60%) had a lead content higher 600 ppm. No paint from any brand of anticorrosive paints had a lead content above 10,000 ppm. The highest lead concentration detected was 2,200 ppm in a paint from the Topfer brand.
- Three colored paints from the brand Special 7 were mixed with an acrylic white paint from the brand Batilo, a common practice among painters in Côte d'Ivoire. The white paint did not contain added lead, but the green colored paint from Special 7 contained high levels of lead (17,000 ppm).

Lead Levels by Color

Of the 44 solvent-based enamel decorative paints, 12 were white paints, 10 were yellow paints, 10 were red paints, 10 were green paints and 2 were blue paints. In addition, 2 different colors of anticorrosive paints were analyzed: 4 grey paints and 1 red paint. Also, 3 colors (green, yellow and red) of solvent-based enamel decorative paint was mixed with a white acrylic paint and analyzed

- Yellow and green enamel decorative paints had the highest average concentrations of 56,100 ppm and 23,700 ppm, respectively. Blue and white colors had the lowest lead concentrations with averages of 3,880 and 2,530 respectively.
- Lead concentrations in the four rustproof grey anticorrosive paints ranged from 100 to 2,200 ppm. The lowest lead level in anticorrosive paints was below 60 ppm and was found in the red anticorrosive paint. The highest concentration was the grey paint with 2,200 ppm.
- While the yellow and red, mixed paints (with an acrylic base) had lead content below 90 ppm, the green mixed paint had a lead content of 17,000 ppm. The acrylic paint, by itself, had a lead concentration below 90 ppm.

Consumer Information

No paint cans from the 53 sampled paint cans offered information about lead content.

This report was prepared by JVE with support and assistance from the African Lead Paint Elimination Project, which was established to eliminate lead in paint and raise widespread awareness about the adverse human health impacts of lead-based paints, particularly on the health of children under six years old.

The Africa Lead Paint Elimination Project carries out focused activities to eliminate lead in paint in four project countries – Cameroon, Ethiopia, Ivory Coast, and Tanzania. The project is funded by the Global Environment Facility; the United Nations Environment Programme (UNEP) is the Project Implementing Agency; and IPEN is the Project Executing Agency. The contents of this booklet, however, are the sole responsibility of IPEN and JVE.

Jeunes Volontaires pour l'Environnement (JVE) Côte d'Ivoire was established in February 2008 and has its headquarter in Riviera-Faya at the opposite of the 1st Infantry Battalion of Akouedo. Our activities areas are climate change, chemical safety and biodiversity, community development, environmental education and renewable energy. In the field of chemical safety, JVE Côte d'Ivoire has a particular interest for heavy metals, including lead.

CÔTE D'IVOIRE LEAD PAINT DATA

TABLE 1. SOLVENT-BASED, ENAMEL DECORATIVE PAINTS PURCHASED AND ANALYZED FOR LEAD CONTENT IN CÔTE D'IVOIRE

Sample Number	Brand Name	Color of Paint	Paint Can Size	Purchase Price Per Litre (CFA)	Date Manufactured	Batch Number	Date of Purchase	Website on Label
YVE-40	EUREKA-LAC ^{M1}	White (Enamel)	1 kg	5492	22/01/2015	-	19/02/2015	No
YVE-41	PANTINOX SR9 ^{M1}	Yellow (Enamel)	1 kg	6975	22/01/2015	-	19/02/2015	No
YVE-42	PANTINOX SR9 ^{M1}	Green (Enamel)	1 kg	6975	22/01/2015	-	19/02/2015	No
YVE-43	PANTINOX SR9 ^{M1}	Red (Enamel)	1 kg	6975	22/01/2015	-	19/02/2015	No
YVE-44	PANTINOX SR9 ^{M1}	White (Enamel)	1 kg	6606	22/01/2015	-	19/02/2015	No
YVE-45	ANTIROUILLE SR ^{M1}	Red-Brown (Anti-corrosive)	1 kg	3980	August -14	201302004/302010	19/02/2015	No
YVE-46	DELUX ^{M2}	White (Enamel)	1 kg	2500	-	-	31/12/2014	No
YVE-47	DELUX ^{M2}	Yellow (Enamel)	1 kg	2500	-	-	31/12/2014	No
YVE-48	DELUX ^{M2}	Red (Enamel)	1 kg	2500	-	-	31/12/2014	No
YVE-49	DELUX ^{M2}	Blue (Enamel)	1 kg	2500	-	-	31/12/2014	No
YVE-50	DELUX EMAIL ^{M2}	Rustproof Grey (Anti-corrosive)	1 kg	500	-	-	31/12/2014	No
YVE-51	PEROLAC ^{M3}	White (Enamel)	1 kg	2500	06/01/2015	37974	16/01/2015	No

Sample Number	Brand Name	Color of Paint	Paint Can Size	Purchase Price Per Litre (CFA)	Date Manufactured	Batch Number	Date of Purchase	Website on Label
YVE-52	PEROLAC ^{M3}	Yellow (Enamel)	1 kg	2500	31/12/2013	24404	16/01/2015	No
YVE-53	PEROLAC ^{M3}	Red (Enamel)	1 kg	2500	08/01/2014	24690	16/01/2015	No
YVE-54	PEROLAC ^{M3}	Green (Enamel)	1 kg	2500	17/11/2014	36002	16/01/2015	No
YVE-55	KIMIMAT ^{M3}	White (Enamel)	1 kg	5650	22/09/2014	33158	28/01/2015	No
YVE-56	KIMIMAT ^{M3}	Yellow (Enamel)	1 kg	5650	22/09/2014	33158 / -	28/01/2015	No
YVE-57	KIMIMAT ^{M3}	Green (Enamel)	1 kg	5650	22/09/2014	33158 / -	28/01/2015	No
YVE-58	KIMIMAT ^{M3}	Red (Enamel)	1 kg	5650	22/09/2014	33158 / -	28/01/2015	No
YVE-59	ULTRALAC BL ^{M4}	White (Enamel)	1 kg	3925	03/06/2014	14060794	04/03/2015	No
YVE-60	ULTRALAC RAL 1021 ^{M4}	Yellow (Enamel)	1 kg	4601	09/03/2015	15020540	04/03/2015	No
YVE-61	ULTRALAC RAL 6032 ^{M4}	Green (Enamel)	1 kg	4601	05/03/2015	15018020	04/03/2015	No
YVE-62	ULTRALAC RAL 3000 ^{M4}	Red (Enamel)	1 kg	4601	05/03/2015	15022387	04/03/2015	No
YVE-63	ULTRA FER ^{M4}	Grey (Anti-corrosive)	1 kg	3013	18/02/2015	15022118	04/03/2015	No
YVE-64	AUTOLAC ^{M4}	White (Enamel)	1 kg	5712	24/02/2015	15022321	04/03/2015	No
YVE-65	AUTOLAC RAL 1021 ^{M4}	Yellow (Enamel)	1 kg	5712	05/03/2015	15020540	04/03/2015	No
YVE-66	AUTOLAC RAL 6032 ^{M4}	Green (Enamel)	1 kg	5712	05/03/2015	15018020	04/03/2015	No
YVE-67	AUTOLAC RAL 3000 ^{M4}	Red (Enamel)	1 kg	5712	05/03/2015	15022387	04/03/2015	No

Sample Number	Brand Name	Color of Paint	Paint Can Size	Purchase Price Per Litre (CFA)	Date Manufactured	Batch Number	Date of Purchase	Website on Label
YVE-68	TOPLINE ^{M4}	White (Enamel)	1 kg	1695	08/09/2014	14090271	15/01/2015	No
YVE-69	TOPLINE ^{M4}	Yellow (Enamel)	1 kg	1695	14/11/2014	11110551	15/01/2015	No
YVE-70	TOPLINE ^{M4}	Green (Enamel)	1 kg	1695	31/10/2013	13091462	15/01/2015	No
YVE-71	TOPLINE ^{M4}	Red (Enamel)	1 kg	2000	24/09/2013	13090989	15/01/2015	No
YVE-72	TOPFER ^{M4}	Rustproof Grey (Anti-corrosive)	1 kg	1695	12/06/2013	13060028	15/01/2015	No
YVE-73	TRAPLINE ^{M2}	White (Enamel)	1 kg	2000	-	-	31/12/2014	No
YVE-74	TRAPLINE ^{M2}	Yellow (Enamel)	1 kg	2000	-	-	31/12/2014	No
YVE-75	TRAPLINE ^{M2}	Green (Enamel)	1 kg	2000	-	-	31/12/2014	No
YVE-76	TRAPLINE ^{M2}	Red (Enamel)	1 kg	2000	-	-	31/12/2014	No
YVE-77	KIMALAC (GLYCERO PHTALIQUE) ^{M3}	White (Enamel)	1 kg	3300	01/09/2014	32711	28/01/2015	No
YVE-78	KIMALAC (GLYCERO PHTALIQUE) ^{M3}	Yellow (Enamel)	1 kg	3250	26/11/2014	36418	28/01/2015	No
YVE-79	KIMALAC (GLYCERO PHTALIQUE) ^{M3}	Green (Enamel)	1 kg	3250	20/10/2014	22227	28/01/2015	No

Sample Number	Brand Name	Color of Paint	Paint Can Size	Purchase Price Per Litre (CFA)	Date Manufactured	Batch Number	Date of Purchase	Website on Label
YVE-80	SUPER+ ^{M3}	Rustproof Grey (Anti-corrosive)	1 kg	3000	20/10/2014	34960	28/01/2015	No
YVE-81	EMAIL BRILLANT ^{M3}	Red (Enamel)	1 kg	850	-	-	28/01/2015	No
YVE-82	IKARLAC (MAESTRIA E-25-3) ^{M5}	Red (Enamel)	1 kg	5349	14/01/2015	1410T1148	31/12/2014	No
YVE-83	IKARLAC (MAESTRIA E8-4) ^{M5}	Yellow (Enamel)	1 kg	5349	14/01/2015	1410T1150	31/12/2014	No
YVE-84	IKARLAC (MAESTRIA BLANC) ^{M5}	White (Enamel)	1 kg	3723	14/01/2015	1410T1149	31/12/2014	No
YVE-85	IKARLAC (MAESTRIA RAL 3020) ^{M5}	Blue (Enamel)	1 kg	5349	14/01/2015	1410T1151	31/12/2014	No
YVE-86	JALINE ^{M5}	White (Enamel)	1 kg	6000	-	14063018	18/02/2015	No
YVE-87	BATILO ^{M4}	White (Acrylic)	4 kg	4130	-	15020354	06/03/2015	No
YVE-88	SPECIAL 7+ BATILO ^{M4}	Yellow (Acrylic)	1 kg	1761	-	-	06/03/2015	No
YVE-89	SPECIAL 7+ BATILO ^{M4}	Green (Acrylic)	1 kg	2384	-	-	06/03/2015	No
YVE-90	SPECIAL 7+ BATILO ^{M4}	Red (Acrylic)	1 kg	2384	-	-	06/03/2015	No
YVE-91	DELUX ^{M2}	Green (Enamel)	1 kg	-	-	-	-	No
YVE-92	TRAPLINE ^{M2}	Green (Enamel)	1 kg	-	-	-	-	No

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TABLE 2: RESULTS OF LEAD ANALYSIS FOR SOLVENT-BASED ENAMEL DECORATIVE PAINTS PURCHASED IN CÔTE D'IVOIRE

Sample Number	Brand Name	Color of Paint	Lead Content of Paint (ppm)	Country of Brand Headquarters	Country Where Manufactured	Is there information on can about lead content of paint?
YVE-40	EUREKALAC	WHITE	<60	USA	RCI	No
YVE-41	PANTINOX SR9	YELLOW	<60	USA	RCI	No
YVE-42	PANTINOX SR9	GREEN	<60	USA	RCI	No
YVE-43	PANTINOX SR9	RED	<60	USA	RCI	No
YVE-44	PANTINOX SR9	WHITE	<60	USA	RCI	No
YVE-45	ANTIROUILLE SR	RED-BROWN	<60	USA	RCI	No
YVE-46	DELUX	WHITE	7800	RCI	RCI	No
YVE-47	DELUX	YELLOW	57000	RCI	RCI	No
YVE-48	DELUX	RED	9700	RCI	RCI	No
YVE-49	DELUX	BLUE	7700	RCI	RCI	No
YVE-50	DELUX EMAIL	RUSTPROOF GREY	100	RCI	RCI	No
YVE-51	PEROLAC	WHITE	2200	RCI	RCI	No
YVE-52	PEROLAC	YELLOW	40000	RCI	RCI	No
YVE-53	PEROLAC	RED	11000	RCI	RCI	No
YVE-54	PEROLAC	GREEN	3200	RCI	RCI	No
YVE-55	KIMIMAT	WHITE	1600	RCI	RCI	No
YVE-56	KIMIMAT	YELLOW	11000	RCI	RCI	No
YVE-57	KIMIMAT	GREEN	1400	RCI	RCI	No
YVE-58	KIMIMAT	RED	1800	RCI	RCI	No
YVE-59	ULTRALAC BL	WHITE	4100	RCI	RCI	No
YVE-60	ULTRALAC RAL 1021	YELLOW	190000	RCI	RCI	No
YVE-61	ULTRALAC RAL 6032	GREEN	61000	RCI	RCI	No

Sample Number	Brand Name	Color of Paint	Lead Content of Paint (ppm)	Country of Brand Headquarters	Country Where Manufactured	Is there information on can about lead content of paint?
YVE-62	ULTRALAC RAL 3000	RED	50000	RCI	RCI	No
YVE-63	ULTRAFER	GREY	1100	RCI	RCI	No
YVE-64	AUTOLAC	WHITE	<60	RCI	RCI	No
YVE-65	AUTOLAC RAL 1021	YELLOW	190000	RCI	RCI	No
YVE-66	AUTOLAC RAL 6032	GREEN	75000	RCI	RCI	No
YVE-67	AUTOLAC RAL 3000	RED	91000	RCI	RCI	No
YVE-68	TOPLINE	WHITE	2300	RCI	RCI	No
YVE-69	TOPLINE	YELLOW	34000	RCI	RCI	No
YVE-70	TOPLINE	GREEN	11000	RCI	RCI	No
YVE-71	TOPLINE	RED	5200	RCI	RCI	No
YVE-72	TOPFER	RUSTPROOF GREY	2200	RCI	RCI	No
YVE-73	TRAPLINE	WHITE	8200	RCI	RCI	No
YVE-74	TRAPLINE	YELLOW	4100	RCI	RCI	No
YVE-75	TRAPLINE	GREEN	9700	RCI	RCI	No
YVE-76	TRAPLINE	RED	760	RCI	RCI	No
YVE-77	KIMALAC (GLYCE-RO PHTALIQUE)	WHITE	3800	RCI	RCI	No

Sample Number	Brand Name	Color of Paint	Lead Content of Paint (ppm)	Country of Brand Headquarters	Country Where Manufactured	Is there information on can about lead content of paint?
YVE-78	KIMALAC (GLYCE-RO PHTALIQUE)	YELLOW	35000	RCI	RCI	No
YVE-79	KIMALAC (GLYCE-RO PHTALIQUE)	GREEN	12000	RCI	RCI	No
YVE-80	SUPER+	RUSTPROOF GREY	1500	RCI	RCI	No
YVE-81	EMAIL BRILLANT	RED	6000	RCI	RCI	No
YVE-82	IKARLAC (MAESTRIA E-25-3)	RED	<60	RCI	RCI	No
YVE-83	IKARLAC (MAESTRIA E8-4)	YELLOW	<60	RCI	RCI	No
YVE-84	IKARLAC	WHITE	<60	RCI	RCI	No
YVE-85	IKARLAC	BLUE	<60	RCI	RCI	No
YVE-86	JALINE	WHITE	<60	RCI	RCI	No
YVE-87	BATILO	WHITE	80	RCI	RCI	No
YVE-88	SPECIAL 7+ BATILO	YELLOW	<60	RCI	RCI	No
YVE-89	SPECIAL 7+ BATILO	GREEN	17000	RCI	RCI	No
YVE-90	SPECIAL 7+ BATILO	RED	70	RCI	RCI	No
YVE-91	DELUX	GREEN	37000	RCI	RCI	No
YVE-92	TRAPLINE	GREEN	27000	RCI	RCI	No

TABLE 3. DISTRIBUTION OF LEAD CONCENTRATION BY BRAND OF SOLVENT-BASED, ENAMEL DECORATIVE PAINTS PURCHASED IN CÔTE D'IVOIRE

Brand	Number of Paints	Number of Paints >90 ppm Lead	Number of Paints >600 ppm Lead	Number of Paints >10,000 ppm Lead	Minimum Lead Concentration (ppm)	Maximum Lead Concentration (ppm)
Autolac	4	75% (3)	75% (3)	75% (3)	< 60	190,000
Delux	5	100% (4)	100% (4)	100% (4)	7,700	57,000
Eurekalac	1	0%	0%	0%	< 60	-
Ikarlac	4	0%	0%	0%	< 60	-
Jaline	1 (white)	0%	0%	0%	< 60	-
Kimilac	4	100% (4)	100% (4)	100% (4)	3,800	35,000
Kimimat	4	100% (4)	100% (4)	100% (4)	1,400	11,000
Pantinox	4	0%	0%	0%	< 60	-
Perolac	4	100% (4)	100% (4)	100% (4)	2,200	40,000
Topline	4	100% (4)	100% (4)	100% (4)	2,300	34,000
Trapline	4	100% (4)	100% (4)	100% (4)	760	27,000
Ultralac	4	100% (4)	100% (4)	100% (4)	4,100	190,000
Special 7 *	3	25% (1)	25% (1)	25% (1)	< 60	17,000

* When calculating the averages, levels < 60 ppm were approximated to 60 ppm

TABLE 4. LEAD CONCENTRATION BY COLOR OF SOLVENT-BASED, ENAMEL DECORATIVE PAINTS PURCHASED IN CÔTE D'IVOIRE

Color	Number of Samples	Average Lead Concentration (ppm)	Number of Samples >90 ppm Lead	Number of Samples >600 ppm Lead	Number of Samples >10,000 ppm Lead	Minimum Lead Concentration (ppm)	Maximum Lead Concentration (ppm)
Blue	2	3,850	1	1	0	< 60	7,700
Green	11	23,100	10	10	7	< 60	75,000
Red	11	16,000	8	8	3	< 60	91,000
White	12	2,530	7	7	0	< 60	8,200
Yellow	11	51,000	8	8	7	< 60	190,000
Anticorrosive Paints							
Grey	4	1,225	4	3	0	100	2,200
Red	1	< 60	0	0	0	< 60	-