Cleaner bank notes for cleaner health.

Date : 1 October 2016

Dear People of Pakistan,

Please help the statebank to clean all the old and dirty soiled notes of Pakistan.

If you get a soiled note, then you can submit it to any bank branch. Also stop accepting any soiled notes from any bank branch.

If there is any black marketing then it shall be evident if some or all bank branches return the soiled notes or refuse to accept them.

Document and inform all refusals via video by any bank branch so that statebank can be informed of which branch is black marketing the new notes. Also post it to social media so that people can know which branches need to be reported and fixed.

If the branches claim that the statebank is not providing them the new notes, then get the details for forwarding to the statebank as proof of more work required from the statebank side in providing more new notes. If the proof provided by the branch to you is invalid, then we can let the state bank deal with that.

If there are any ideas on how to fix the notes, please email them so they can be incorporated into this article.

Also if the hospitals (and food retailers) need the help of the banks and computer scientists to make their clinics, hospitals and cash less or reduce the contact with cash as much as possible, then feel free to contact us for solutions and ideas on how to do that on an reliable, secure, efficient and effective basis.

The research has been done more on the effects on health by bank notes in hospitals. But less has been done on food retail contamination. We can see how people handle food and currency before providing it to us. Even if gloves are used, you may notice that due to lack of man power available, some food handlers touch the money with the same gloves that they use to handle food. In Karachi at least, the good aspect is that in many food outlets and bakeries, the people who handle the food are separate from those who handle the money.

Example :
https://www.youtube.com/watch?v=Ykc8moigQa8&feature=youtu.be&t=444

Regards,

Khawar Nehal
khawar@atrc.net.pk
http://atrc.net.pk

DIRTY MONEY

Ever wonder why money is such a sickly shade of green? It's probably due to all the germs it carries! Your credit card will never look better after you realize how filthy dollar bills are!

42% of notes contain this staph infection-causing bacteria.

Commonly found on all currency, this virus is responsible for **1/3 of all common colds.**

This hormone disrupting chemical carcinogen is found on over **half of all notes.**

A whopping 92% of all notes have traces of cocaine on them, which bonds to green dye.

It isn't just hamburgers that can give you E Coli. This dastardly bacteria can be found on **7% of all bills.**

30% of US currency is contaminated with nasty fecal bacteria.

FACTS

There are 560 billion US bills in circulation. Placed end-to-end, they would wrap around the earth...twice!

If you scraped the Cocaine residue off all the notes, it would weigh the same as a female German Shepherd!

TIPS

Most germs only last an hour on dry bills, but if moisture is present germs can last up to 17 days!

No cash will ever be germ free, so your best defense is to always wash your hands after handling money.

Because fewer people handle them, credit cards are much more sanitary than cash.

http://health.usnews.com/health-news/family-health/cancer/articles/2010/12/10/health-buzz-paper-money-contaminated-with-bpa.html
http://hubpages.com/hub/Dirty-Money-Germs-on-Currency
http://well.blogs.nytimes.com/2009/05/01/catching-flu-from-money/

Dirty Money

What research reports say?

100% of the **Indian** currency handled at vegetable markets, non-veg markets, milk parlours, pan shops, petrol bunks, shoe makers, beggars are contaminated with dangerous bacteria

Indian Currency notes are contaminated with various dangerous bacteria which can cause diseases like Tuberculosis, meningitis, tonsillitis, peptic ulcers, throat infections, genital tract , hepatitis C etc.

Source: Regional Sophisticated Instrumentation Center (RSIC) research

90% of **south-African** bank notes circulated during 1997 were contaminated with either bacteria or fungi

Source: Bosch & Steyn research report

How germs grow on currency notes?

36,000

Americans die each year from flu-related causes. Among them 10% of people received the flu from paper currency.

Source: The Centers for Disease Control and Prevention (CDC) report

92% of the **USA** Currency notes have traces of cocaine which are the source for hepatitis C

Source: Forensic Science International research

Poor handling: Contamination from the anal region, nasal secretions & aerosols generated by sneezing & coughing are potential sources of transfer of bacteria to currency notes during handling.

Application of saliva on fingers while counting currency

Bacteria transfers through open wounds or scratches on the hands when currency note touches it.

Currency notes are often kept warm by our body heat and even absorb our body moisture, helping bacteria to grow faster.

CURRENTWEEK.COM

http://pubs.sciepub.com/bb/2/3/2/

A Paper currency note is widely exchanged for goods and services in countries worldwide and it was first developed in China. An individual living in unhygienic conditions having unhygienic habits will contaminate the notes with bacteria and these notes will act as a vehicle delivering bacteria to contaminate the hands of the next user. improper hand washing after using the toilet, counting paper notes using saliva, coughing and sneezing on hands then exchanging money, and placement or storage of paper notes on dirty surfaces leads to the contamination and these notes will act as a vehicle delivering bacteria to contaminate the hands of the next user. The money makes for easy transfer of microorganisms and thus cross contamination. Paper notes of currency which is handled by a large number of people, under a variety of personal and environmental conditions thus increase the possibility of acting as environmental vehicle for the transmission of potential pathogenic microorganisms. Accumulated data obtained over the last 20 years on the microbial status and survival of pathogen on currency notes indicate that this could represent a potential cause of sporadic cases of food borne illness. The lower the index values of the money, the higher the microbial contamination of the currency. They further showed that the age of the notes and the material that was used to produce the notes influence the number of microbial contamination. Lower denomination notes harbor the greatest bulk of infectious agents since they are exchanged more than higher denomination notes. Several studies have reported bacterial contamination from 60% to as much as 100% on tested paper currencies. Study conducted on India rupee, Bangladesh Teka, Iraqi and Ghanaian Currency Notes were contaminated with 100% by pathogenic or potentially pathogenic bacteria. Eighty-eight percent of the Saudi one Riyal paper note, 96.25% of Palestine banknote, 69% of Mexico, 91.1% Colombian bills, 90% of South African banknotes were contaminated with pathogenic or potentially pathogenic bacteria with mixed bacterial growth. Currency notes in circulation are contaminated with various microbial agents of which most are resistant to commonly used antibiotics and therefore represents risks and public health hazards to the community and individuals handling currency notes.

http://www.ijser.org/researchpaper/Bacteriological-Examination-of-Currency-notes-in-Atbara-Town-in-Sudan.pdf

Abstract: Currency notes and coins serve as an agency of transmission of microorganisms since they are passed freely from hand to hand as a medium of exchange. A research, with an objective to explore the microbial load on Sudanese paper currency notes and coins, was carried out at Faculty of Education, Department of life science and Environmental Studies ,Nile Valley University . All together 60 samples of Sudanese pounds (1, 2, 5 and 10 for paper notes and one pound only for coin currency) were randomly collected from different sources at Atbara town (bus conductors ,butcher, vegetable sellers, restaurant and grocery) and were analyzed for bacterial contamination. Among the total aerobic bacteria, 98% were contaminated with coliform bacteria ,98 % showed presence of Staphylococci ,90 % for Bacillus spp. The percentage of predominant bacteria found in paper currency notes were S.aureus (33. 5%), E.coli (41.8 %),S. epidermidis (36.7%), Streptococcus spp. (3 6.8%), Bacillus spp. (27.8%) , Micrococcus (6.7%), while in coins were, S.aureus (17.7%), E.coli (13.3 %),S. epidermidis (17.8. %), Streptococcus spp.(17.8%), Bacillus spp., (6.7%) , Micrococcus sp. recorded in paper banknotes only (6.6%) and Shigella sp. was isolated from coin only (4.4%), Paper notes was heavily contaminated when compared with coin. The presence of high microbial load on currency notes and coins indicate the potentials of such currencies for possible spread in the human communities.

https://www.researchgate.net/publication/277766177_An_Assessment_of_Oral_Health_Risk_Associated_with_Handling_of_Currency_Notes

Background: The objective of this study was to identify the micro-organisms present on the currency notes circulating in Nashik city. *Materials and Methods:* A total of 25 currency notes (Five of each Rs 5, Rs 10, Rs 20, Rs 50 and Rs 100) were randomly collected from open-air markets, milk-parlors, food-vendors, beggars, banks and petrol bunks. Persons handling the notes were asked to deposit them in sterile envelopes. The notes were taken to the laboratory immediately and micro-organisms were identified using standardized microbiological techniques. *Results: Micro organisms were isolated from 100% of the currency notes.* Mainly three species were isolated, namely Escherichia coli, Proteus spp. and Staphylococcus aureus. *Conclusion:* Infected currency was identified as a potential public health hazard, as pathogens could spread by circulating banknotes. We recommend that currency notes must be handled with caution.

https://www.newyorkfed.org/medialibrary/media/newsevents/events/banking/2011/Currency_Health_Safety_Concerns.pdf

Types of International Currency

- Two Broad Categories of Notes
  - Porous
    - Paper and/or Cloth Notes (U.S., Argentina, Euro, UK)
  - Non-Porous
    - Polymer Notes (Australia, Mexico, Singapore, Israel, soon to be Canada)
    - Durable Paper Notes/Resin or Varnish Coated (Switzerland)
- Type of Note is a Major Factor in Contamination

What is Contaminated?

- Federal Reserve Defines Contaminated Currency as:

  "Currency that has been damaged by or exposed to contaminants, poses a health hazard or safety risk and cannot be processed under normal operating procedures"

  In general, contamination may be caused by the following:
  - Floodwater or prolonged exposure to water or other liquids;
  - Exposure to blood, urine, feces or any other bodily fluids, including removal from any body cavity, corpse or animal;
  - Exposure to sewerage;
  - Exposure to any foreign substance or chemical, including dye packs, which may pose a health hazard or safety risk;
  - Mold or mildew.

Types of Contamination on Notes

- Biological
  - Viruses
  - Bacteria
  - Fungi
- Chemical
  - Drugs
  - Dye Packs
  - Other Chemicals

Biological Contamination -- Viruses

- Recent Focus on Influenza (H5N1 and H1N1)
- Transmission Routes
  - Droplet or Airborne Transmission (coughing/sneezing)
  - Contact Transmission (hand to hand, object to hand)
- Many Contributing Factors
  - Droplet Size
  - Temperature and Humidity
  - UV Radiation (sunlight)
  - Open Air
  - Viral Inactivation Rate (Survival Time)
  - Presence of Mucus or Other Secretions (increases survival)

Weber and Stilianakis, Journal of Infection, 2008
Thomas et al, Applied and Environmental Microbiology, May 2008
Tiwari et al, Avian Diseases, 2006

Biological Contamination – Viruses (continued)

- Key Transmission Route with Currency is Contact
- Primary Variable is Survival Time
  - Non-Porous (metal, plastic) – up to 72 hours
  - Porous (cloth, paper, tissue) – up to 24 hours
  - Survival on Hands After Transfer – 5 minutes

Weber and Stilianakis, Journal of Infection, 2008
Thomas et al, Applied and Environmental Microbiology, May 2008
Tiwari et al, Avian Diseases, 2006

Biological Contamination – Viruses (continued)

- Study of Swiss Banknotes found survival of influenza viruses up to 3 days
- Presence of mucus extended survival to 17 days
- Swiss Banknotes have resin coating, so equate to that of non-porous surface
- No comparable studies of U.S. Banknotes, but would equate to that of porous surfaces
- FYI, flu virus survival on coin would equate to non-porous surfaces, ie, 72 hours

Thomas et al, Applied and Environmental Microbiology, May 2008

Biological Contamination – Bacteria (continued)

- Studies of bacterial contamination on currency vary and are very limited
- Two studies of currency from randomly selected individuals found that 7% of notes contained bacteria considered pathogenic to healthy individuals.
- Of these, one study found that 87% of notes contained bacteria pathogenic to hospitalized or immune compromised individuals
- A third study by Abrams and Waterman found pathogenic bacteria on 42% of paper currency collected from hospital workers
- Most common pathogens include Staph Aureus and Enterococcal organisms, including E. Coli

Patricia Gadsby, Discover 1998

Biological Contamination -- Fungi

- Wide range of fungal organisms on currency
- Typically found on currency that has been kept in wet or damp environments for long periods of time
- Generally cause exacerbations of respiratory illnesses, eg allergies and asthma, and also skin irritation

http://tribune.com.pk/story/1078170/soiled-currency-notes/

KARACHI:

This is to draw your attention towards a major problem relating to the issuance and use of Pakistani currency notes. The problem is getting from bad to worse by the day. Currently, neither an ordinary citizen or even a bank account holder can get a hold of proper currency notes. Nearly 90 per cent of the notes in circulation of Rs10, 20, 50, 100 and 500 are soiled and most unhygienic and unworthy of circulation. Moreover, even a bank account holder is unable to acquire clean used currency notes, let alone new ones. Personal connections are needed to acquire even clean used notes.

Under these circumstances, the State Bank of Pakistan, the Pakistan Banking Association and Security Printing Press should immediately and without any bureaucratic delay, take the necessary steps to resolve this man-made problem.

Imtiaz Yousuf

http://www.dawn.com/news/1151769

Detect a fake note

Counterfeit banknotes are but a fraction of the currency in circulation. However, what happens when you obtain one? How do you reduce the chances of being passed a fake note? Are topics not widely discussed!

The State Bank of Pakistan has made great strides in both prevention and enabling detection of counterfeit currency. The design of all the currency notes in circulation has virtually been replaced in the past 15 years and this has been primarily driven by the need to introduce security measures that are difficult to copy. On the detection front they've ensured that people know how to trace a suspect note. All banks are required to and do display the security feature brochures at prominent places within the branches. The SBP also has it on their website http://www.sbp.org.pk/BankNotes/banknotes.htm

Yet ask people in your own friends' circle and family and you'll realise very quickly they wouldn't know what a fake note was if it was staring them in the face. Then there are those who will tell you to rub a note on a piece of white paper and if it leaves a trace of ink or not that would indicate that it's fake. Others would tell you to scratch Quaid-i-Azam's jacket and if it's rough then it's genuine. Then there are those who would encourage you to trace a finger along the edge of the bigger denomination notes and if it were rough then it's genuine.

Can you tell whether the currency note you have just been handed is genuine or fake? Read on to learn how to do so

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Truth be told, for most part these suggestions may be true but understanding how the note is actually printed and where the security features are placed will help you detect the note quicker.

The currency notes that are mostly counterfeited are 100, 500, 1,000 and 5,000; the larger denominations far more than the smaller.

Here are a few simple suggestions on how to detect counterfeit 100, 500, 1,000 and 5,000 currency notes:

The paper

Currency notes are made from special paper in Pakistan that incorporate security features at the time of production. ʃ The security thread is embedded in this paper in a manner that:

— It can never be pulled out

— It runs only on the Front Left side of the note

— When viewed while placed on a surface will show an INTERRUPTED thread

— When viewed held up with light behind it will show a COMPLETE thread

— Has the denomination of the note printed on it.

If you experience anything to the contrary then be wary of accepting the note. Counterfeiters will either print a dark strip or put a complete strip inside two sheets of paper.

ʃ The Watermark is the image of Quaid-i-Azam and is on the front left side of the note:

— When viewed while placed on a surface a faint white outline is visible

— When viewed held up with light behind it will show Quaid-i-Azam with the currency denomination

— Watermarks are NOT printed they're created by changing the thickness of the paper

ʃ If you rub your finger over the surface of the paper of the new note you can feel the surface changes.

If you view anything to the contrary then don't accept the note. Counterfeiters are known to print the image which is the wrong way to produce the watermark.

ʃ The paper the way it is fabricated will never split in two like tissue paper does.

If you notice that a currency note is splitting at the edges then reject it. While genuine currency through use and mishandling may shred it will never split. Counterfeiters when making notes are known to print the front and reverse of the notes separately and then glue them together.

ʃ Genuine currency notes will note change colour when viewed under Black light or UV Light

This is one of the foremost and quickest ways to detect a counterfeit currency note in a bundle. Pass Black light or UV light over the bundle and if you notice a note that is GLOWING reject that note.

Practice detection by placing a genuine note on a plain white sheet of paper. Switch off the lights, pass a UV / Black light over it. Instantly the white paper will glow with a bluish tinge the currency note will stay neutral.

The printing

Like the paper, the printing process of currency notes is also special. Secured printing is what enables many security features, which if not present or doctored, will help you detect counterfeit currency.

ʃ Specialised ink is used for printing which will never smear or smudge even if wet.

The ink of counterfeit notes generally smudges when wet. If you suspect there may be a problem with the ink then put a drop on the area with the most ink and rub. If it holds it's genuine, if it doesn't it's fake.

A tip commonly shared by people is to rub the surface of a note on a plain paper and see if it leaves a trace of ink on the paper. Some say it should, some say it shouldn't. It doesn't really matter because if it does then do you really know how much ink should come on to the plain paper? Does it not depend on the force applied while rubbing the paper on the surface. The bottom-line: this is not the correct way as both genuine and fake notes leave traces of ink.

ʃ The technical application of ink or the paper is what enables the rough surfaces on the Quaid-i-Azam's jacket and on the edges of the notes.

— Here's what you should know and look for:

The Quaid's jacket/sherwani will always leave a trace of roughness no matter how old the note is despite wear and tear, though it does become faint with older notes.

The lines on the edge of the notes ONLY on the front side are rough

Easy detection tip: run a nail of the thumb on the front side of the edges while simultaneously allowing the index finger to slide across the reverse of the note. If the reverse feels rough or hollow hold it up to the light facing you and you'll find fine perforation marks. Counterfeiters, to create the effect of roughness on the front side, prick the notes from the reverse with pins or perforation wheels. This results in the reverse not being plain.

ʃ Anti-photocopying and anti-scanning process is adopted.

The area to the front left side of the note has fine lines. These lines magically vanish when the note is photocopied or scanned and then printed. Therefore, if the lines aren't there you know it's a fake.

ʃ Flags on 500, 1,000 and 5,000 currency notes

— These flags will change colour when viewed at different angles.

Easy detection tip: if the flag doesn't change colour when the note is viewed from different angles, the note is fake.

ʃ Hidden Denomination of the note is printed near Quaid-i-Azam's image on the front of the note where the pattern is heavy.

To view this hidden image hold the note up to your eye level with the Quaid-i-Azam away from you. Allow light or sun to pass over the surface and the denomination magically appears.

ʃ Denomination in Urdu script printed on top left front of the note.

— When viewed while placed on a surface it will show incomplete figures

— When viewed while lifted and light passing through it will show complete figure.

Counterfeiters imitate this feature quite often by printing in a dark and light shade to produce the impact when the note is viewed placed on a surface. However lifting the note for light to stream through will show no change unlike in the genuine note.

There are many more features on currency notes that are listed on the State Bank's website. Check the features out and learn to recognise them.

The key to handling currency notes is to be focused on it. Counting notes while watching something else will prevent you for some of the easiest detection points.

By law if you present a counterfeit note to a bank teller it is their responsibility to immediately put a stamp that says 'Cancelled' on it and retain the note. The banks are also authorised to report you to the authorities concerned if they suspect you of deliberately attempting to pass on counterfeit currency. Prosecution can result in fines and jail time.

http://bankers-forum.com/tag/state-bank-of-pakistan/

New Currency Drama by State Bank of Pakistan

Artificial Shortage of Fresh Currency

Every year in Pakistan the Captioned Drama have been played by the central bank, which even do not know the real picture of currency notes in circulation and shortage of currency notes, a question arises, why it has been severally noted that an artificial shortage of Currency notes giving hike in media there are some factors to be noted; How State Bank of Pakistan feeds to commercial Banks Branches

- A Smaller Supply of Currency notes of Rs: 10/-Per Branch Just 50 Packets of 100 Notes
- No data of Notes in Circulation, a high Shortage of Smaller Denomination Notes
- An absolute denial to accept Soiled and defective notes by commercial banks
- A created Artificial Shortage of New notes have created Appetite for Black market by smaller Supply

There are many more to describe the role of Central bank to play with currency notes, merely these four points highlights how it has been manipulated, in the name of Clean Notes Policy, the cost of central bank's for Cash monitoring is just to monitor these fifty packets issued to branch on the eve

of Eid, further, circulated notes in the market of smaller denomination of currency notes are not only soiled that’s Filthy due to the least interest in circulated notes, the five larger banks have been made responsible for re-acceptance of Soiled and defective notes putting a prime responsibility of central bank to these five major banks, there is an vested or disguised force which is deriving this shortage on policy level to promote cartel of currency in black market.

Using a larger team work the central bank is an absolute responsible for this artificially created shortage, addressing above four pointes may ease the both ends if Central Bank review responsibly.

STATE BANK OF PAKISTAN

ACCOUNTS DEPARTMENT
I.I. CHUNDRIGAR ROAD
KARACHI

Accounts Circular No. 01 — 5th March, 2004

The Presidents/Chief Executives
All Banks

Dear Sirs/Madam,

Master Circular on Cash Management – Monitoring

For quite sometime soiled, cut and mutilated currency notes are in circulation in large quantity, which is causing inconvenience to the General Public, and, as such, criticism is being made through direct complaints and letters / articles in print media etc. Taking cognizance of the fact, the Governor SBP had constituted a "Task Force on Currency Management" under the chairmanship of Deputy Governor (Banking) with Presidents of a few commercial banks as members. This task force had recommended various measures that were conveyed to the stakeholders by the SBP Banking Services Corporation from time to time through various circulars thereby putting in place a mechanism for monitoring the issuance of currency notes in order to improve the quality of notes in circulation in order to bring the same inline with the best international standards & practices. The measures were basically directed towards : -

- **Simplification of Procedures for Quick Disposal of Soiled & Defective Bank Notes in order to lift soiled / defective bank notes at a higher pace,**
- **Improving Printing Quality / longevity of bank notes,**
- **Introduction of modern currency handling equipment,**
- **Increasing the supply of Fresh Bank Notes and**
- **Measures to implement strict monitoring of issuance of bank notes to the general public by the commercial banks / branch counters.**

In order to facilitate banks to ensure strict compliance with the above mentioned statutory / regulatory requirements / disclosure, this Master Circular is being issued containing consolidated instructions on the subject. All banks, scheduled or non-scheduled, are advised to meticulously follow the instructions given below:

- The banks / branches are required to prepare, on daily basis, a statement for closing cash balances at individual branch level as per the following Performa :

Date	Denomination	Sorted (Pieces)			Unsorted	Coins
		Re-issuable	Soiled	Defective		

- Special teams constituted at SBP BSC Offices will pay surprise visits to banks branches periodically to examine the quality of currency notes being issued by the banks to their clients and General Public from their counters.

- The team members will record their observations on the condition of the cash available on payment counters / in safe, compliance of statutory / regulatory measures and get the same authenticated / validated by the Manager / Incharge of the branch concerned in the shape of on-site examination report on cash monitoring.

- Banks / branches are required to maintain, on a daily basis, minimum surplus cash balance in Sorted Re-issuable balances of at least ONE DAY'S average requirement for the preceding month. However, following categories of branches are exempted from this condition :-

  a) Branches making an average daily payment of less than Rs.0.50 million.

  b) Branches having immediate access to re-issuable good quality currency notes such as withdrawal facility from SBP BSC (Bank) local Offices / NBP Chests.

- Banks having less than 50 branches mostly in big cities in Pakistan are allowed to develop their own efficient mechanism and forward the same to SBP BSC (Bank) for vetting / approval and, as such, would be exempted from the conditions of maintaining minimum one day's surplus cash balance in sorted issuable condition, as they have ready access to SBP BSC Offices for replenishment of their cash.

- Average Receipts / Payments of the branch during the preceding five – six days shall be worked out excluding the following transactions from the payments: -

  a) Cash deposited in their accounts with their main / feeding branches, Chests / sub-Chests and / or SBP BSC Offices.

  b) Issuance of MTS, TTS and DDS for the clients against cheques drawn by them on their accounts.

- Banks are allowed to make payments from their balances received over the counters during the day's business, provided they follow the procedure as under : -

  a) Banks / branches would be required to develop an efficient system of sorting of currency notes. Amount received in heavy tender (Rs. 100/- to Rs. 1,000/- denomination notes) need to be sorted over the counters immediately upon receipt. For branches making an average payment of Rs. 0.50 to Rs. 1.50 million, in addition to the normal tellers, have to put extra efforts for sorting on the spot by allocating appropriate resources.

  b) Bank Notes for the denomination of Rs. 5/- to Rs. 50/- would be sorted out at the branches or cash houses as per the convenience of the bank.

- As a matter of policy, once a packet of bank notes is sorted, the sorting bank / branch shall clearly identify / stamp on the wrapper of the packet as **"SORTED"** along with the name of the bank, branch and the date of sorting. Once such packets are in circulation, further sorting would not be required till the packet is broken into pieces.

- Simplification procedure for making payment against clearly payable defective notes, claim notes and to ensure quick disposal of these categories of notes, following guidelines shall continue : -

  a) The definition of **Claim Notes** has been modified and the following categories of notes shall now be treated as **Clearly Payable Defective Notes** instead of claim notes:

     "Partially cut / damaged or slightly burnt note provided 3/4th portion thereof be intact."

  b) The definition of **Clearly Payable Defective Notes** has been modified and the following categories of notes shall now be treated as **Soiled Notes** instead of clearly payable defective notes : -

     "Bank Notes divided into two pieces either horizontally or vertically but are in full."

  c) Claim notes of all denominations tendered by Commercial Banks would now be accepted without going into Claim Process, in the manner notes under Guarantee are accepted and credit would be afforded immediately while recovery against rejection or shortage of notes, if any, would be made from the respective banks subsequently.

  d) The Chests / Sub-Chests maintained with National Bank of Pakistan branches now are also authorized to accept Claim notes

likewise from Commercial Banks and deposit the same with our Field Offices under whose jurisdiction they fall.

- Banks shall discontinue stapling of Rs. 5/- and 10/- denomination bank notes even in reissuable form. The stapled notes of Rs. 5/- & 10/- already in circulation will, however, continue to be legal tender as before. Both the stapled and unstapled notes shall continue together in circulation till such time the banks are able to withdraw the stapled notes in non-issuable condition, leaving behind the unstapled clean notes in circulation.

- The commercial bank branches need to immediately equip themselves with modern currency handling machines, such as loose note counters, coin counters, bank note banding machines, sorting machines etc. so as to avoid any inconvenience to general public, as well as other stakeholders.

- Banks, without fail, shall accept legal tender over their counters, including small denomination bank notes of Rs. 5/- & 10/- as well as cut / soiled / mutilated and defective from general public / customers.

You are, therefore, requested to issue necessary directives / instructions to your branches for meticulous compliance in letter and in spirit and ensure that visible improvement is brought about with regard to issuance of good quality currency notes from your counters, proper sorting and deposits of non-issuable balances with area offices of SBP BSC / Chest branches of National Bank of Pakistan regularly.

Please acknowledge receipt.

Yours faithfully,

Sd/-
(MUHAMMED SALEEM REHMANI)
Director

https://propakistani.pk/2016/03/10/sbp-to-phase-out-old-currency-notes-by-year-end/

SBP To Phase Out Old Currency Notes by Year End

Farah Saleem

7 months ago

With effect from December 1st, 2016, all old design bank notes will cease to be legal tender as per the Federal Government's Gazette notification, dated June 4th, 2015. Under the light of this notice, all old design bank notes of Rs 10, 50, 100 and 1,000 will be phased out. In fact, the Rs.5 banknote and the old Rs.500 notes have already been demonetized.

It is important to note that it was in 2005, when the State Bank began releasing new designs of Rs.20 notes, a process which was completed in 2008 when all other denominations received new designs. The aim behind this move was to improve the durability, security and aesthetic quality of the Pakistani currency notes.

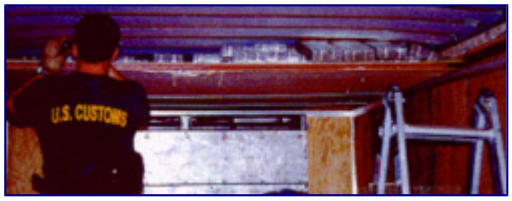
Commercial and micro-finance banks have been directed to accept old design banknotes of Rs.10, 50, 100 and 1000 until November 30th 2016, exchanging the old, soiled or damaged currencies with new notes with the general public.

Do ensure that you return all old design notes no later than November 30th, 2016 as starting from December 1st, 2016, old bank notes will cease to be legal as per the State Bank of Pakistan's directives.

However, in case you miss this deadline, the State Bank of Pakistan's BSC field offices have been directed to accept the bank notes of denomination Rs. 10, 50, 100 and 1000 until December 2021 so that the general public does not end up being inconvenienced by the demonetization move. As the state regulator, State Bank is doing its part to phase out the old currency notes in use by Pakistanis at the earliest.

https://en.wikipedia.org/wiki/Contaminated_currency

Contaminated currency



$5.6 million was found hidden in this ceiling compartment of a truck during a seizure.

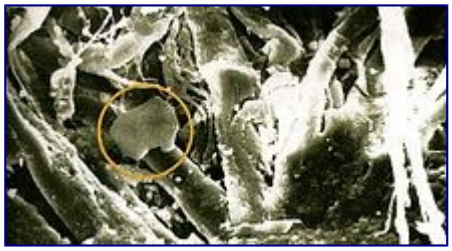
Most banknotes have traces of cocaine on them; this has been confirmed by studies done in several countries.[1] In 1994, the U.S. 9th Circuit Court of Appeals determined that in Los Angeles, out of every four banknotes, on average more than three are tainted by cocaine or another illicit drug.[2] [3]

Additionally, paper money in other parts of the world show a similar drug contamination, and studies indicate that they might even serve as a vector of disease, though researchers disagree over how easily diseases are transmitted this way. Five dollar bills have the most cocaine on them. This is because five dollar bills are the most printed bills in the U.S.


Part of the US$207 million seized from alleged drug trafficker Zhenli Ye Gon.

Several theories have been suggested to explain this contamination beyond the predictable contamination due to handling during drug deals and the use of rolled up notes for snorting drugs. After the initial contamination, the substance is "infected to" other notes in close contact, often stacked together, in enclosed environments common in financial institutions.

In the United States



A grain of cocaine hydrochloride trapped in the forest-like structure of a single dollar bill

In a study reported in *Forensic Science International*, A.J. Jenkins, at the Office of the Cuyahoga County Coroner (Cleveland, OH), the author reports the analysis of ten randomly collected one-dollar bills from five cities, and tested for cocaine, heroin, 6-acetylmorphine (also called "6-AM"), morphine, codeine, methamphetamine, amphetamine and phencyclidine (PCP). Bills were then immersed in acetonitrile for two hours prior to extraction and subjected to Gas chromatography-mass spectrometry (GC-MS) analysis. Results demonstrated that "92% of the bills were positive for cocaine with a mean amount of 28.75+/-139.07 micrograms per bill, a median of 1.37 µg per bill, and a range of 0.01-922.72 µg per bill. Heroin was detected in seven bills in amounts ranging from 0.03 to 168.5 µg per bill: 6-AM and morphine were detected in three bills; methamphetamine and amphetamine in three and one bills, respectively, and PCP was detected in two bills in amounts of 0.78 and 1.87 µg per bill. Codeine was not detected in any of the one-dollar bills analyzed". The study confirmed that although paper currency was most often contaminated with cocaine, other drugs of abuse may also be detected in bills.[4]

Another study, conducted at Argonne National Laboratory, found that four out of five dollar bills in Chicago suburbs contain traces of cocaine. Previous studies have found similar contamination rates in other cities. But the Argonne study is the first to demonstrate that if you handle contaminated bills, you won't wind up with drugs on your hands. "It's virtually impossible for cocaine to rub off", Argonne chemist Jack Demirgian said.[5] This estimate of contamination could be as high as 94%, according to Bill and Rich Sones of the Chicago Sun-Times.[6]

This was confirmed by Ronald K. Siegel in his book, *Intoxication: Life in Pursuit of Artificial Paradise*,[7] who noted the figure as well.

It was uncovered in the *Sacramento Bee* that while the initial source of the contamination comes from money used in the Illegal drug trade in circulation, the U.S. Federal Reserve unwittingly spreads the substance to clean currency by mixing the notes together.[8] The Journal of Analytical Toxicology confirms this assessment, noting that counting machines (in addition to simple proximity) are the agents of transfer.[9]

The discovery that cocaine is so prevalent in U.S. banknotes has a legal application that reactions by drug-sniffing dogs is not immediately cause for arrest of persons or confiscation of banknotes. (The drug content is too low for prosecution but not too low to trigger response to drug-sniffing dogs.), [*citation needed*] though this has been contested legally in a number of U.S. states[10] as a standard of what constitutes 'unusual' levels of contamination remains to be achieved (*see below*).

In the United Kingdom

Forensic scientists have said that around 80% of all British banknotes contain traces of drugs.[11] A 1999 study found even higher levels of contamination in the London area; of 500 notes tested, only four had no traces of cocaine.[12] Most of the banknotes showed only low levels of contamination, suggesting they had merely been in contact with contaminated notes, but 4% of the notes in the study showed higher levels, which the researchers suggested was the result of either being handled by people under the influence of cocaine (which is excreted in skin oils), or by being used directly to snort the drug.[12]

There are drug levels above which banknotes need to be taken out of circulation, and over £15 million worth of notes are destroyed annually for this reason. The destruction is more often done as a precaution than because the money poses a serious health hazard.[11]

Cocaine is the drug most commonly found on banknotes. Heroin and ecstasy are found less often, though the frequency of ecstasy contamination rose in the years leading up to 2002.[11] Joe Reevy of Mass Spec Analytical, a company which analyses confiscated banknotes for the police, pointed out that heroin and ecstasy degrade more rapidly than cocaine, and that a single note which had been used to snort cocaine could subsequently contaminate many others when placed in a sorting machine, to explain the frequency of cocaine contamination.[11]

Money recovered from police raids on the drugs trade are often heavily contaminated. In one raid in 2002, £465,000 was found which had been stored in a room where heroin was being prepared, and was so heavily contaminated that officers were advised not to touch it without protective equipment.[11]

Prior studies[13] found that the level of contamination - i.e., the concentration of the contaminants - was different between those notes suspected to be used in the drug trade and those of proximity transfer levels. Subsequent tests have confirmed this determination, and serve as the basis for court cases against drug dealers, since the basic level of drug contamination remains fairly constant throughout the UK, despite factors that might immediately be thought to affect levels, like rural or urban environments, rich or poor or areas with high or low crime rates.[14]

Hepatitis-C contamination

The contamination of paper money is not limited to simply that of cocaine and other illicit drugs. Health officials in the UK warn that a silent Hepatitis-C epidemic could be brewing. Drug users with hepatitis who share with others the rolled paper note (or straw) used to snort cocaine can facilitate the transfer of the disease to thousands. As drug users are frequently impaired, they can easily fail to notice small traces of blood on these rolled banknotes.[15] This is considered to be of particular concern, as eight out of ten carriers are unaware of their status (as hepatitis can lie dormant for decades), and have little in the way of access to regular healthcare .[16] This higher risk for contracting hepatitis-C has also been noted by the American National Institutes of Health (NIH).[17][18] Without treatment, hepatitis-C can lead to chronic liver disease.

The British Department of Health estimates that there are over 200,000 people infected with hepatitis C in Britain, but the number might be much higher.[19] Charles Gore, the chief executive of the Hepatitis C Trust, said: "Estimates show that around 5,000 new cases of hepatitis C are diagnosed every year - but they are mainly through chance. Because so many are undiagnosed we can't tell what kind of problem we are looking at. When 5,000 banknotes were tested in London in 2000, 99% of them had traces of cocaine on them. That tells us that there is potentially a massive problem in diagnosis and people's awareness of how easily hepatitis C can be contracted."[15]

Professor Graham Foster, of St Mary's Hospital, London, said: "Sharing banknotes or straws is a significant risk factor that people need to be more aware of. Although the risk of contracting hepatitis C through snorting is lower than through sharing a needle, it is still there."[15]

Eurozone

Similar contaminations have been found on euro banknotes from Ireland,[20] Spain,[21] and Germany with the cocaine concentration being almost 100 times higher on the Spanish banknotes than on the German.[22] Additionally, Germany had noted the unusual occurrences of German euros cracking and disintegrating after being withdrawn from ATMs,[23] later explained as being caused by the sulfates used in the production of methamphetamine mixing with human sweat to form sulfuric acid, which breaks down the paper the euros are printed on. Most of the crystal methamphetamine present in Germany comes from Eastern Europe, and has a high level of sulfates.[24]

Elsewhere in the world

The longevity of most modern currency has also given rise to various fallacies regarding the transmission of bacteriological agents with paper banknotes. SARS cannot be spread via banknote, any more than AIDS can - though it bears noting that China's concern in early 2003 that the deadly SARS virus could be spread by banknotes caused that country to automatically sequester surrendered notes for 24 hours (the presumed lifespan of the virus) before releasing them back into circulation.[25]

The levels of contamination and the overall "dirtyness" of bills led Australia to introduce a plastic currency in 1988.[*citation needed*] These notes are less prone to contamination due to lack of the fabric that can hold crystalline structures that illicit drugs often take.[*citation needed*] Australia now prints polymer currency for almost two dozen other countries, including Israel, Malaysia, Mexico and Romania, as well as at home[?].

http://www.idosi.org/abr/4(5)/5.pdf

Abstract: Bangladesh paper currency, Taka, the legal tender of Bangladesh were surveyed for microbial contaminations. This study was carried out on hundred paper currency notes belong to all- the notes denominations obtained from different chosen occupational groups in Dhaka City, Bangladesh. Identification and characterization revealed active participation of the following species of organisms in the ascending order of percentage as *Escherichia coli 58%, Klebsiella* 50%, *Staphylococcus aureus* 25 %, *Salmonella* 15 %,, *Bacillus* 9%. *Pseudomonas.* 7% and *'Vibrio cholerae 5%.* One hundred and sixty nine bacterial isolates were recovered belonging to these selected seven species. Currency notes collected from fish sellers, meat sellers, vegetable sellers, food vendors, office workers, students, bus conductors, beggars and shop keepers with 42.85% - 85.71% *Escherichia coli,* 28.57% - 92.85%, *Klebsiella,* 9.09% - 53.84% *Staphylococcus* aureus,, 0% - 42.85% *Salmonella* sp,0% - 28.57% *Vibrio cholerae,* 0% - 25% *Bacillus* sp and, 0% - 28.57% *Pseudomonas* sp. respectively. The study suggested that Bangladesh paper currency is commonly contaminated with pathogenic microorganisms and this contamination may play a significant role in the transmission of potentially harmful microorganisms or different diseases such as cholera, diarrhea, skin infections and also poses antibiotic resistant, so great care should be taken during handling of money and the preparation and handling of food to avoid cross contamination.

https://www.researchgate.net/publication/259260694_Bacterial_Contamination_of_Iranian_Paper_Currency

Abstract

Background: Transmission of human pathogens can be occurred via inert objects. Paper currency is a further common contact surface whereby pathogens can be transferred within a population although the significance remains unknown. Hence, the aim of the present study was to investigate microbial populations associated with Iranian paper currency.

Methods: This study was carried out by getting 108 samples of the Iranian currency notes (1000, 2000, 5000, 10000, 20000 and 50000 RIALS) from food-related shops that included food service outlets, greengrocery, supermarket, bakery, confectionary and poultry meat retail outlets. All currency notes were examined for total bacterial count and identification of pathogenic bacteria.

Results: The average total bacterial count that was recovered from currency notes was found to be 3.27±0.31 colony forming unites. 2000R had the highest total bacterial count, followed by 5000R, 10000R and the lowest in 50000R. In this study, the isolated bacteria recovered were *Bacillus cereu*s (8.33%), *E. coli* (48.14%), *Staphylococcus aureus* (28.7%), *Salmonella* (0.92%), *Listeria monocytogenes* (0.92%), *Yersinia entrocolitica* (6.48%). It was revealed that all the pathogens screened for where encountered on currency notes were recovered from one sample. There were no significant (P>0.05) correlations between the carriage of pathogens/fecal indicator bacteria and currency note condition.

Conclusion: Our findings demonstrate that Iranian currency notes represent a significant vehicle for human pathogens.