FINGERPRINTING IS A SCIENCE - TAKE A SCIENTIFIC APPROACH

– FINGERPRINT CLEAN HANDS ONLY
– DRY HANDS THOROUGHLY
– ROLL FINGERS FROM NAIL-TO-NAIL
– NOTE THE CORES AND DELTAS
– TAKE IMPRESSIONS IN CORRECT ORDER
– PRODUCE CLEAR IMPRESSIONS – DO NOT SLIP OR SMUDGE
– IF UNABLE TO ROLL PRINT – NOTE WHY IN FINGER BLOCK
– CENTER IMPRESSION IN FINGER BLOCK

– CONSULT YOUR IDENTIFICATION OFFICER FOR EXPERT ADVICE
– THINK OF THE FINGERPRINT CLASSIFIER AND EXAMINER – IT COULD BE YOU
COMMON PROBLEMS IN TAKING INKED FINGERPRINTS

PERMANENT DISABILITIES

IF ANY PART OF THE FIRST JOINT EXISTS, IT MUST BE PRINTED.
TEMPORARY DISABILITIES

MAKE NOTATION OF THE CONDITION OF FINGERS. USE LOTIONS TO SOFTEN ROUGH SKIN. REMOVE BAND-AIDS TO OBSERVE INJURIES. RE-PRINT PERSON AFTER CONDITION HAS HEALED.

SMUDGED IMPRESSIONS

USE PROPER FINGERPRINT TECHNIQUES. HOLD THE FINGERS SECURELY. APPLY LIGHT PRESSURE AND HAVE THE PERSON RELAX HIS/HER ARM AND HAND.
INK UNEVENLY DISTRIBUTED

BLACK PRINTERS INK SHOULD BE ROLLED TO A FLAT, EVEN FINISH. WHEN PRINTING SEVERAL PEOPLE, ONE AFTER ANOTHER, RE-ROLL THE INK TO AVOID DOUBLE IMAGES.

NOT FULLY ROLLED

THE DELTA AREAS MUST BE VISIBLE. IN SOME CASES THE DELTAS DISAPPEAR UNDER THE FINGERNAIL. AFTER ROLLING THE FINGER FROM NAIL-TO-NAIL WITHOUT SUCCESS WRITE THE NOTATION “NO DELTAS-ROLLED NAIL-TO-NAIL”.
RIGHT INDEX

IMPROPER SPACING

ENTIRE FIRST JOINT OF FINGER SHOULD APPEAR IN THE FINGER BLOCK. FINGERS SHOULD BE IN SEQUENCE IN SPACES INDICATED.

2. Right Index

UNSUITABLE INK

WATER BASED INKS AND CHEMICALS MAY RUN OBLITERATING RIDGE DETAIL. IMPRESSIONS SHOULD BE CLEAR BLACK ON WHITE PRINTS. PORELON PADS SHOULD BE KEPT LINT FREE AND STORED UPSIDE DOWN WHEN NOT IN USE.
INSUFFICIENT INK

IMPRESSIONS THAT ARE TOO LIGHT MAKE RIDGE DETAIL IMPOSSIBLE TO SEE. WHEN MAKING MORE THAN TWO CARDS, DRY INK SHOULD BE REMOVED FROM THE PLATE AND FRESH INK APPLIED. REPLACE OLD PORELON PADS.

TOO MUCH INK

INK SHOULD BE SPREAD TO A THIN, EVEN FILM. RIDGE DETAIL MUST BE VISIBLE. DO NOT APPLY TOO MUCH PRESSURE WHEN USING A PORELON PAD.
TECHNIQUES FOR TAKING GOOD FINGERPRINTS

I. HOW TO TAKE INKED FINGERPRINTS

A. Equipment

1. An inking plate – made out of smooth glass
2. Printer’s ink – heavy black paste
3. Roller – 3” long by 1” in diameter
4. A fingerprinting ink pad or other fingerprint system may be used, provided they produce a clear black on white impression.
5. Card holder
6. Cleaning solution and cloths
7. Printing spoon or spatula

B. Set up

1. Apply a thin even coat of ink, three dots are sufficient.
2. Roll the ink to a flat, dull finish, two to three inches in width, along the front edge of the inking plate.
3. A good fingerprinting ink pad may be substituted for printer’s ink, roller and inking plate. The pad should be kept clean of dust and dirt by occasional wiping with a soft cloth. (Hint: store upside down when not in use.)
4. The work surface should be at the edge of a counter or table to allow the fingers to swing freely off the inking plate or ink pad.

C. Printing

1. Stand to the left of the subject while printing the right hand.
   Stand to the right of the subject while printing the left hand.
2. Relax the subject. Have him look at some object, not at his hands.
3. Hold fingers at the tip under the nail and at the base of the finger on the third joint.
4. The direction of rolling the finger should be from the most awkward position to the easiest position. Therefore, the fingers will be rolled away from the subject’s body and the thumbs will be rolled toward the subject’s body.

5. Individual rolled impressions are made by placing the side of the pad of the finger upon the inking plate and rolling to the other side until it faces the opposite direction. The ink should cover the pad from the tip if the finger to below the first joint.

6. Transfer the ink to the card by rolling the inked finger in exactly the same manner.

7. Ink and print each finger separately in sequence. Impressions must be centered in the fingerprint block.

8. Plain impressions taken simultaneously consist of all four fingers inked together, pressed flat and rock forward. The thumb is not rolled but rather rocked forward.

9. When fingerprinting several people, one after another, it is necessary to remove dried ink from the inking plate. It is suggested that after every shift, the old ink should be removed from the plate, fresh ink applied and rolled to a flat finish with additional ink added when needed.

D. Focal points to look for:

1. The core – The approximate center of the pattern area.
2. The delta – The “Y” shaped ridges, which point away from the core and appear on the outside edge of the pattern area.
3. The Automated Fingerprint Identification System (AFIS) needs the prints fully rolled, black ridges with white spaces between them. It plots the different ridge characteristics (ending ridges and bifurcations), with a circle and a tail determining the direction. If the prints are no clear, the AFIS computer will plot false minutia or no minutia at all. Therefore, reducing the chances of a positive identification.
II. PROBLEMS IN TAKING INKED FINGERPRINTS

A. Mechanical Operation – indistinct or illegible prints are usually cause by one or more of the following factors:

1. Failure to reproduce the focal points (deltas and cores) because the finger has not been rolled from one side to the other, and the pad of the finger from joint to tip, has not been completely inked. In some instances, the deltas will disappear under the fingernail. After fully rolling the finger from nail-to-nail without success, write the notation “Rolled nail-to-nail, no deltas.”

2. Allowing the fingers to slip or twist will result in smears, blurs, and false appearing patterns. The fingers should be held securely, but without the technician applying too much pressure.

3. The use of writing or similar ink will result in impressions that are too light and faint; or the may run, obliterating the ridge detail. The best results will be obtained by using heavy black printer’s ink, which should not be thinned before using. This ink will dry quickly and will not blur or smear with handling. Fingerprinting machines, which bake chemicals, must result in clear black on white impressions.

4. Failure to thoroughly clean the fingers or inking apparatus of foreign substances and perspiration will cause the appearance of false markings and the disappearance of ridge characteristics. If fingers are cracked and dry, they may be soaked before printing or moisturized with oils or lotion. In the case of persons who sweat profusely, the fingers may be wiped with alcohol and then printed or each finger may be wiped with a towel before printing.

5. The use of too much ink will obliterate or obscure the ridges. The ink should be spread to a thin even film by rolling the ink over the plate by means of the roller.

6. Insufficient in will result in ridges too light and faint for the AFIS computer to process.

7. Double images are caused by inking a second finger in the same place as the first finger without re-rolling the ink.
B. Temporary Disabilities

1. Disabilities beyond the control of the fingerprint technician are: fresh cuts, wounds, bandaged fingers, blisters, etc. Remove the band-aids to observe a wound to determine if the finger is printable. *Make a notation as to the condition on these fingers in the corresponding block.*

2. Problems resulting from a person’s occupation (carpenters, brick layers, cement workers, etc.) such as worn, peeling, dry, rough skin. Apply softening agents such as creams or oils. *Make a notation as to these conditions and occupations.*

3. Older persons may have thin, worn ridges. It is suggested that a thin layer of ink may bring out these characteristics, though they may be lighter. *Make a notation as to the condition of these fingers; e.g. “ridges worn smooth”.*

C. Permanent Disabilities

1. Missing fingers, amputations and birth defects: note why the finger is missing and how much is missing. An amputation is when the entire first joint of the finger is cut off. The remaining two joints need not to be printed. *Write “Amp” in the individual fingerprint block on the front of the card and also on the back of the card.*

   If the tip of the first joint is cut off, print the stub. This may not be a complete amputation and must be seen by the classifier. When all 10 fingers are amputated, palm prints and foot prints should be obtained.

2. Bent, paralyzed or crippled fingers: If space is available between the fingers and the palm, a spoon or spatula instrument should be used to obtain these prints. They may be taken on a separate card blocks, then attached in sequence to the fingerprint card. *Make a notation as to the situation.*
D. Deformities

1. If the subject has more than 10 fingers, print the thumb and the next four fingers. Print the extra fingers on the back of the card. *Make a notation as to this condition.*

2. If the subject has split thumbs having town nail joints, the joint toward the inside of the hand should be printed. *Make a notation as to this condition.*

3. If a subject has webbed fingers, roll as completely as possible. *Make a notation as to this condition.*
Electronic Capturing
Of
Palm Print Images
Upper Palm Print

The upper palm print area is taken by placing the upper one-third of the palm print and four fingers in the image capture area of the livescan. Then press down firmly on the hand, making sure to capture the entire area being printed.
Lower Palm Print

The lower palm print is obtained by placing the heel of the palm print on the bottom edge of the glass on the livescan and pressing down firmly on top of the hand. The goal is to eliminate any white space showing in the center of the palm print. The amount of pressure needed will differ from person to person but firm pressure is needed to capture the center of the palm print.
Writer’s Palm Print

The writer’s palm print is taken by grasping the top of the person’s hand (over the thumb and index finger area) with your hand and then placing the little finger side of the person’s hand on the glass. The person’s hand is pressed on the glass while slightly rolling the hand down toward the glass.