Cádmio e Chumbo em Bijuterias e Jóias

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O que é

Materiais Utilizados – Ligas de Zinco.

Crise Mattel – Crise 2008

Repressão – utilização de Chumbo - EUA.

Outros países aderiram – Crise na Indústria Chinesa. Fecham mais 10% das fábricas

Solução – Cd – a qualquer custo "saúde" dos outros.

Prioridade Lucro

Risco a saúde não entra na pauta (dos fabricantes chineses).

CONTROLE – CONTROLE – CONTROLE. – Método expedito.

Carlos Alberto Achete – Divisão de Materiais
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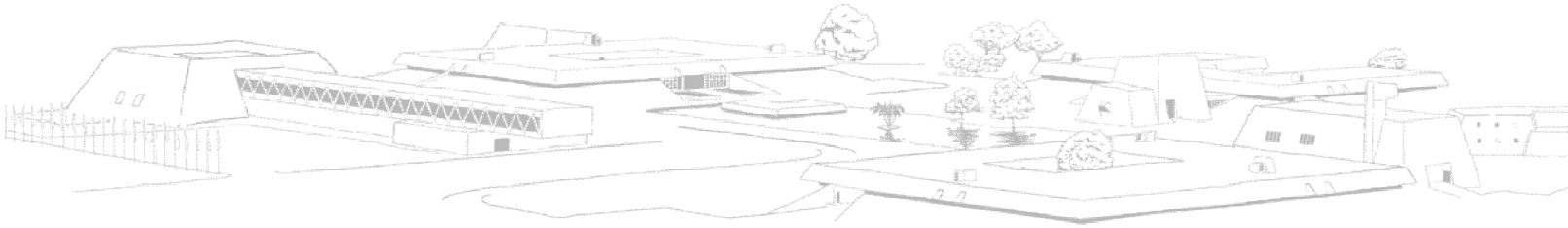

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Alguns exemplos - Formas

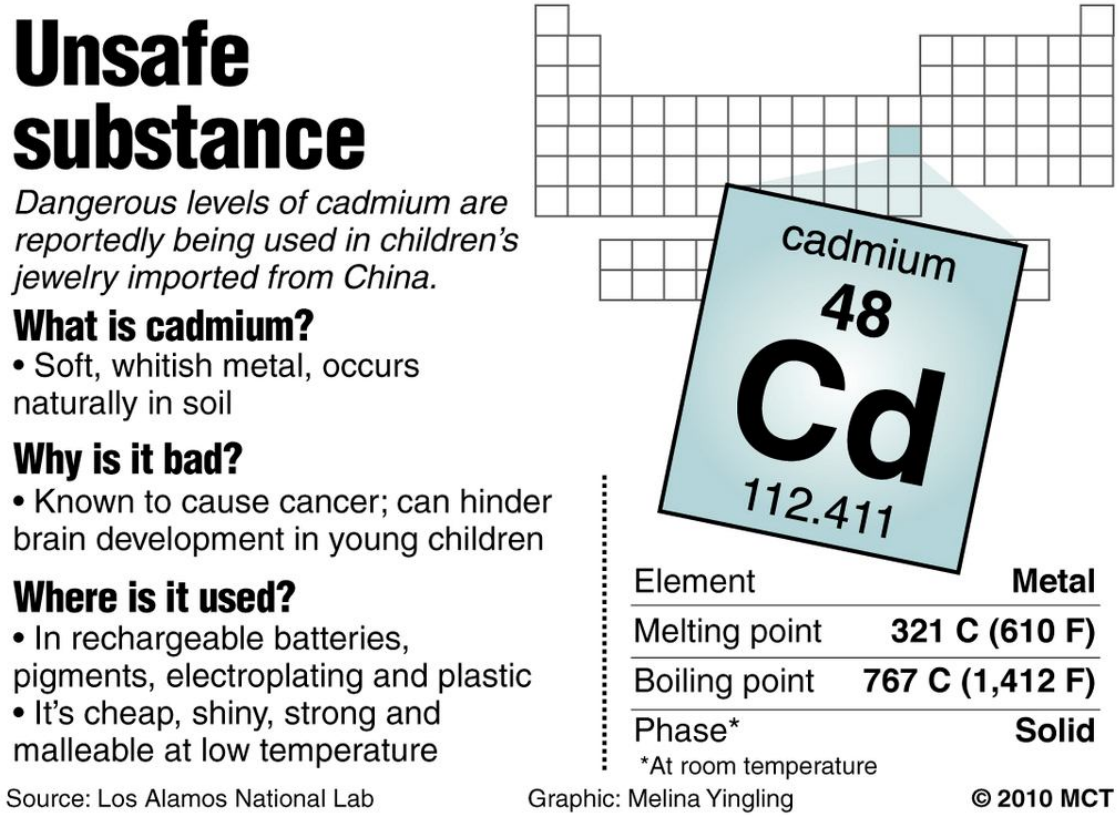
Cádmio e Chumbo em Bijuterias e Joias

"Bom", Bonito e Barato.

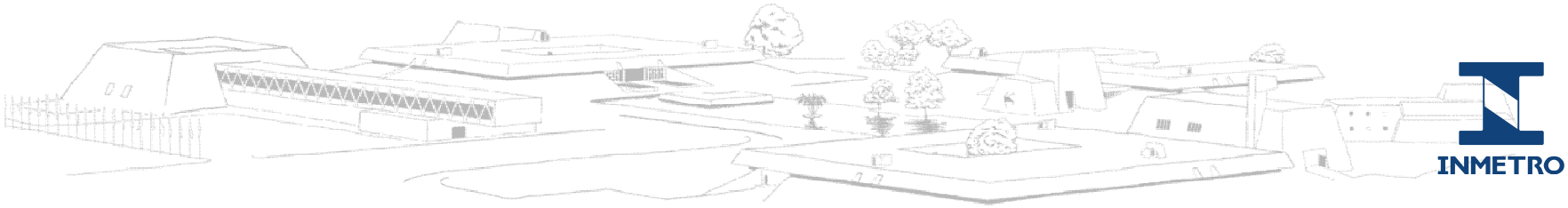
Brilhante, resistente e maleável a baixas temperaturas.

Efeitos nocivos a saúde

BAIXO CUSTO!!!



A ton of high-quality zinc costs about 28,000 yuan ($4,100) while zinc with lead, cadmium or both in it sells for about 16,000 yuan ($2,350), said Frank Zhang, an executive with a jewelry factory in Yiwu that specializes in high-end exports but who did not want his Chinese or company names used.



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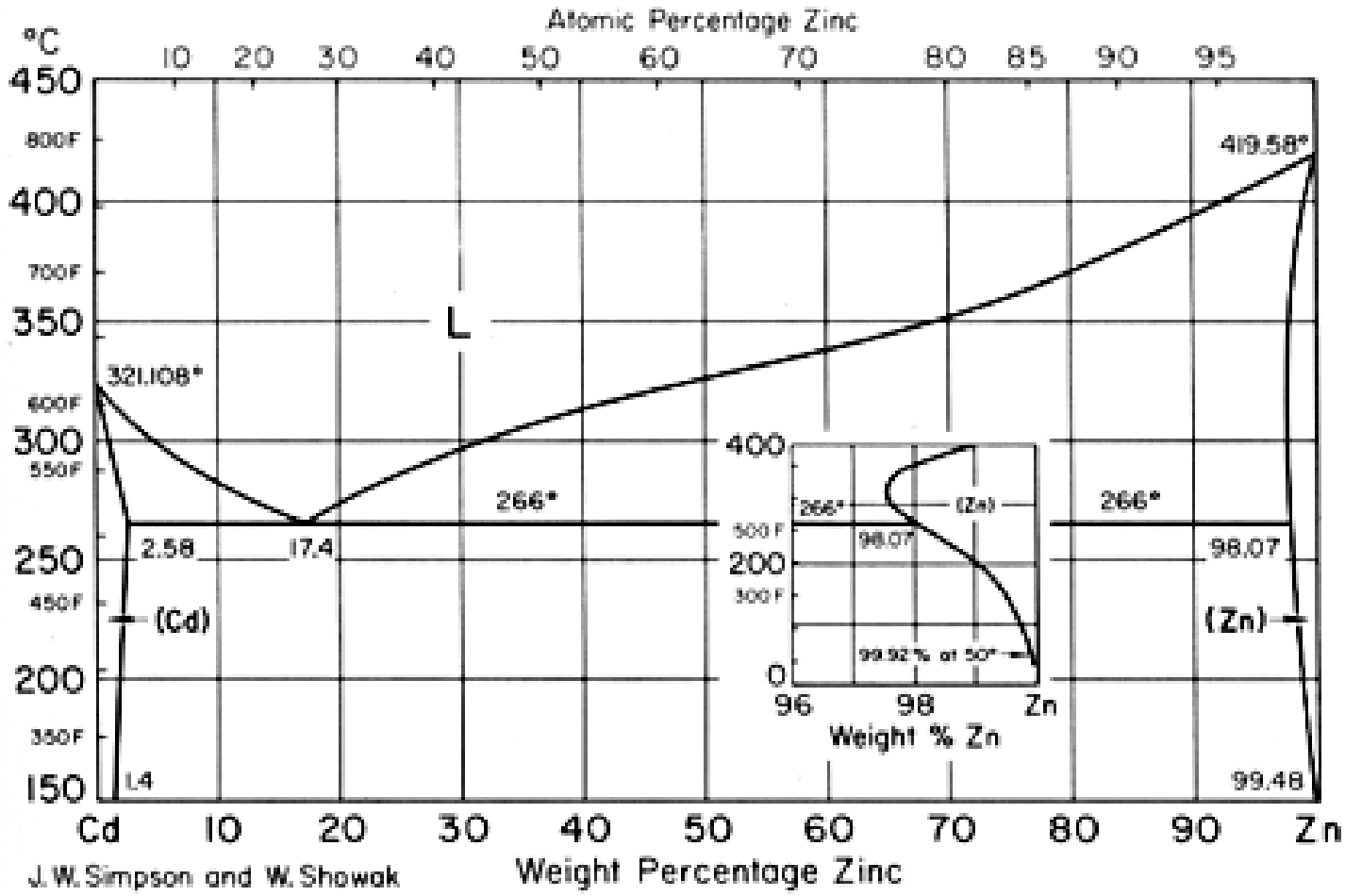
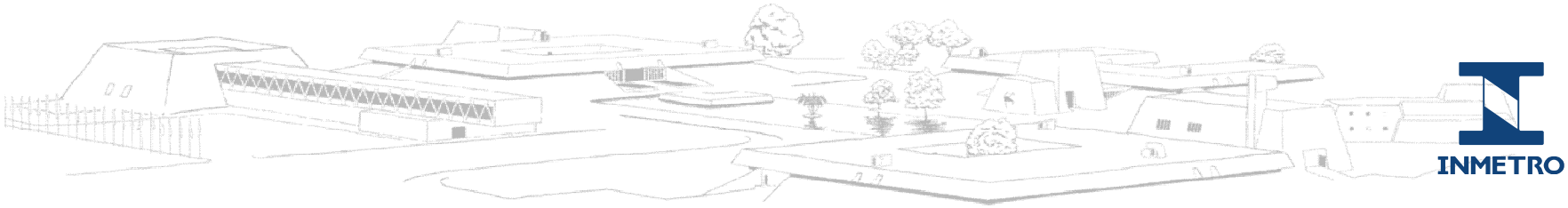

Atomic Percentage Zinc
°C
10 20 30 40 50 60 70 80 85 90 95
450
800F
400
700F
350
600F
300
550F
250
450F
200
350F
150
L
321.108°
419.58°
266°
2.58
17.4
(Cd)
(Zn)
98.07
99.48
L4
400
500 F
200
300 F
0
96 98 Zn
Weight % Zn
99.92 % at 50°
Cd 10 20 30 40 50 60 70 80 90 Zn
Weight Percentage Zinc
J. W. Simpson and W. Showak



Ligas de Zinco

A ton of **high-quality zinc (baixissima quantidade de Cd)** custa cerca de 28,000 yuan ($4,100)

zinco com Chumbo. Cadmium ou ambos custa cerca de 16,000 yuan ($2,350). .

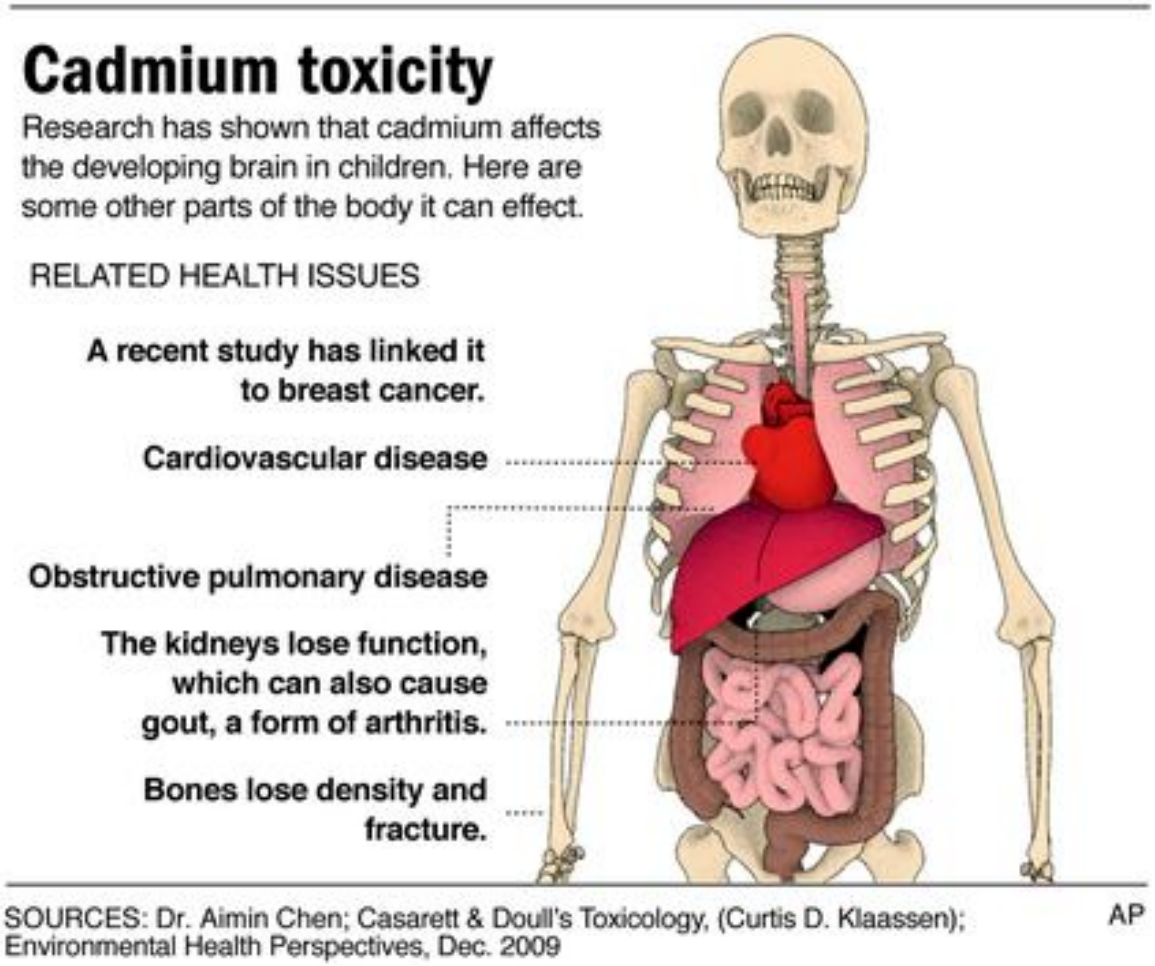
Mas Zinco com 80 % de Cd não poderia mais ser chamada de liga de zinco.

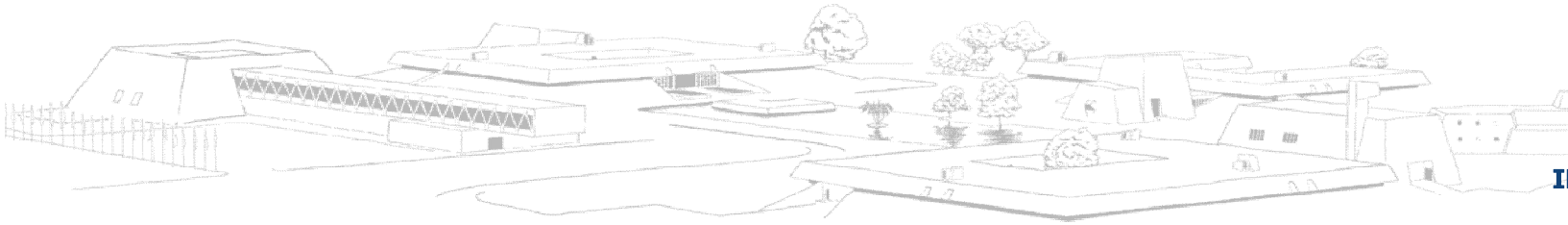
De toda a China foram exportados 595,000 kilogramas de bijouterias em 2008 — decrescimo de 15 % em relacão ao ano anterior.

Fonte -Associeted Press – reportagem internet

Cadmium Afeta desenvolvimento do cérebro das crianças

Além disto





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O Metal Cadmium é brilhante, resistente e maleável a baixas temperaturas.
Efeitos nocivos a saude. Baixo custo.

A despeito dos riscos os responsáveis pela manufatura nas fábricas de Yiwu, na costa leste da China dizem que a prioridade é o LUCRO.

Portanto para oferecer mercadorias baratas frequentemente significa usar materiais de baixa qualidade.
Incluindo o Cadmium, que é conhecido por causar CANCER.

NEGÓCIO É NEGÓCIO E TUDO DEPENDE DE NOSSOS CLIENTES.
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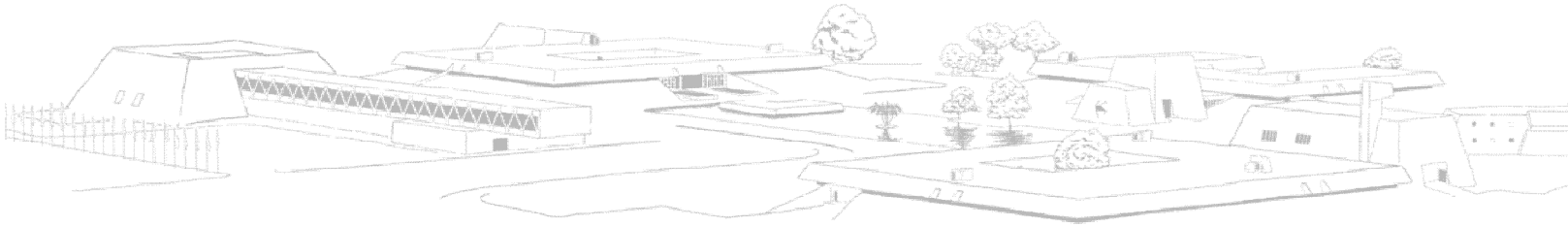
"Disse - He Huihua, manager of the Suiyuan Jewelry Shop at International Trade City in Yiwu, a sprawling wholesale mecca where sellers pitch their wares in hopes of landing a lucrative export contract".



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Perguntado sobre o que ele pensava a respeito dos riscos associados com o Cd e outros metais toxicos ele disse:

"I can't be overly concerned about that."

Estados Unidos da America:

Pesquisa encomendada pela "Associated Press" encontrou que: 2010

12 de 103 peças principalmente da China compradas nos EUA contém pelo menos 10 porcento de cadmium, algumas 80-90 porcento. Duas tinha menos de 10 porcento e o resto nada.

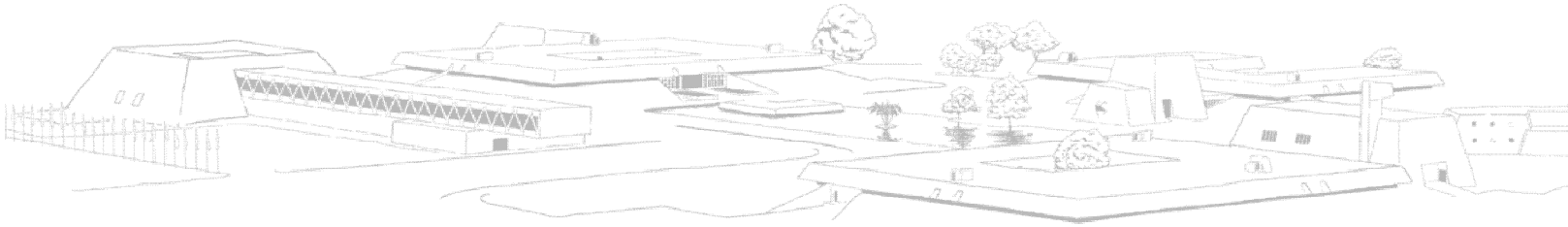
Nossos resultados

Resultados por lotes de 10

Bijuteria/	Descrição	Modelo	Marca	Cor	Cd	Cu	Fe	Ni	Zn	Pb
1	Brinco 3 cores	Guga	Sorria	Multicor		X	X			
2	Brinco Redondo	-	Biju	Cobre		X	X	X	X	
3	Anel duplo com strass	-	-	Prata	X	X			X	X
4	Pulseira com pingentes	Lindinha	Sorria	Dourado		X	X		X	X
5	Pulseira com pingentes	Alice	Sorria	Dourado		X	X			
6	Brinco de corações	Raro	Sorria	Dourado		X			X	
7	Colar pedras laranjas	Lola	Sorria	Dourado	X	X			X	
8	Bracelete trançado	-	Biju	Dourado		X	X		X	
9	Anel mola	-	-	Prata	X	X			X	
10	Brinco um coração	-	Biju	Dourado		X	X			

40% possuem níveis inaceitáveis (90%) de Cd ou Pb ou ambos

Mostra que depois de 2010 passaram a descarregar em outros mercados;



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Regulação na China limitando Cd a pequenas quantidades em bijouterias e brinquedos para criança.

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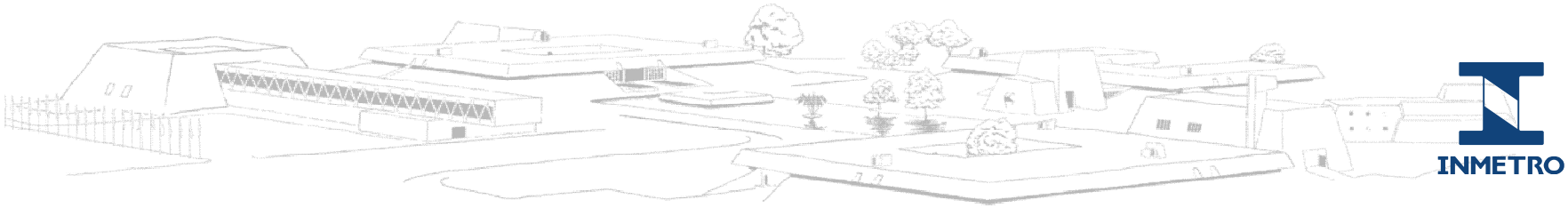
Fashion jewelry should not contain more than 0.1 percent cadmium. In materials for toys, cadmium should not exceed 75 parts per million, or 50 parts per million for clay and paint.

Making sure Chinese-made goods are safe requires constant vigilance — something many foreign companies fail to do, said Christopher Devereux, managing director of the Guangzhou-based consulting firm Chinasavvy HK Ltd. China traders like Devereux call it "quality fade" — a phenomenon in China in which suppliers constantly try to produce **goods more cheaply with lower-quality materials**.



"In any other country in the West, your quality curve goes upwards, but it's the opposite in China. We just have learned our lesson. We need to check every single batch," said Devereux who helps Western companies buy and produce a variety of goods in China, from toys and plumbing fixtures to shoes and lunch boxes.

"Cadmium is one of the nastiest of the heavy metals, worse than lead. I was absolutely amazed that people were using it," he said.

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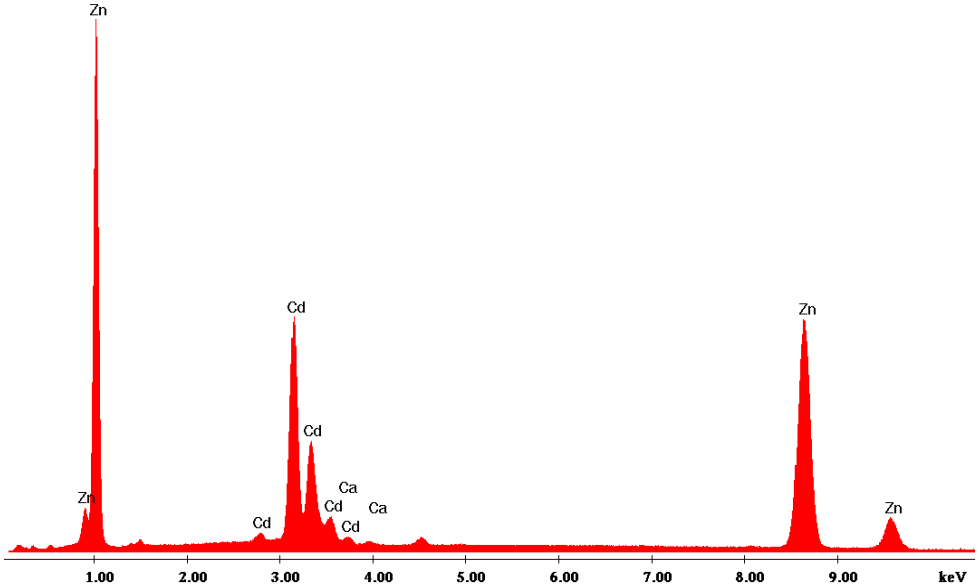
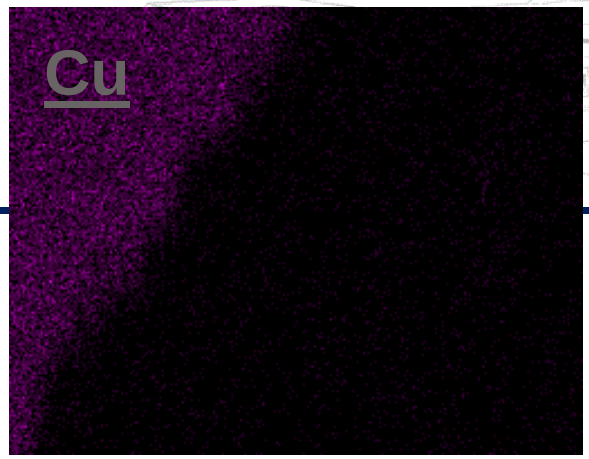
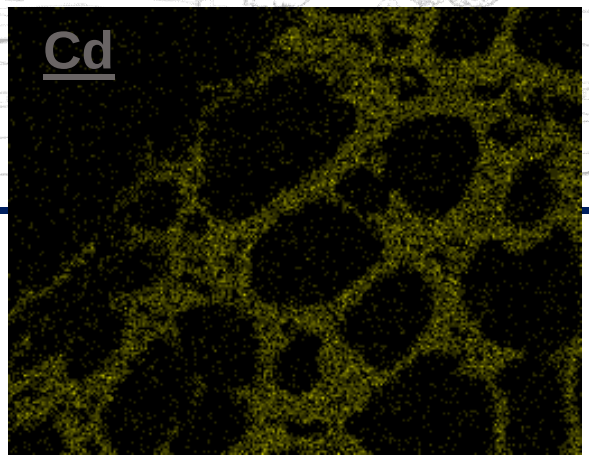
Não pode mais ser por amostragem. Tem que ser lote a lote pois a prática da mistura está disseminada em Yiwu.

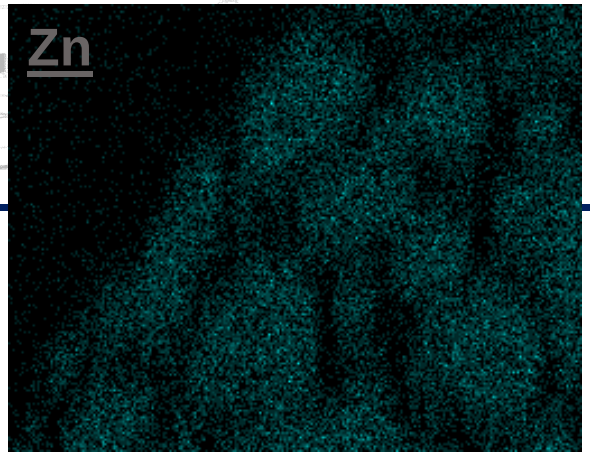
Método expedito

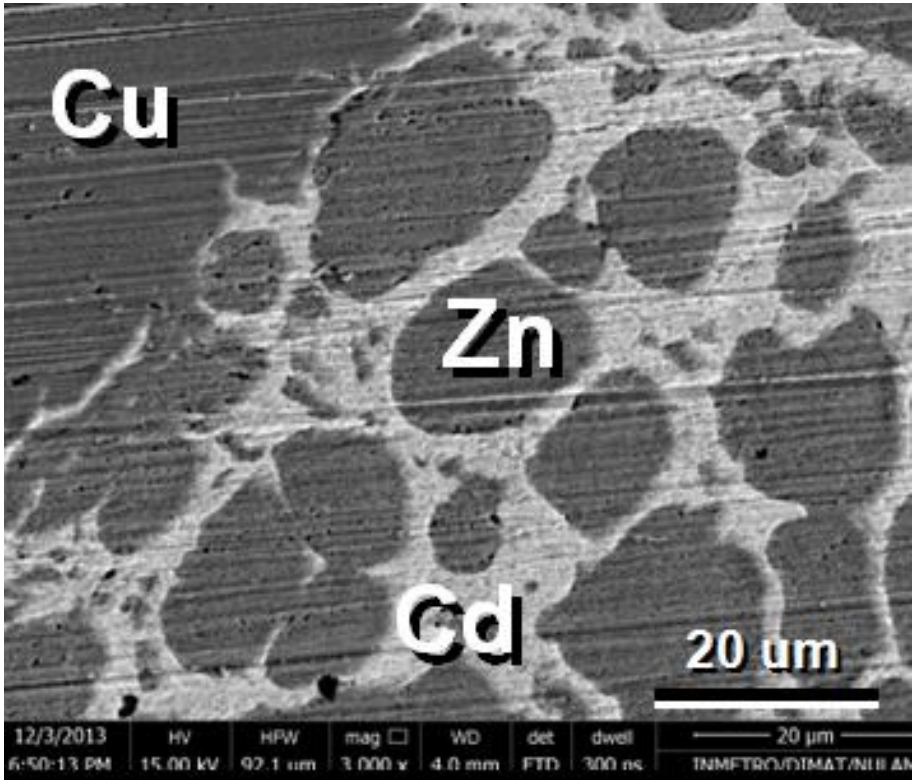


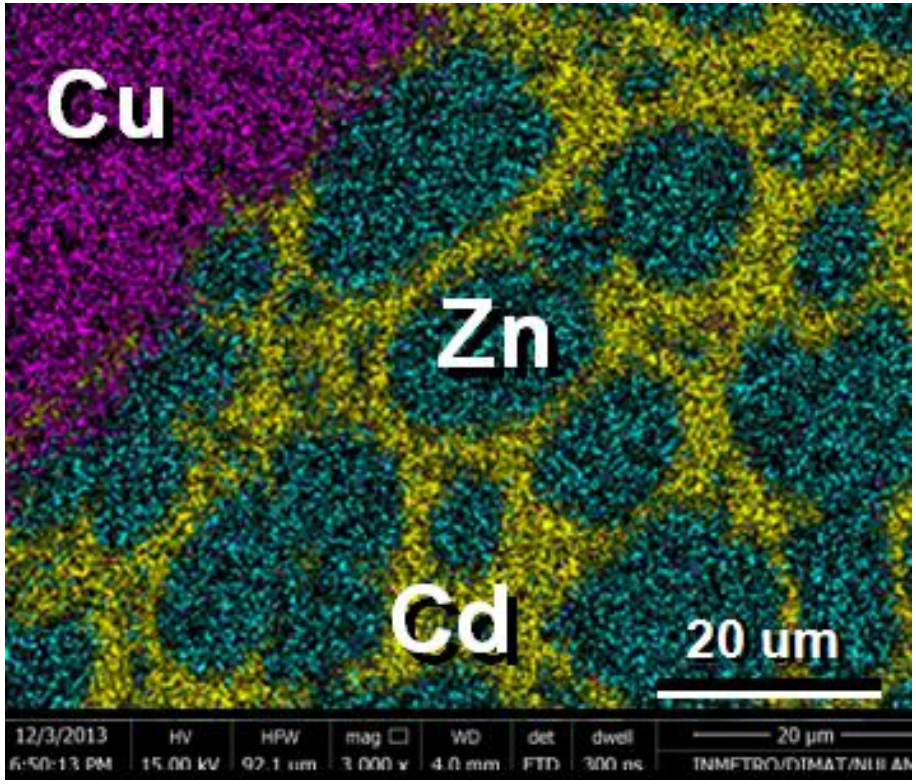
Espectro de composição química obtido na seção transversal do anel, mostrado na figura 9.1, contendo cerca de 40 % de cádmio (Cd).


Cu


Cd


Zn


Cu
Zn
Cd
20 um
12/3/2013
6:50:13 PM
HV
15.00 kV
HFW
92.1 um
mag
3 000 x
WD
4.0 mm
det
FTD
dwell
300 ns
20 µm


Cu
Zn
Cd
20 um
12/3/2013
6:50:13 PM
HV
15.00 kV
HFW
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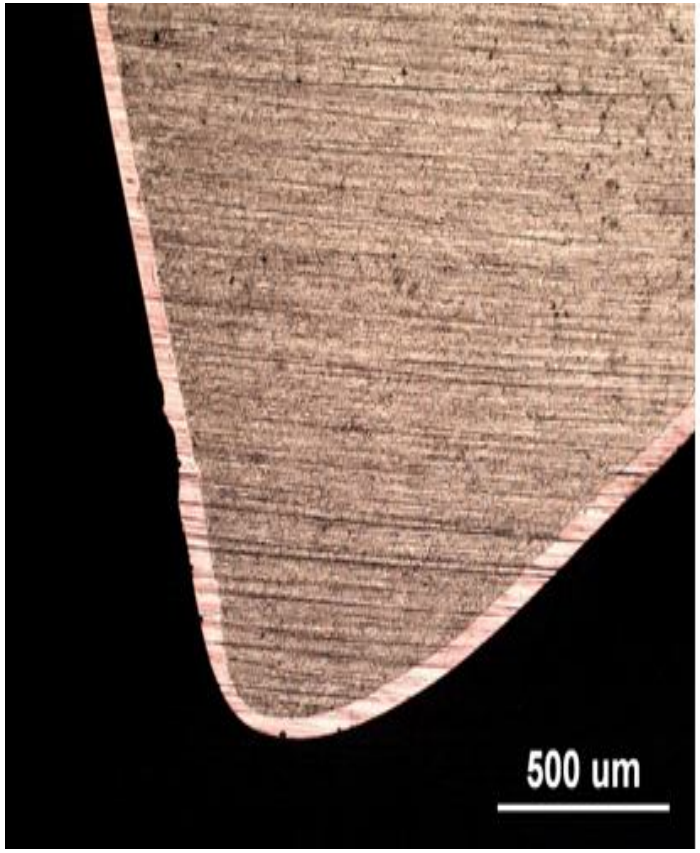
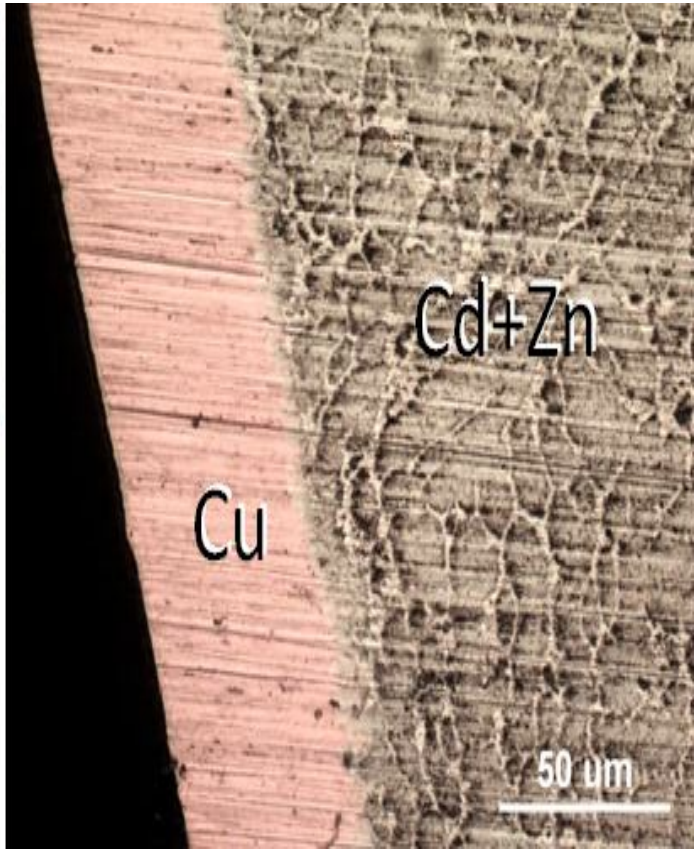
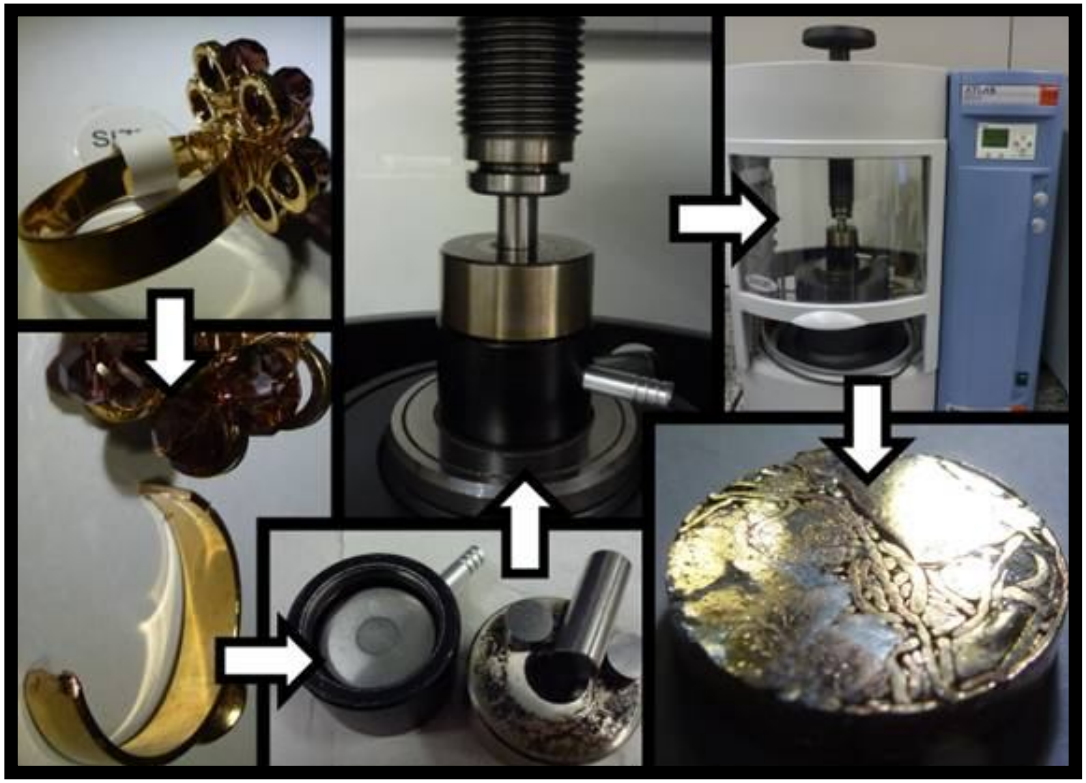
mag
3 000 x
WD
4.0 mm
det
FTD
dwell
300 ns
20 µm

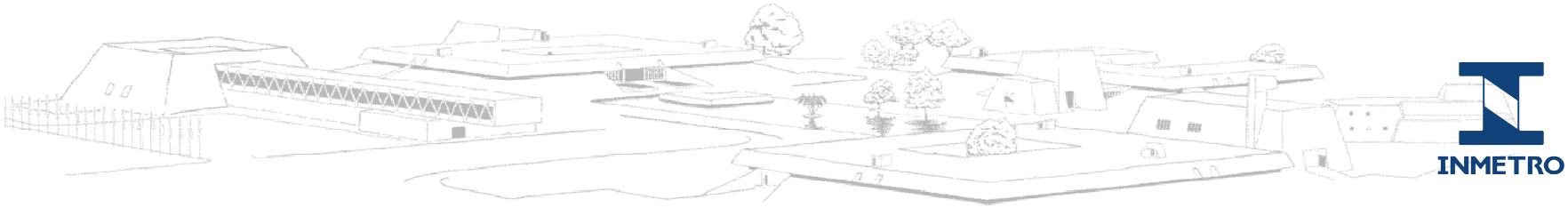

500 um


Cd+Zn
Cu
50 um

MEV

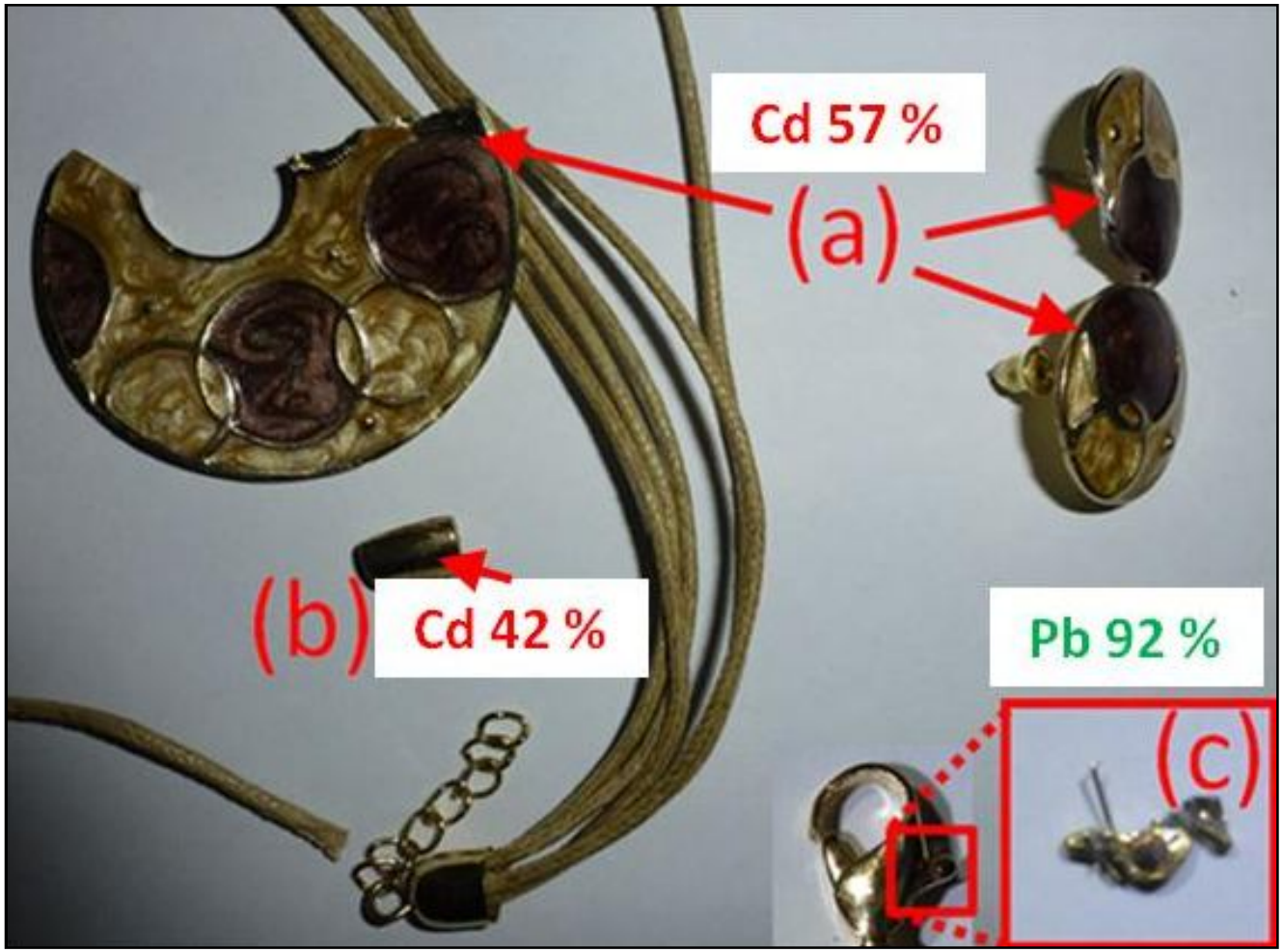
FRX

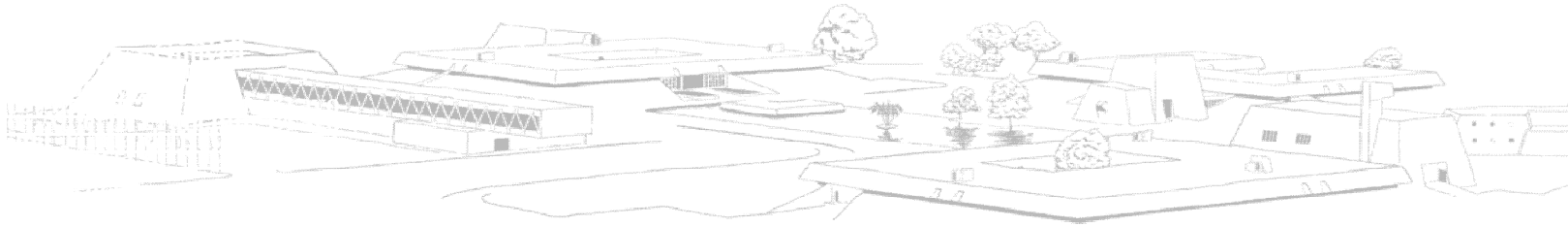




MEV

TEM


Cd 57 %
(a)
(b)
Cd 42 %
Pb 92 %
(c)



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