

OFF THE SHELF FORENSICS

UT NFA Instructors





What is off the shelf?

- These are items that are readily available to us locally that we can repurpose for forensic applications
- The definition has expanded to include additional sources because it depends why we are doing it





Why?

Cost Not just the agency Time Do more





Crime Scene Processing





Powder for Snow Impressions

- In the past we have used snow print wax
- Several companies have developed powders now as well for the same purpose
- Both have good and bad points





Powder Snow Prints



This works because powder coat paint is actually plastic. It will not combine with water and the powder is very fine. All we do is shake the bottle and squeeze out the powder that is in the air in the bottle. This results in a nice even thin coat of powder. This product works no matter how long it is in the cold and is not affected by varying storage temperatures (being in the car). The bottle picture here will last us years and cost \$6.00.





What not to do





HARBOR FREIGHT TO Quality Tools at Ridiculously Low Price		SEARCH Vour Store: Florence, Store Info	KY FIND STORE		
	30 Million Customers Shop 700+ his Week view	• Stores Nationwide or Cal	II to Order 1-800-423-2567 TEXT TOOLSG TO 222377 FOR COUPONS & SALE ALERTS		
SALE & CLEARANCE MONTHLY	ILY AD GIFT CARDS 555	INSIDE TRACK CLUB	HFT GIVES BACK		
POWER AIR HAND TOO TOOLS TOOLS TOOLS STOR	OOL AUTOMOTIVE ENGINES Drage & Motorcycle & Generators	WELDING LAWN & GARDEN	MATERIAL EVERYTHING HANDLING ELSE		
<complex-block></complex-block>	16 Oz. Powder Coat Paint tem#93309 Create a nearly indestructible finish comp at \$16.36 Sale: \$5.89 Oty: 1 Add to My List View Shipping	Write A Review with powder coat paint	CUSTOMERS WHO BOUGHT THIS ALSO BOUGHT Powder Coating System comp at \$169.99 Sale: \$69.99 Sale: \$69.99 Comp at \$49.00 Sale: \$15.99 Comp at \$49.00 Sale: \$15.99 ADD Sale: \$15.99 ADD Sale: \$15.99 ADD		







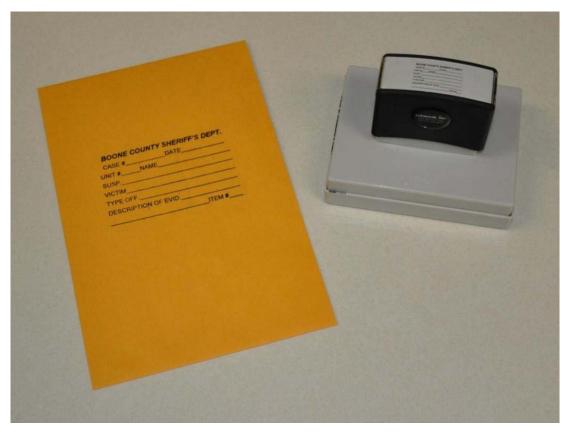








Stamped Evidence Bags





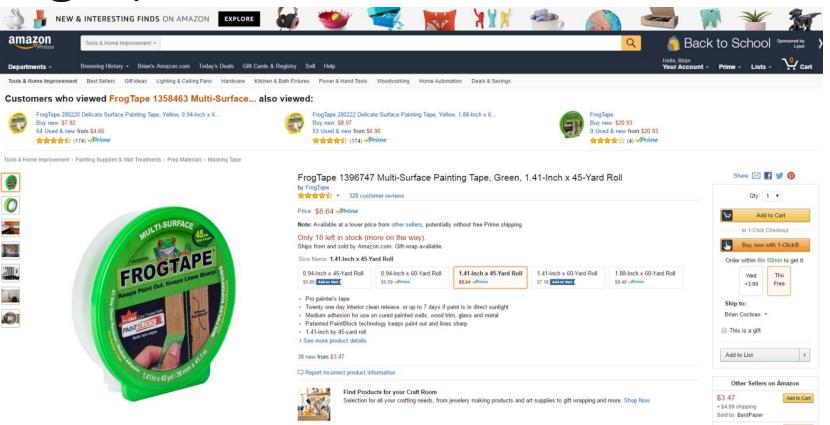


BOONE COUNTY SHERIFF'S DEPT.	
UNIT #NAME	
SUSP VICTIM TYPE OFF DESCRIPTION OF EVID TEM #	
DESCRIT	



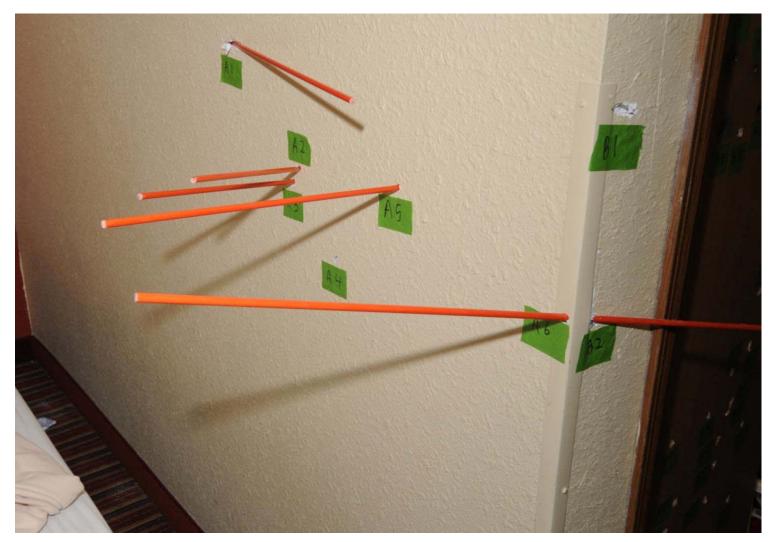


Frog Tape























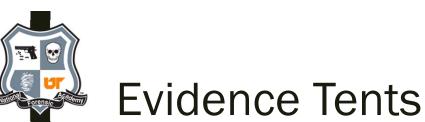


Great for holding scales on vertical surfaces.

Holding doors open

Holding evidence tents in place

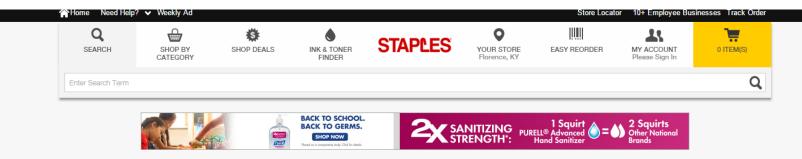




- We have done them on business card stock
- Tend to be too small and difficult to see
- Blow away in the wind
- Hard to use in grassy areas







Paper & Stationery > Index Cards > Staples Index Cards 3" x 5" Line Ruled Neon Assorted Color, 300/Pack

Staples Index Cards 3" x 5" Line Ruled Neon Assorted Color, 300/Pack

Item: 916330 Model: 15095 **** (154) | Write a Review

	\$5.99 ^{300/Pack}		
	1 ADD TO CART 1-HOUR	PICK UP	
	Expected Delivery By: Wednesday, August	t 03	
	3" x 5", neon assorted		
	• 5 AVAILABLE AT: 7659 Mall Road, Florence, KY 41042 Check Other Stores		
	Special Financing Available		
Product Details • 3" x 5" • Line-ruled, assorted neon multicolor	Free Pick Up In Store ShopRunner Eligible <u>learn more</u> <u>sig</u>	<u>n in</u>	
Line-ruied, assorted neon multicolor			
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- Each tent is a 3x5 "page"
- Allows for easy printing of specific sets
- Very easy to replace what you use
- Very cheap to deploy to patrol units







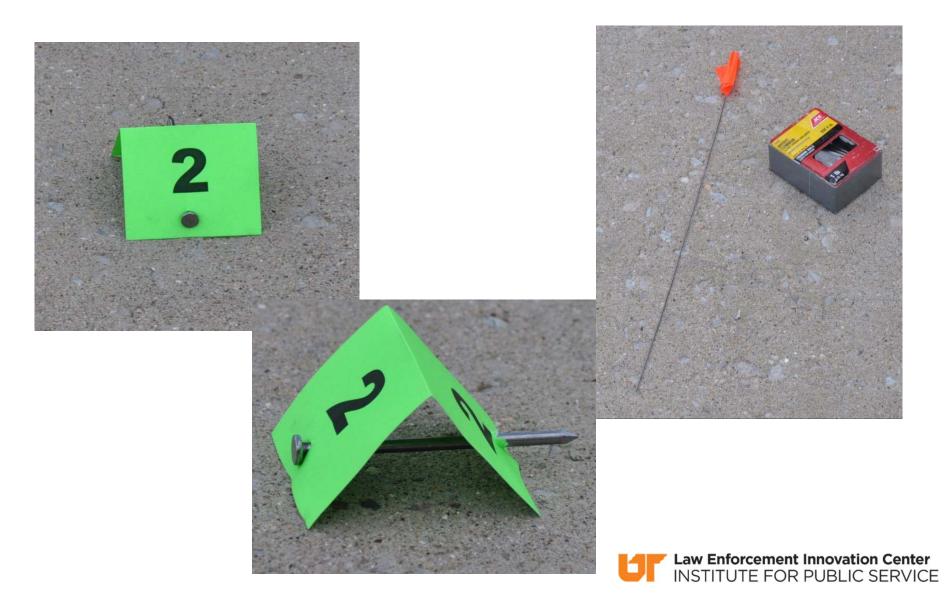












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Home Services	DIY Projects & Ideas 🗸	Credit Services Pro Xtra S	tore Finder Order Status	Local Ad			
Products and Services	Marker flags	Your Store Florence	Sign in or Register	=			
Home > Text Search > marker	flags			a			
Showing Results for ' Related Searches: marking flags;	"marker flags"				Compare	Grip-Rite #6 x 4 in. 20-Penny Bright Steel Smooth Shank Common Nails (1 lbPack)	Ship to Home FREE WITH \$45 ORDER
Products & Services Products (5)	Your Store: Q Florence #	2306 Florence, KY 41042 (Change)		٥		Model# 20C1	FREE Ship to Store
Enable more filters by choosing a department	All Products (5) O in Brand	Price	✓ Review Rating			s347 See More in Common Nails >	View Pickup Options Add To Cart
Department Outdoors (2) Tools & Hardware (2) Storage & Organization (1)	Compare	Empire 3.5 in. x 2.5 in Glo Orange (100-Pack) Model# 78-002	FREE WITH \$	45 ORDER			
Price Set custom price range: \$ to \$ Go \$ 0 - \$10 (4) \$ \$10 - \$20 (1)	^	 ***** (25) *798 See More in Flagging Tape > 	FREE Store P Today Check Inven Add To	Store tory			





Graph Paper

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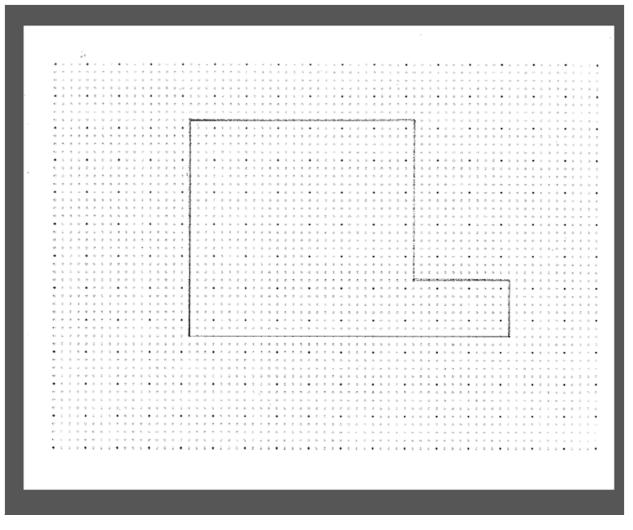




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Forensic Light Source Alternatives

RGB Light with remote



Roll over image to zoom in

E27 Bulb Color Changing Dimmable RGB LED Light Bulb ,UNIFUN 12W E27 Led RGB Led Bulbs with Remote

★★★★★ 120 customer reviews | 8 answered questions

Price: <u>\$29.99</u> Sale: <u>\$9.99</u> **√Prime** You Save: \$20.00 (67%)

In Stock.

Want it Tuesday, Aug. 9? Order within 25 hrs 12 mins and choose Two-Day Shipping at checkout. Details

Sold by TECKIT and Fulfilled by Amazon.

Eligible for amazonsmile donation.

- Color Changing: E27 Led RGB bulb is dimmable with 16 colors and 4 modes, including red, orange, yellow, green, blue and purple; Flash, Strobe, Fasd, Smooth.
- · Remote Controller: Use 1 remote controller can adjust multiple bulbs within 3 meters in one time.
- · Color/Function Memory: this led bulb has memory when you turn it off by a switch.
- · Long Lifespan: Superior heating output and long lifespan up to 30,000hrs.
- Multifuntional Applications: bars, KTV, stage, clubs, casinos, restaurants, coffee shops, birthday
 parties and wedding banquet, chandeliers, festive lights, other indoor and outdoor decoration.

> See more product details





Forensic Light Source Alternatives



Share 🖂 🖬 🔰 🔞 Feit Electric A19/1100R/LED A19 16W/75W Soft White Bulb by Feit Electric ★★★★★ · 1 customer review Qty: 1 🗸 List Price: \$32.26 \$14.78 + Free Shipping Price: \$14.78 & FREE Shipping In stock. Sold by Electrical Supply You Save: \$17.48 (54%) & Lighting In stock. Add to Cart Estimated Delivery Date: Aug. 15 - 18 when you choose Expedited at checkout. Ships from and sold by Electrical Supply & Lighting. Turn on 1-Click ordering for this browser Dimmable Performance A19 16W (watts) equivalent to 75W (watts) Replacement for general lighting, etc. Ship to: Save \$162 on energy cost over lifetime of Performance LED bulb Average bulb life 25,000 hours, estimated life at 3 hours per is 22.8 years KNOXVILLE, TENNESSEE 37931 Omni directional LED, fully dimmable to 5%, 1100 lumens. > See more product details Add to List 14 new from \$9.80

Featured deals during Home Improvement's Summer Renovation Event

Other Sellers on Amazon





Latent Print Processing







Giottos AA1900 Rocket Air Blaster Large - Black

by Giotto's

\$9.75 *Prime* Get it by Tuesday, Aug 9

More Buying Choices \$9.75 new (20 offers) \$9.02 used (2 offers) ***** 1,929

Product Description ... Large black *Rocket Air* Blaster easily removes dust and debris from ...

Electronics: See all 123 items



Giottos AA1910 Medium Rocket Air Blaster (6.6) by Giotto's

\$8.85 *Prime* Exclusively for Prime Members Get it by **Tuesday**, **Aug** 9

More Buying Choices \$8.85 new (6 offers) \$7.49 used (2 offers)



Product Features One way valve brings clean *air* and does not redistribute the dust

Electronics: See all 123 items





- Latent Print cleaning
- DNA Safe







Very effective cleansing of dust before lifting
Does not transfer DNA
Exceptional for magnetic powder on ferrous metals







...other uses

 Inflating Latex / Nitrile Gloves prior to processing for latent prints





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...other uses

Safely inflating balloons in plastic shopping bags prior to processing for latent prints





NFA 41 Black

Sticky side powder

- Desire for home-made version with a longer shelf life
- Problem with lack of suspension of powder over time
- Challenge to NFA class #41





Detective Sean D. Flynn Anderson County Sheriff's Dept. National Forensic Academy Class #41







<u>Mixture</u>

- Black carbon-based powder, 45g (90.22ml)
- Dawn Ultra liquid detergent, 45ml
- Corn Huskers Lotion, 5ml
- Water, 60ml







Corn Huskers Heavy Duty Oil-Fre by Corn Huskers	e Hand Treatment Lotion, 7 Fluid Ounce	
\$4.02 (\$0.57/FI Oz) Add-on Item	★★★ ★ ★ 3 9	
	Product Description	
More options available:	like a gel than a lotion, Corn Husker's lotion works great on dry hands	
\$3.31 Other Sellers	Health, Household & Baby Care: See all 41 items	

Corn Husker's Lotion

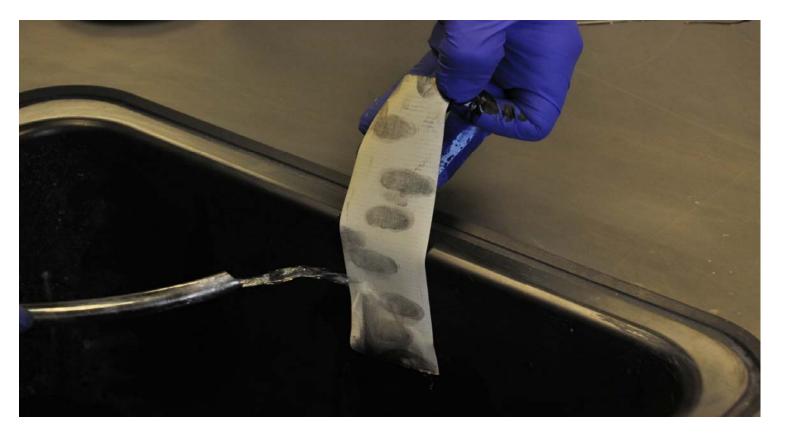
- Glycerin (natural/synthetic)
- sodium calcium alginate
- calcium chloride
- calcium sulfate in the lotion as a thickening agent

CORN HUSKERS LOTION

 Oleoyl Sarcosine - a modified fatty acid, that is commonly used in products to enable dirt and oil to better suspend during washing



















NFA Pink

SCIENCEY MIX

.2g Rhodamine 6G 500 ml water 10ml Photoflo 15ml <u>2 Propanol</u>

WALMART MIX

.2g Rhodamine 6G 500 ml water 5ml Dawn dish soap 50ml 91% rubbing alcohol

- One big mistake
- For the sticky side of tape
- Great as a dye stain as well







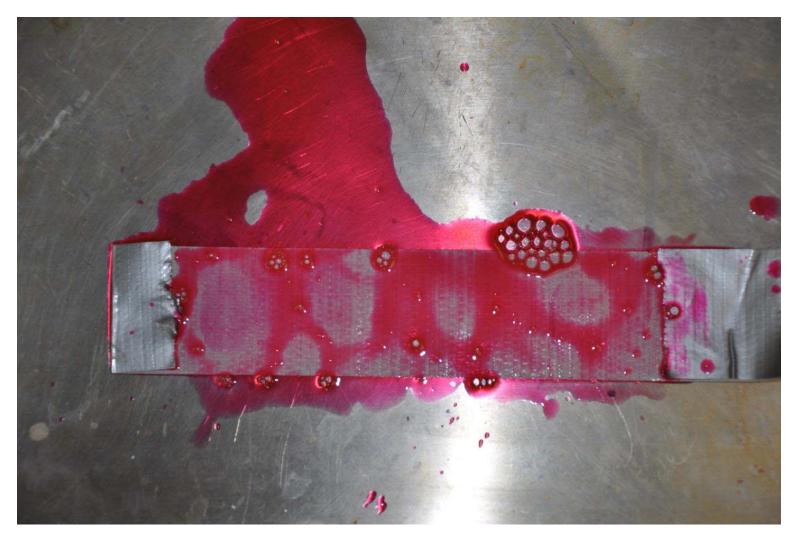






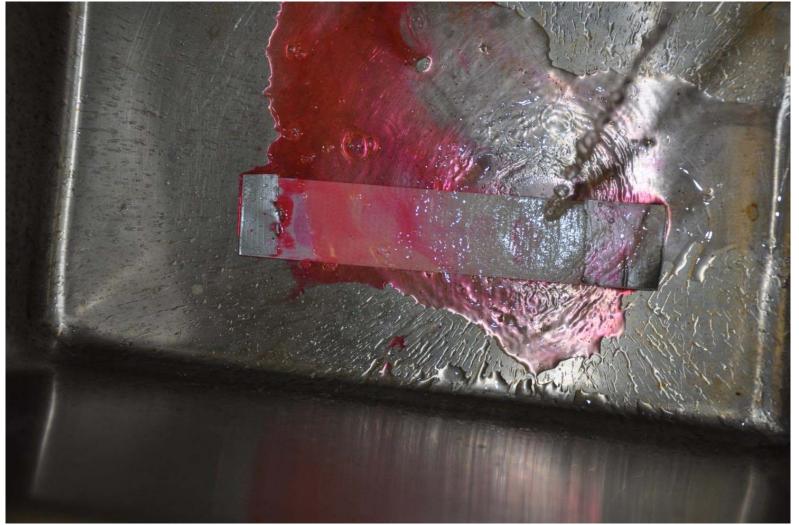










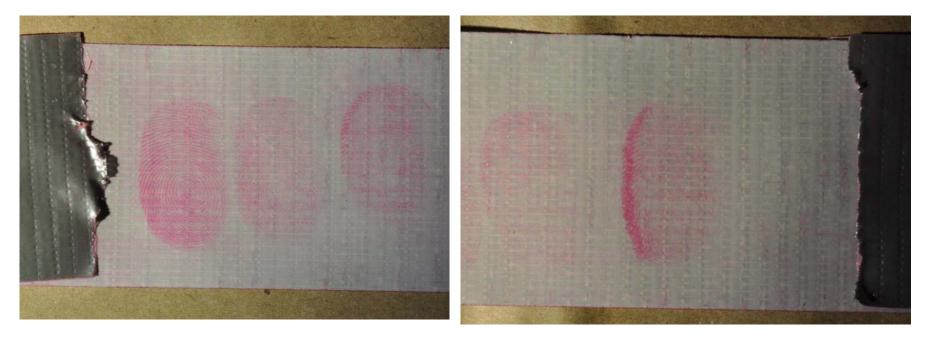






Most Sebaceous

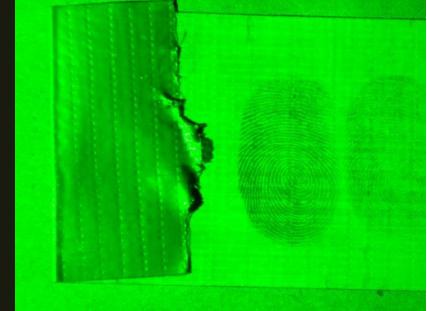
Least Sebaceous



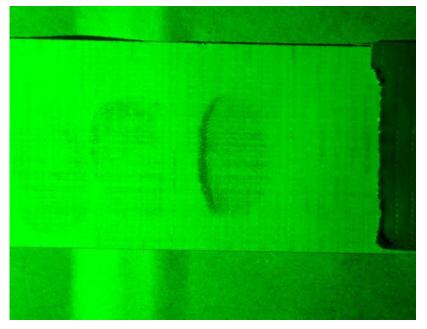




Most Sebaceous



Least Sebaceous



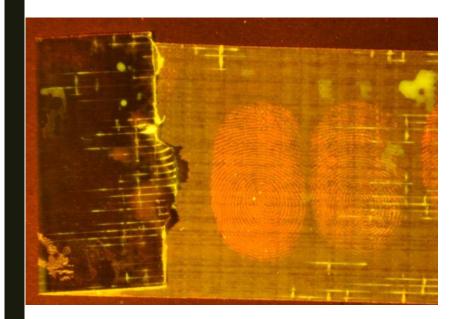
555 nm no filter



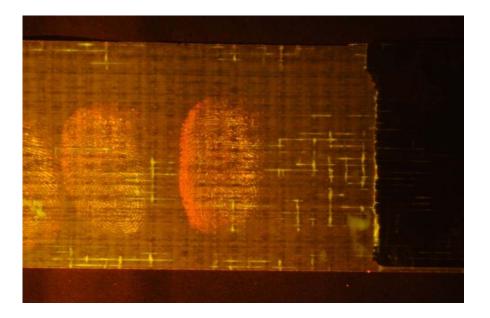


Most Sebaceous

Least Sebaceous



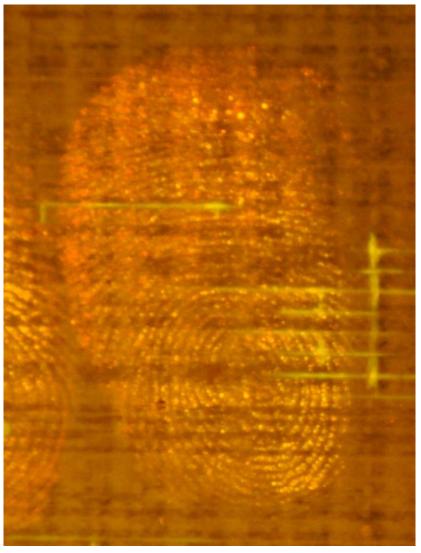
495 nm orange filter













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Cartridge Case Electrolysis



Technical Report

Development of Fingerprints using Electrolysis: A Technical Report into the Development of Fingerprints on Fired Brass Cartridge Cases

Fatima Nizam¹ Wade Knaap² John D. Stewart²

Abstract: This paper examines whether electrolysis could be a useful method in the development of latent fingerprints on fired brass cartridge cases. The influence of electrolysis on galvanic metal corrosion was explored. We found that the clarity of the fingerprints was time sensitive and improved as acid concentration increased with lower duration of electrolysis.

Definitely not my idea.

Department of Forensic Science, University of Mississauga, Ontario, Canada

Forensic Identification Services, Toronto Police Services, Ontario, Canada

Received November 18, 2010; accepted February 19, 2011

 Journal of Forensic Identification 62 (2), 2012 \ 129



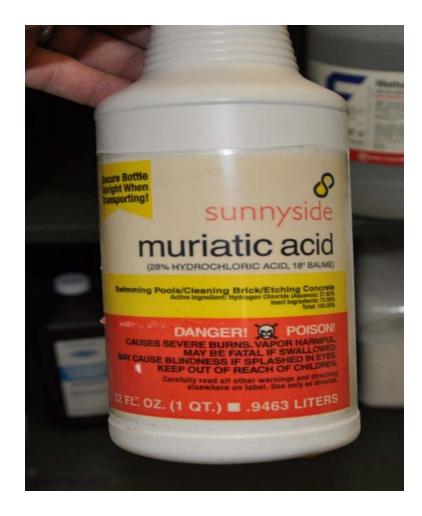




Solution: 650ml of water 1ml of 28% hydrochloric acid



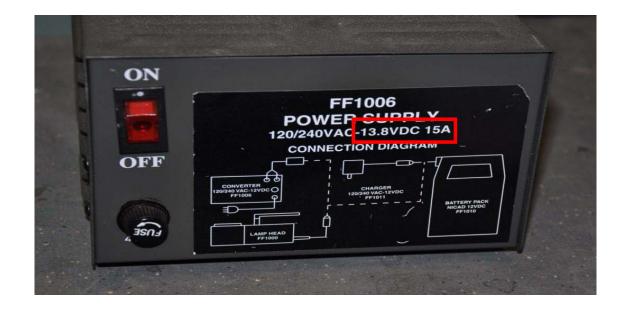








Power Supply







Or you could...













- Very short burst of electricity (about 1 second check for development)
- Repeat





- Post development halt process with baking soda and water solution
- If you skip this step development will continue and potentionally obliterate the print















Ruvis







Photography and Imaging





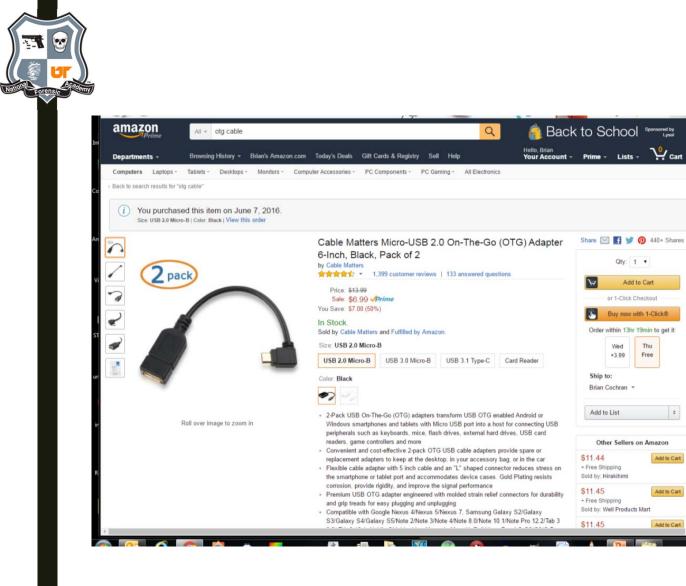
OTG Phone Capability

On The Go protocol Phone can be used as a host or slave

Android only

Legal



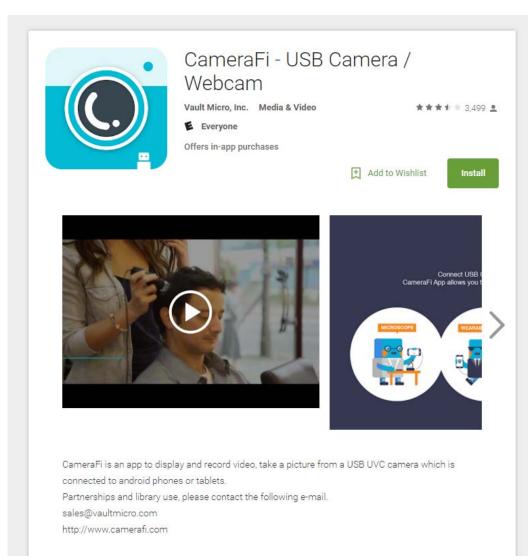


Equipment











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Endoscope

k to search results for "endoscope"	BlueFire 7mm 5M Android OTG Endoscope Tube for Phones with OTG and UVC Function by BlueFire	Share 🖂 📑 🎔 🔞 300+ Shares
	Price: \$22.99 <i>/Prime</i>	Add to Cart
	In Stock. Sold by BlueFire Tech and Fulfilled by Amazon. Gift-wrap available.	Buy now with 1-Click®
	Color: 16.4 Feet	Order within 13hr 14min to get it:
Hillefire	 Support Android Phone has OTG and UVC function, such as Samsung Galaxy S5 S6 S7 Edge, Note 2, Note 3, Note 4, Note 5 IP67 Waterproof Tmm Camera Head with 6 Ajustble LED Light, fully competent for different uses High-resolution CMOS camera resolution: 640 * 480; 30 frames per second Focal Length: 3cm - 8cm Please download "CameraFi" app from Google Play Store to use this endoscope. 2 new from \$22.99 2 used from \$14.99 	Wed Thu +3.99 Free Ship to: Brian Cochran ▼ This is a gift Add to List
	C Report incorrect product information	Other Sellers on Amazon
	A Full Selection of Professional Medical Supplies	4 used & new from \$14.99
Roll over image to zoom in	🎍 🧈 T 🖌	Have one to sell? Sell on Amazon









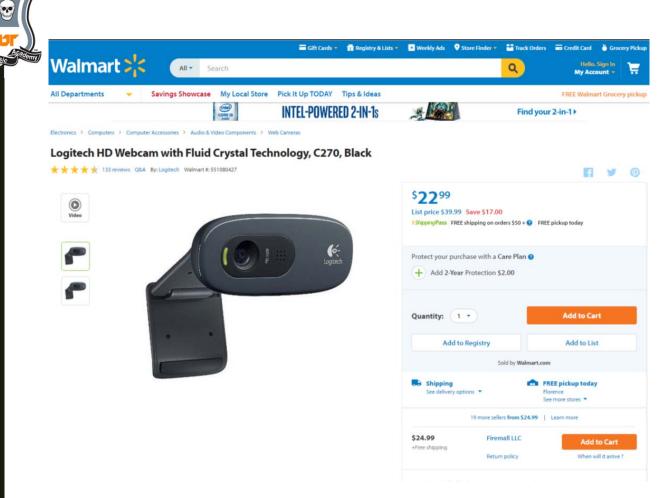




Search Camera













Electronics > Cameras & Camcorders > Camera Accessories > Tripods

Self-Portrait Handheld Selfie Stick for Smartphones and Cameras, Black

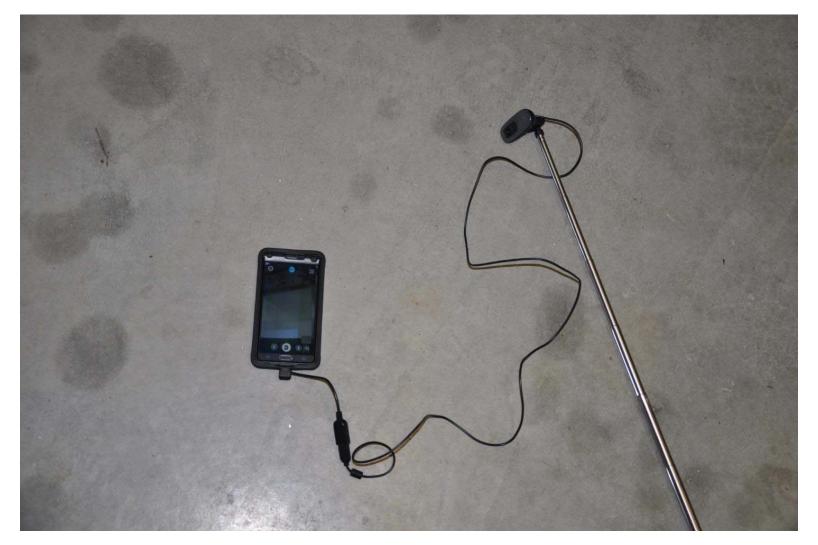
Write a review Q&A By: CELLET Walmart #: 555082359



\$ 3 63					
Was: \$4.27 Save \$0.64 >ShippingPass FREE shipping on orders \$50 + ?	FREE pickup				
Quantity: 1 •	Add to Cart				
Add to Registry	Add to List				
Sold by Walmart	Lcom				
See delivery options 🔻	FREE pickup Florence See more stores ▼				
 No need to charge, just plug the aux cable i shooting 	nto your smartphone and start				
2.6' extendable arm					
 Accommodates devices up to 3-1/2" wide 	More about this item				

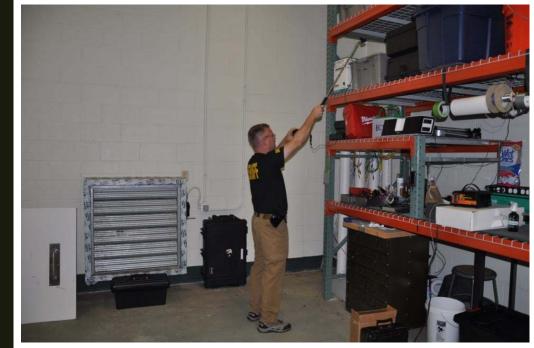






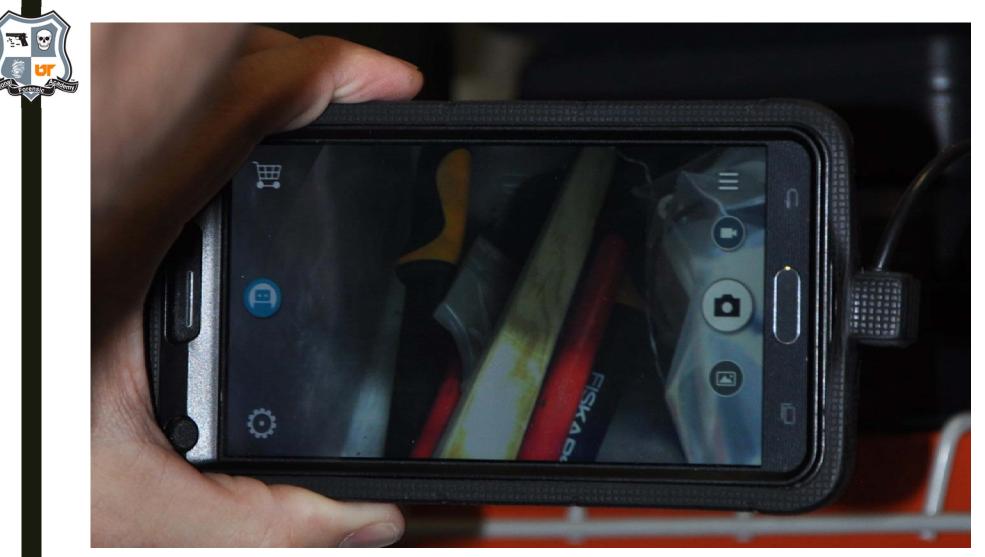






 Can do longer runs for cable with a usb extension cable





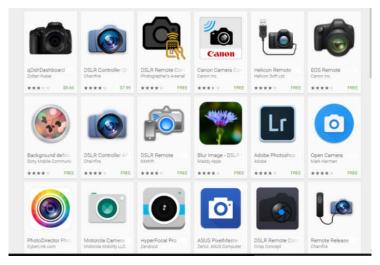


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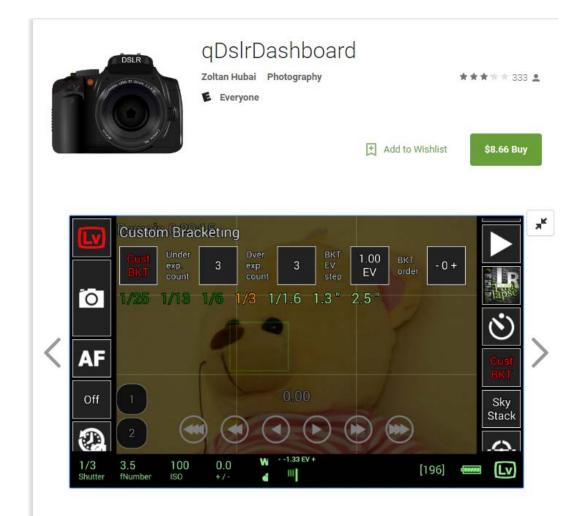
DSLR Control

- Difficult to recommend one specific app for this
- Very powerful tool for photography









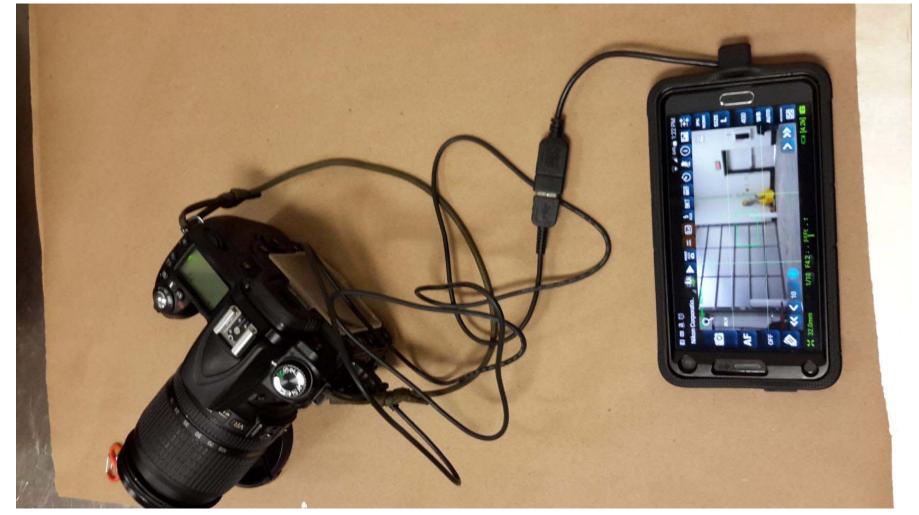














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Very useful for "pole" photography, copy stand work, and low light photography





Shooting Scene





Fiberglass Rods for Shooting Scene

Home Services	DIY Projects & Ideas ~	Credit Services	Pro Xtra	Store Finder	Order Status	Local Ad
Products and Services	P What can we help	you find?	Your Sto Floren	ore Ice	Sign in or Register	Ħ
Home / Tools & Hardware	/ Hardware / Signs, Letters &	Numbers / Drive	eway Reflectors			
48 in. Reflec	Model # 848638 Internet # 20 Tive Rod Ora w + Questions & Answers (1) +		5KU # 428157			
		1	\$1.99 /ea	ich		
			Ideal for resid Highly visible		mercial applications	
			 Driveways, pa 	arking lots, mail	boxes etc. clearly ma	rked
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Open Expanded View	Click Image to	Zoom	1	Ad	ld To Cart	
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		F	Florence #2306 > Florence, KY 41042 Change Pick Up Sto		505 In Stock Aisle 11, Bay 017 Text Product Locatio	n
						.aw E NSTI



h results for "Fiberglass rod driveway"



Share 🖂 🚮 🔰 🔞 FiberMarker, 1/4"*48", 20 Pack, Yellow Color, Snow Markers, Highway Markers, Reflective **Driveway Markers** Qty: 1 🔻 by FiberMarkers ★★★★★ • 1 customer review Ņ Add to Cart Price: \$30.50 VPrime or 1-Click Checkout Only 3 left in stock - order soon. Sold by Mr Garden and Fulfilled by Amazon. 1 Buy now with 1-Click® · High quality fiberglass rods, brand new, 20pcs a set Order within 2hr 8min to get it: - Diameter: 1/4", yellow color · Durable fiberglass reflective snow markers are ideal for marking driveways and road ways Thu Wed · One end is pointed that easily insert into the earth Free +8.99 · Top end has a high impact plastic cap, 360° reflective strip for maximum nighttime visibility Ship to: Report incorrect product information Brian Cochran * 2016 Tailgate Event Find everything you need to celebrate the 2016 football season > <u>Shop now</u> Add to List ¢

Roll over image to zoom in

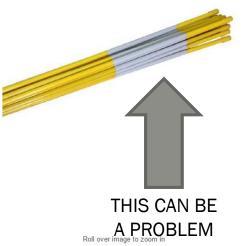


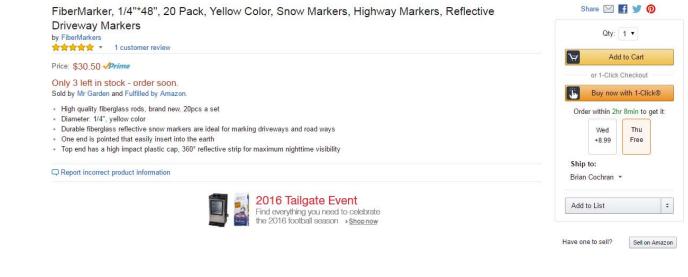
Have one to sell?

Sell on Amazon



h results for "Fiberglass rod driveway"





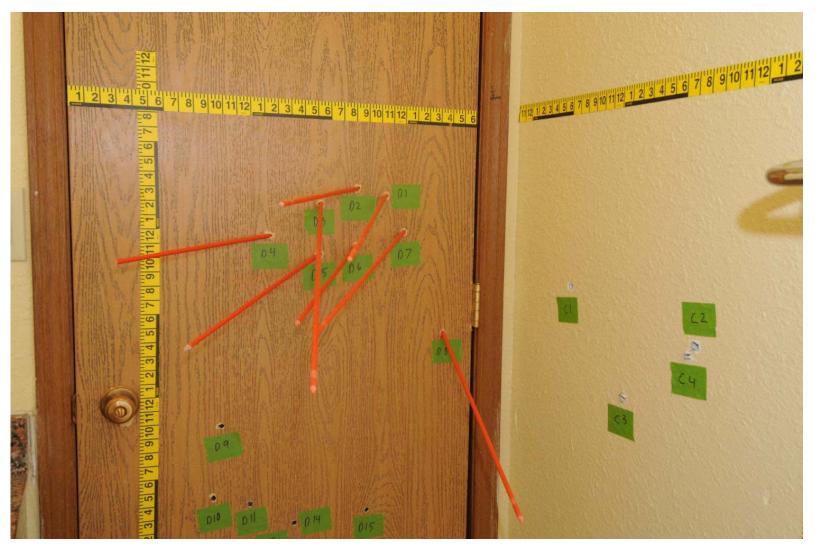




We cut the reflective potion offUse caution cutting fiberglass

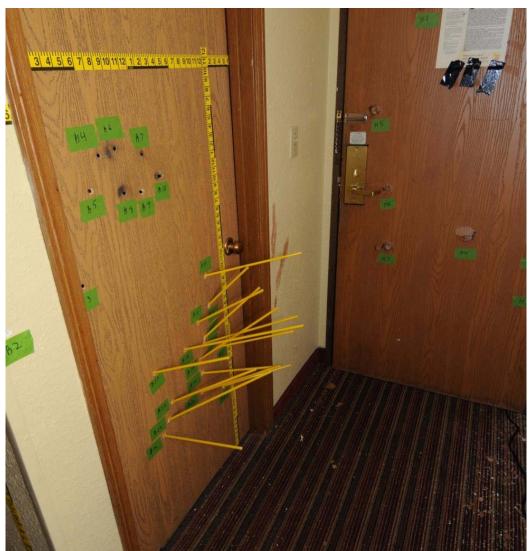
















- Powder with white label lifts
- Photos under glass
- Lift furrow powder with Accutrans or Dap white caulk





- Magnetic or Non-Magnetic powder
- Lift with address labels





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Address labels for fingers



Avery Shipping Labels for Laser and Inkjet Printers, White, 2 x 4 Inches, Pack of 100 (18163)

by Avery

★★★★★ 128 customer reviews | 5 answered questions

Price: \$3.99 Free shipping for Prime members when buying this Add-on Item. Details

In Stock.

Want it Tuesday, Aug. 9? Add it to a qualifying order within 24 hrs 36 mins and choose Two-Day Shipping at checkout. Details Ships from and sold by Amazon.com. Gift-wrap available.

Eligible for amazonsmile donation.

- Compatible with the Avery Quick Peel Automatic Label Peeler (available separately) so you can peel and apply labels up to two times faster than by hand
- · Use white shipping labels for all your shipping and mailing needs
- · Customize with free tools, software and templates from avery.com
- · Save time shipping products with Avery shipping labels
- · Use white shipping labels for all your shipping and mailing needs
- · Customize with free tools, software and templates from avery.com
- · Save time shipping products with Avery shipping labels
- Show more





Address labels for palms

AVERY	8168" Pres Easy-to-Use Avery Templates
White	
31/2" x 5" actual survey states	Jam & Smodge Free CLARATEED
100 labels - 25 sheets	Inkjet
TrueBlock Shipping Labels	AVERY . 8168

Avery Shipping Labels for Inkjet Printers, 3.5 x 5 Inches, Box of 100 (8168)

by Avery

★★★★★ • 68 customer reviews | 5 answered questions

Price: \$7.99 *Prime*

In Stock. Want it Tuesday, Aug. 9? Order within 24 hrs 41 mins and choose Two-Day Shipping at checkout. Details Ships from and sold by Amazon.com. Gift-wrap available.

Eligible for amazonsmile donation.

- TrueBlock Technology completely covers everything underneath
- · Labels are bright white for professional results every time
- Smudge free and jam free printing is guaranteed
- · Customize with free tools, software and templates from avery's site
- Save time shipping with Avery Shipping Labels

52 new from \$3.10 1 used from \$798.53





Palm Label







Photos on scaled glass







 Use Accutrans or Dap caulk to lift powder from the furrow.







•Cover with parchment paper. The silicon in the paper with attach to the Accutrans.

•Follow-up with flat bed scanner with scale







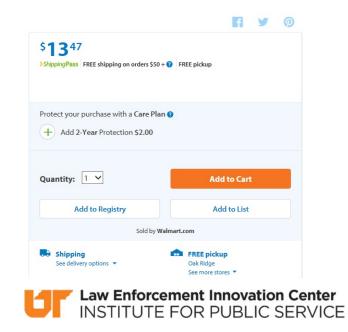
Pot for boiling technique per Aaron Uhle and FBI

Rival Plastic Kettle, 1.7L

★★★★★ 8 reviews Q&A By: Rival Walmart #: 553482293









Resource materials may be found at the National Forensic Academy website:

http://leic.tennessee.edu/2016IAI

