

## A

Accident reconstruction 169  
Address  
    crime laboratories ii  
AFIS iii, 121-123, 125, 129, 132-133  
    electronic submissions 132-133  
    fax submissions 133  
    FBI search 121  
    obtaining quality images 122, 129  
    search requests 122, 129, 132  
    taking legible prints 122, 125, 129  
    *See also fingerprints*  
Air drying 62,  
    method 68-70, 99, 174  
    plant materials 212  
Alcohol 8  
    blood alcohol 197-198, 200, 202, 204,  
    207, 208  
    with drug screening 197-198, 202, 204,  
    208  
Ammunition 75-81  
    bearing print 75-76  
    handling, marking, shipping 75, 78-79  
    possible determinations 77  
    *See also Bullet; Cartridge*  
Amniotic fluid  
    as biohazard 236  
Anatomical outlines 179  
Animals  
    poisoning 210  
Anonymous writing 226, 231, 233  
    *See Documents, anonymous writing*  
ANSI/NIST record 121, 130  
Arson 219-222  
    flammable liquids 219  
    scenes, evidence 219-220  
    suspects, evidence 221-222  
    *See also Flammable liquids*  
ATF 138, 223  
Audio recordings 39-44  
    *See Video recordings*  
Audio slate 40, 42, 240  
Automobile 169-176  
    *See Hit-and-run; Vehicle*  
Automobiles—National Insurance Crime  
    Bureau (formerly: National Auto  
    Theft Bureau) 170  
Autopsy 177-182  
    anatomical outlines 180  
    authorization 177  
    autopsy kit 182  
    bite mark recovery 73, 178  
    body fluids and organs 179  
    clothing 178-179  
    fingerprinting 179  
    firearms evidence 181  
    hair 182, 203  
    identification of unknown deceased  
    183-187

    officer procedure 177-179  
    pathologist procedure 179-182  
    photography 22-23, 177-179  
    poisoning – animal 210  
    poisoning – human 209-210  
    report 177  
    sexual assault kit 182  
    toxicology samples 208  
    wound area recovery 179, 181  
    x-ray dental records 189-195  
    x-rays 177, 179, 185, 187  
    *See also Poisoning; Toxicology*

## B

Bile  
    samples 202-203, 210  
Biohazard  
    labels, use of 204, 215, 235-237  
    shipment 203-204  
Bite marks 36-37, 71-73, 178  
    bruises, abrasions, indentations 71  
    casting 73  
    photography 17, 23, 28, 36-37, 68, 72, 178  
    recovery at autopsy 73, 178  
    removal and preservation 73  
    saliva recovery 60, 73  
    suspect work-up 73  
Blasting caps 224  
Blood  
    ante-mortem samples 202, 210  
    autopsy recovery 177, 201  
    bullets, blood on 76  
    drug-alcohol determination, in 197-200,  
    204-205, 208  
    hit-and-run, in 171-176  
    identification of unknown deceased,  
    in 187  
    packaging 157, 173  
    poisoning, in 209  
    sample collection 8, 60, 64-65, 173-174,  
    200-202, 239  
    sexual offenses, in 68-69  
    standard samples 200  
    toxicology 197, 204, 208  
Bloodborne Pathogens 235-236  
    Exposure Control Plan 235  
    general guidelines 236  
    Hepatitis B 235  
    HIV 235  
    body fluids containing 236  
    other potentially infectious materials  
    (OPIM) 236  
    protection against exposure 3, 235  
    universal precautions 236  
Bloodstain Pattern Analysis vii, 66  
Body 2-3, 22, 27, 36, 51, 76, 169, 174, 177,  
183, 185, 187, 189-191  
    *See Autopsy; Deceased*

- Body Bag 3, 174  
 body sheet 3, 174, 177-178  
 photography 174
- Bombs 223-224
- Buccal swab 65, 68
- Building materials 139-141  
 at scene 139, 219-222  
 suspect procedures 140, 221  
*See also Glass; Metal; Paint; Wood*
- Bullet  
 detection by x-ray 185  
 handling, marking, shipping 4, 6, 22, 47, 76-81, 180-181  
 tissue, in 81
- Burglary 135-138  
 safe burglary 136-138  
 scene, procedure 135-136, 141, 146, 157, 163  
 suspect, procedure 15, 135  
*See also Building materials*
- ## C
- Camera 1, 17-37, 40-41, 93, 105, 241-244  
*See Photography*
- Canine drug training 216
- Cardboard boxes  
 as packaging 6-7, 62-63, 79, 87, 217
- Cartridge  
 bearing fingerprints 76, 78  
 handling, marking, shipping 76-79  
 possible determinations 77
- Casting 73, 87-99, 102, 106-107, 148, 237-238  
 defectors 92  
 dental stone 89-100  
 marking of casts 99  
 Mikrosil 106, 237  
 packaging of casts 99  
 retaining forms 92  
 snow print wax 94-95  
 sulfur 96-99  
 what to cast 91-92  
*See also Dental stone; Impressions; Tool marks; Photography, footwear and tire*
- Chain of custody 4, 12, 18, 20, 174, 206
- Checks 165-166, 186  
 forgery 226-232  
 as standards 228
- Clandestine drug laboratories 211, 218
- Clothing 157-158  
 air drying 79, 173, 178-179  
 autopsy recovery 178-179  
 identification of unknown deceased, in 183, 185  
 packaging 4-5, 7, 79  
 recovery and packaging 2, 60-61, 135, 140, 157-158, 178-179, 183, 185, 220-221  
 semen stains in 69-70  
 sexual offenses, in 67, 69-70  
 shot or powder patterns in 77-78  
*See also Fabric*
- Computer generated printing 232
- Computer Evidence v
- Condoms 60, 69-70
- Controlled substances iii, 105, 207, 211-218  
*See Drugs*
- Courts i, 1, 4, 17, 53, 73, 101, 109, 176, 228  
 custodial chain, and 12-13, 18  
 Laboratory services, and vi, 17, 206
- Crime Laboratories  
 areas of analysis iii  
 contact information ii, vi, viii  
 field services vii-viii  
 forensic units ii  
 preliminary hearings vi  
 providing technical support vi  
 requesting aid from v, vii  
 service areas (map) iv  
 tours of ix  
 training programs ix
- Crime scene  
 arson 219-221  
 burglary 135-136  
 chain of custody 4, 12-13  
 fingerprints 101-104, 129, 179  
 hit-and-run 171-173  
 maintaining crime scene log 1  
 poisoning 209  
 preserving the scene 1  
 processing the scene 2-3, 136, 139-141, 171-173, 219-221  
 sexual offenses 69-70  
*See also Crime scene sketch; Photography*
- Crime scene sketch 45-55  
 computer based programs 52-55  
 documenting evidence recovery 45  
 equipment 48-49  
 illustrating of 52  
 labeling of 52  
 locating objects 50-51  
 types of 45-48
- Criminal damage to motor vehicles 169-170
- ## D
- Deceased  
 body bag 3, 174  
 death investigation vii, 3, 207  
 hit-and-run, in 174  
 medical history 210  
 sexual offenses, and 182  
 poisoning 210  
*See also Autopsy; Deceased unknown*
- Deceased unknown 183-187  
 clothing 183, 185

- external examination 183-184
  - identification photographs 185
  - internal examination 185-186
  - personal effects
  - Dental identification 189-195
    - evidentiary significance 189
    - examination procedures 189-191
    - locating ante mortem records 193
    - identification of unknown deceased 189
    - NCIC 189
    - preparing postmortem records 191-192
  - Dental stone 89-100
    - bulk 90-91
    - dry powder method 95-96
    - mixing 91
    - premeasured 90-91
    - procedures 92-93
    - sand/soil, in 93
    - snow, in 92, 94-95, 97
    - snow print wax, with 94-95, 238
    - See also Casting; Footwear; Impressions; Tires*
  - Diagram 17, 34, 45, 48, 50, 52-54, 62, 80, 136, 171, 179
    - See Crime scene sketch*
  - Digital imaging
    - admissibility 18
    - chain of custody 18
    - file formats 19-20
    - film resolution equivalents (table) 18
    - requirements for latent prints 19
    - storage 20-21
    - See also Photography*
  - Division of Criminal Investigation 211, 218
    - clandestine lab assistance v, vii, 211
  - DNA
    - definition 57
    - collecting techniques 3, 60-62
    - elimination samples 65
    - mitochondrial DNA 57-58
    - nuclear DNA 57-58
    - packaging 4-7, 63-64, 216-217
    - preventing contamination 61
    - standard samples iii, 65
    - storing evidence 64-65
    - STR analysis 59
    - submitting to Lab 63-64, 216
    - Y chromosome DNA 57-58
    - See also DNA samples*
  - DNA samples 5
    - Biological Specimens Kit 239
    - bloodstains 60
    - cars 61
    - drug baggies 60
    - feces 60
    - fetal tissue 61
    - fired casings 60
    - food 60
    - hair 60
    - saliva 60
    - semen stains 60
    - Sexual Assault Collection Kit 67
    - Suspect Evidence Collection Kit 67
    - tissue (skin cells) 60
    - touched items 61
    - urine 60
    - vaginal secretions 60
    - vaginal swabs 60
    - vomit 60
  - Documents 225-234
    - anonymous writings 231
    - bearing fingerprints 165
    - care and marking 233
    - charred 234
    - computer generated iii, 232
    - evidence, types of 226
    - examination 225-226
    - exemplars 226-227
    - forgery 231
    - indentations on 233
    - packaging 223-224
    - photocopies iii
    - possible determinations 215, 223
    - standards 228-230
    - typewriting iii, 233
    - See also Anonymous writing; Checks; Forgery; Handwriting; Typewriting*
  - Drugs 197-199
    - body fluids, in 19
    - canine training 216
    - capsule/tablet identification 211
    - clan labs 218
    - color testing 215
    - ecstasy 214
    - fingerprints/DNA on packaging 216-217
    - fresh plant material dried 212
    - illicit tablets 199, 214
    - khat 212-213
    - liquids 214
    - marijuana/THC 199, 212
    - powders 213
    - pharmaceuticals 197, 205, 214
    - product identification code 214
    - repackaging of drugs 217
    - pseudo drugs 216
    - sample size for analysis 215, 217
    - syringes 215
    - use with alcohol 197
    - See also Field drug testing kit; Clandestine drug laboratories*
  - Duquenois-Levine color test 212
    - as probable cause 212
    - marijuana 212
- ## E
- Ecstasy 214
    - See Drugs, ecstasy and illicit tablets*
  - Electronic imaging 17
    - See Digital imaging*
  - Electrostatic Dust Print Lifters 83-84, 87-88, 240

See *Impressions, dust; Footwear*

Elimination standards

DNA 65

Fingerprints 65

Engine

criminal damage to 169-170

Envelopes 6, 11, 13, 15-16, 60-61, 63, 68-70, 75, 79, 140, 145, 152-153, 163, 174, 212, 217, 231

as packaging 237, 239-240

hairs and fibers, as packaging for 160-161

Evidence collection 3, 67-70, 73, 178, 182, 237, 239

Explosives iii, 138, 147, 223-224

assistance 223

ATF 223

electric blasting caps 224

fireworks 224

precautions 138, 223-224

safe burglary, in 138

## F

Fabric 157-158, 165-166

air drying 157

impressions 23, 28, 158, 176

recovery and packaging 157-158, 160

sexual offenses, recovery 69

Feces

as biohazard 236

DNA analysis 60

Fibers 159-161

evidentiary value 159-160

packaging 159-161

known sample 159-160

See also *Clothing; Fabric*

Field Drug Testing Kit 215

Field service iv, vii-viii

See *Crime laboratory, field service*

Fingernails 3, 68, 166, 184

identification of unknown deceased, in 184

scrapings 60, 68, 179

Fingerprints 13, 65, 76, 140, 165, 174, 189-190, 209

arch pattern 125

AFIS 121-134

crime scene procedures 102-109

fingerprinting equipment 113, 116, 122, 126

IAFIS 121

latent prints 101-111

livescan 132

loop pattern 125

major case prints 113-120

obtaining good prints 125-129

palm prints 125, 129-131

patent prints 101-102

plastic prints 101-102

significance of 101

whorl pattern 125

writer's palm 131

See also *Fingerprint processing*

Fingerprint processing

backing cards 238

fingerprint kit 238

gel lifters 238

gel tapes 238

lifts 106-107

lifting method 107-108

marking lifts 109

nonporous item 101

photography of 105-106

porous items 101

powder cleaning techniques 105

powders, with 104-105

superglue, with 104, 106, 110-111

visual examination 103

Fire

See *Arson*

Firearms iii, 75-81, 223

handling, marking, shipping 75-79

possible determinations 77, 80-81

recovered from water/liquid 63

See also *Ammunition*

Fireworks 224

Flammable liquids

arson 219

clandestine labs 218

collection and packaging 4, 8, 220-221

gasoline 8, 219

unlawful to mail 170

Fluids 61-62, 64, 66, 69-70, 171, 173, 179, 197, 202-203, 210, 236, 243

See *Flammable liquids; Drugs, liquids*

Footprints 23, 179, 183

See *Impressions; Footwear*

Footwear 2-3, 18, 83-100, 135-136

examinations 2, 23, 30-33, 87-98

submission 19, 83-84

See also *Casting; Impressions*

Forgery 131, 231

See *Documents, forgery*

Fracture matching 138, 143-144, 151, 153, 155, 163-167

(table) 166

See also *specific kinds of evidence*

## G

Gasoline 8, 170, 219

foreign materials in 169

See also *Flammable liquids*

Gelatin lifters 88-89

See *Impressions, dust; Footwear*

Glass iii, 143-145, 183

chemical analysis of 144

determining direction of force 80-81, 144-145

fracture matches 143-144, 165-166

as packaging 4, 8, 63, 70, 160, 163,  
174, 201-203, 214, 217, 220-221  
collection and packaging 139-141,  
144-145, 220  
hit-and-run, in 143, 157  
known samples 135, 139, 141, 143  
objects bearing fingerprints 101-102  
questioned glass 85, 143  
recovery and packaging 155, 157,  
171-172, 175  
Gun iii, 6, 22, 52, 60-61, 129, 240  
See *Firearms*

## H

Hair 103, 135, 159-161, 175-176  
autopsy recovery 179  
collection of standards 68-70, 140, 159,  
203, 220  
evidentiary value 159-161  
DNA analysis 58, 60, 150  
head, standard sample 159  
identification of unknown  
deceased, in 184  
packaging 5, 179  
poisoning, in 203, 209  
pubic combings 160  
pubic, standard sample 160  
sexual offenses, recovery in 68-70, 160  
toxicology sample, as 203  
Handwriting iii, 225-231  
anonymous writings iii, 231  
collected standards 228-230  
forgery 131, 231  
handwriting exemplars 226-227, 231  
See also *Checks; Documents*  
Hepatitis B Virus 235  
protection against exposure 235  
vaccination against 235  
Hit-and-run 152, 171-176  
body fluids 173-174  
clothing 157  
diagramming 171, 176  
fingerprints 174  
glass recovery 143, 171-172  
impressions 158, 173, 176  
metal recovery 171-172  
paint recovery 152, 171-172  
photography 171, 174-175  
scene procedure 171  
skid marks 173  
towing 174-175  
vehicle procedure 174-176  
vehicle sketches 176  
victim (deceased) procedure 174  
victim (living) procedure 171, 173-174  
HIV 235-236  
protection against exposure 235-236

Impressions 68-69, 73, 87-101, 104, 106,  
125-128, 133-134, 173, 190, 192, 233  
bite marks—See *Bite marks*  
dust, in 3  
electrostatic dust print lifters 87  
fabric 23, 28, 158, 176  
footwear iii, 2-3, 18-19, 30-35, 83-84,  
93-98, 135, 139, 238  
footwear photography 18-19, 23, 30-35,  
87, 91, 93-95, 97-98  
gelatin lifters 89-90  
hit-and-run 176  
photography 31-37  
sand/soil, in 93  
snow, in 92, 94-95  
tire iii, 2, 34-35, 83-84  
tire photography 34-35  
tool mark—See *Tool marks*  
See also  *Casting*  
Indentations  
documents, on 233  
Inked prints 117  
See *AFIS; Major case prints; Fingerprints*  
Intoxication, testing for 204

## K

Kidney  
autopsy recovery 202-203  
Kits 88, 90, 126, 148, 206, 208, 215,  
237-244  
autopsy 182, 208, 240  
biological specimens 178, 239  
casting kits 238  
dental stone 238  
fingerprint processing 238  
general collection 237  
photographer's 241, 244  
sexual assault collection 60, 67, 182, 239  
studio equipment 244  
sulfur 239  
suspect evidence collection 3, 67, 239  
Knife 3, 6-7, 99, 129, 153  
marks on bone 147  
preserving cuts in clothing 157

## L

Laboratories, Crime i-ii, vi, viii, 3, 13, 40,  
55, 57-59, 64, 84, 132-133, 159, 178, 182,  
187, 203-208, 215-216, 224, 226, 239-240  
See *Crime Laboratories*  
Laboratory of Hygiene, State 206, 208  
Latent prints 19, 29, 43-44, 70, 101-111,  
121, 129, 216  
See *Fingerprints; Fingerprint processing*  
Law Enforcement Bulletin ix  
Leather 71  
packaging 7, 158

Liquids 4, 8, 64-65, 69-70, 75, 92, 97-99, 110-111, 138, 170, 201, 203, 211, 214, 217, 219-221, 223-224, 236

See *Drugs, liquids; Flammable liquids*

Liver 202-203, 209

LSD iii, 205

tear match 165-166

Lungs 202-203, 236

## M

Machine guns

See *Firearms*

Major case prints 113-116, 238

ink method 116-120

powder & tape method 113-116

See also *Fingerprints; AFIS*

Manila envelopes

as packaging 6, 237

Marijuana 199, 205-206

description 211

health risks 212

packaging 5, 212

possession cases 206, 211

Medication 210

See *Drugs, pharmaceuticals*

Metal iii, 4, 7-8, 71, 75, 78, 80, 92, 101, 137, 139, 153, 155, 165-166, 205, 220, 238, 240

autopsy recovery 177

detection by x-ray 177, 185

evidentiary value 155

fabric weave impressions on 157, 176

hit-and-run, in 171-172

immersed in liquid 75

recovery of samples 75, 155, 175, 220

Metal cans

as packaging 4, 7-8, 220

Mikrosil 106, 148, 237

See  *Casting, Mikrosil; Tool marks*

Mitochondrial DNA 58, 159

Mushrooms 5, 213

See *Psilocybe mushrooms*

## N

Narcotics 229

See *Drugs*

National Automobile Theft Bureau 170

See *National Insurance Crime Bureau*

National Insurance Crime Bureau 170

NCIC 187, 189

dental identification, and 189

Nitroglycerine 138, 224

Nuclear DNA 58

## O

Organs, body 179, 185, 202

See *individual organs*

## P

Packaging 4-12, 167, 204

ammunition 76, 78, 81

arson investigations, clothing 220

arson samples 8, 219-221

autopsy samples 177-179

biohazard samples 215

blood samples 174, 203

body fluids 62, 157, 179

buccal swabs 65, 68

building materials 139-141

cardboard boxes 4-6, 62, 79, 155, 217

charred documents 220, 234

clothing 4, 69, 157-158, 179, 221

documents 233

evidence, generally 4

fabrics 4, 157-158

fibers 68-69, 157, 159-161

firearms 65-76, 79

flammable liquids 4, 8, 75, 170, 219-221

glass samples 138, 144-145

glass vials and jars 8, 145, 155, 217

hair 179, 203

latent fingerprint on 103, 217

leather 7, 158

liquids 8, 64-65, 69-70, 75, 170, 201,

203, 214, 217, 219, 221

marijuana 212

metal cans 8, 221

packaging checklist 16

paint samples 152-153

paper 4-6, 62-63, 70, 99, 145, 153,

157-158, 161, 174, 177, 212, 217

plant material 212-213

plastic 7-9, 64, 76, 99, 145, 153,

157-158, 212, 217

saliva samples 63, 69

separating items 69

sexual assault evidence 69-70

slide boxes 79, 155

swabs 62, 65, 68-70

syringes 215

tissue specimens 64-65, 180-181, 203

tools 148

toxicology specimens 203-204

urine samples 65, 157, 174, 201-202

wood chips from burglaries 163

Paint iii, 94, 96-97, 102, 151-153

as evidence in burglaries 135, 139, 141

as trace evidence in arson 8, 219, 221

evidentiary value 151

fabric-weave impressions, in 176

fabrics, on 139, 157

fracture matches 151, 153, 166, 172, 175

hit-and-run, in 152, 171-172

packaging 5-6, 8, 152-153

recovery 152-153, 175

stolen vehicles 170

tool marks, and 139, 152

- Palm prints 106, 121, 125-126, 129-130, 136, 138, 179, 183
  - See *Fingerprints, palm prints, writer's palm; Fingerprint processing; Major Case Prints*
- Paper iii, 4-7, 16, 28, 44, 48-49, 61-64, 68-70, 76, 79, 99, 101-102, 119, 126, 128, 133-134, 140-141, 145, 152-153, 157-158, 160-161, 165-166, 170, 173-175, 177-178, 201, 211-212, 217, 219, 225, 227, 229, 237, 240, 244
  - handwriting standards, in 228
- Paper bags 166, 237
  - as packaging 6, 58, 61, 69-70, 79, 160, 173, 177-178, 212, 217
- Pathologist 3, 28, 61, 73, 177
  - autopsy procedures, general 177-181
  - autopsy procedures, poisoning 209-210
  - role in identification of unknown deceased 183-187
- PCP 205, 214-215
- Perforation matching (table) 166
- Pericardial fluid 236
  - as biohazard 236
- Peripheral blood 202-203
- Peritoneal fluid 236
  - as biohazard 236
- Personal protective equipment 3, 218, 235-236, 240
  - booties 3
  - gloves 236, 240
  - masks 236, 240
- Perspiration 127
  - as biohazard 236
  - DNA analysis 60
- Peyote 213
- Pharmaceuticals 197, 205, 214
  - See *Drugs, pharmaceuticals*
- Photocopies and documents iii, 133-134, 225-231
- Photography 3, 17-37, 52, 66, 178-179, 191
  - autopsy 27-28, 177-179, 181
  - bite mark 17, 28, 36-37, 68-69, 72-93, 178
  - bloodstain patterns 66
  - building, exterior 22
  - building, interior 22
  - burglary 136
  - casting, prior to 87
  - continuity of images 21
  - crime scene, at 3, 34, 45, 53, 66, 136, 241
  - electronic flash 28
  - filling frame with image 33-34, 36, 105
  - fingerprints 23, 32-33
  - footwear impressions 18, 30, 32-33, 83, 87
  - forensic, general 17-37, 241
  - "four views" of rooms 22
  - hit-and-run 171
  - impressions 31-37
  - lenses for crime scenes 241
  - lenses for surveillance 241
  - lenses, general 241
  - lenses, macro 105, 241
  - lighting 31-32
  - motor vehicle accidents 171-176
  - photo log 23, 240
  - recommended equipment 241-244
  - scaling 28-30
  - scaling, required equipment 28-30
  - services offered by Laboratory 17
  - photographer's kit 241-243
  - procedures 18-37
  - tire impressions 34-35
  - tool marks 28-31
  - tripod 25, 28, 30, 33-34, 36, 53, 93, 105, 241-242, 244
  - unknown deceased 185
  - vehicles, initial record 24-27
  - victim 36-37, 178, 184-185, 187
  - See also *Digital imaging*
- Physician 173, 178, 194
  - blood samples 200, 209
  - poisoning procedures 210
  - sexual offense procedures 67
  - See also *Pathologist; Veterinarian Physicians Desk Reference*
- Pipette
  - liquid transfer, and 8
- Plaster of Paris 148
  - See *Dental stone*
- Plastic
  - as evidence 80, 151, 157, 165-166, 171-172, 175, 221
  - as fire debris 221
  - as packaging 4-5, 7-10, 12, 63-65, 76, 89-90, 99, 110, 135, 140, 145, 153, 158, 174-175, 201, 212-213, 215, 217, 238
  - cable ties 157, 240
  - hit-and-run 151, 157, 171
  - trace evidence iii, 157
- Plastic bags 166
  - as packaging 10, 12, 89-90, 110, 145, 157-158, 201, 212, 217, 238
  - fingerprints 217
- Plastic impressions
  - fingerprints 101-102
- Pleural fluid
  - as biohazard 236
- Poisoning, animal 210
- Poisoning, human 203-210
  - autopsy procedure 209-210
  - medical information 210
  - scene procedure 209
  - supplementary information 210
  - victim procedure 209-210
  - See also *Autopsy; Toxicology*

- Poppies, opium 213
- Powder 83-84, 89, 91, 95-97, 211, 213  
 drugs, sample size for analysis 215-217  
 fingerprint 104-105, 107, 110, 113-116, 120, 238  
 gunshot, in tissue 180-181  
 packaging considerations 6-7, 213, 216-217
- Powder pattern iii  
 in clothing 77-79  
 possible determinations 77-79
- Prescriptions 186, 210, 226  
*See Drugs, pharmaceuticals*
- Pretrial conference vi
- Printing, hand 13, 225, 227, 231
- Prints iii, 19, 29, 43-44, 101-110, 113, 116-118, 121-122, 125-127, 129-130, 132-134, 136, 138, 140, 148, 174, 179, 183, 217, 238  
*See Fingerprints; Impressions; footwear; Tire*
- Psilocybe mushrooms  
 packaging 5, 213
- Pubic hair 60, 160  
*See Hair, pubic combings and standards*
- ## R
- Rape 239  
*See Sexual offenses*
- Reports 13, 179, 185, 190, 210, 230  
 stand in lieu of appearance vi  
 at preliminary hearings vi
- Restoring serial numbers 75, 170
- Retaining frame  
 casting impressions 92
- Revolver 48  
 handling, marking, shipping 78-79  
 possible determinations 77
- Rifle  
 handling, marking, shipping 78-79  
 possible determinations 77
- ## S
- Safes 166  
 burglary 136-138  
 combination lock nomenclature 137  
 nomenclature 137  
*See also Burglary*
- Saliva  
 collected from 37, 60, 69, 73  
 collection procedure 37, 69, 73  
*See also Bite marks*
- Sand 33  
 casting impressions in 86, 92, 99  
 photographing impressions in 33, 93  
 vehicle engines, in 169  
*See also Soil*
- Sawdust 163  
*See Wood*
- Sealing evidence 9-12  
 heat sealing 9  
 staples, and use of 10, 12, 237  
 tamper-evident tape 9-11, 44  
 tamper-evident adhesive strip 9, 12  
 tape 6, 9-12, 16, 63, 87
- Seminal fluid 69  
 as biohazard 236
- Seminal stains  
 recovery 69  
 sexual offenses, in 69
- Serial number iii, 23-24, 76, 175  
 restoration 75, 170
- Service Areas iv, vi, 13, 111, 206, 237, 239
- Sexual offenses  
 autopsy procedures 182  
 Biological Specimens Kit 178, 239  
 bite marks—*See Bite marks*  
 buccal swab 65, 68  
 blood samples 65  
 clothing 67, 69-70  
 condoms 60, 69-70  
 evidence collection 67-70, 182, 239  
 fabrics as evidence 69  
 fingernail scraping 68  
 finger swab 68  
 pubic hair combings 160  
 pubic hair standards 160  
 saliva samples 37, 60, 69, 73  
 scene processing 69-70  
 semen stains 7, 60, 69-70  
 toxicology specimens 198, 205  
 trace evidence 69  
 Sexual Assault Evidence Collection Kit 60, 67, 182, 239  
 Suspect Evidence Collection Kit 3, 67, 239  
 sexual offenses, unusual 70
- Shoes  
 arson investigations 221  
 burglary investigations 140  
 glass fragments adhering to 143  
 packaging 140, 158  
 sawdust adhering to 163  
 wood fragments adhering to 163  
*See also Impressions; Prints, footwear and tire*
- Shot patterns 77-79  
 in tissue 180
- Shotgun  
 handling, marking, shipping 76  
 possible determinations 77-79
- Skid marks 169, 173
- Slide box, as packaging 6, 79, 153, 155
- Snow, impressions in 92, 94-95
- Sodium fluoride 174, 200, 240
- Soil 87, 157, 220  
 arson, in 220

- casting impressions in 92-93, 99
- footwear, and 86
- photographing impressions in 93
- Spleen 202-203
- Standards
  - DNA 57-66
  - blood 235
  - documents 226, 228-231
  - fibers 159-160
  - hair 159-160
  - handwriting 226, 228-231
  - paint 152-153, 175
- State Laboratory of Hygiene 206-208
  - See *Toxicology*
- Steroids 214
- Stomach contents
  - autopsy recovery 186, 202, 209
- STR analysis 59-60
- Sulfur
  - casting 92, 94, 96-99, 239
  - safety concerns 97, 99
  - See also  *Casting*
- Superglue process 104, 106, 110-111
- Superglue chamber 110-111
- See *Fingerprint processing*
- Synovial fluid
  - as biohazard 236
- Syringes 173
  - as biohazard 215, 236
  - packaging 63, 209, 236-237

## T

- Tablets 7, 211, 214-215
  - See *Drugs, illicit tablets and pharmaceuticals*
- Tear matching 165-167
  - (table) 166
- Telephone numbers 223
  - computer seizure, for v
  - crime laboratories ii, viii
  - FBI fingerprint database processing center (AFIS) 132-134
  - independent toxicology labs, for 208
  - State Lab of Hygiene 208
  - WI Veterinary Diagnostic Lab 210
- Tissue 70, 73, 236
  - autopsy recovery 189-190, 203
  - DNA analysis 57, 60-65
  - finger nail scrapings, in 60
  - shot or powder patterns in 180-181
  - See also *individual organs*
- Tires
  - examinations 83-86
  - hit-and-run investigations 175
  - submission of 83-84
  - See also *Casting; Impressions; Skid marks*

- Tool marks iii
  - burglary, in 136
  - casting 148
  - evidentiary value 2, 147-150
  - Mikrosil 148, 237
  - paint samples, and 152-153
  - photography 28, 136
  - preservation 148
  - recovery 139, 147-148
  - types and location 147
- Tools
  - arson investigation, and 220-221
  - burglary investigations, in 136-138
  - evidentiary value 102, 149, 163
  - fragments 139
  - packaging 148, 220-221
  - trace evidence, and 140
  - types of investigations 135
  - See also *Tool marks*
- Touch DNA 61, 103
- Tours ix
- Towing
  - hit-and-run vehicle 174-175
- Toxicology iii, 197-208
  - animal poisoning, in 206, 210
  - autopsy specimens 182, 201-203, 240
  - bile samples 203
  - blood alcohol 197, 204-205
  - blood samples 200-202
  - carbon monoxide 205
  - collection, living individuals 8, 200-201
  - collection, deceased 8, 201, 240
  - contact information 208
  - cyanide 205
  - detection periods (table) 198-199
  - drug screening 205
  - GHB 205
  - hair samples 203
  - hit-and-run, in 174
  - independent toxicology labs 206, 208
  - immunoassay 205
  - kits 208
  - liver samples 203
  - lungs 203
  - peripheral blood 202
  - postmortem redistribution 198, 202-203
  - samples, where to submit 206, 208
  - sexual offenses, in 198, 205, 207
  - specimen preservation 200, 203
  - specimens, in lieu of blood 202-203
  - spleen samples 203
  - State Lab of Hygiene 206-208
  - stomach contents 202
  - storage and shipping 203-204
  - submissions: Hygiene vs. Crime Lab (table) 206-207
  - testing 204-205
  - urine samples 198, 200-202
  - vitreous humor 202
  - See also *Poisoning; Autopsy*

Training programs ix  
 Transmittal of Criminal Evidence Form  
 checklist for use 16  
 electronic version 13  
 general 13-16  
 Typewriting 225, 233  
 submittal procedures 13, 225-226

## U

Universal precautions 3, 236  
 Urine  
 as biohazard 204, 236  
 clothing, in 157  
 DNA analysis 60, 64-65  
 drugs and alcohol 197-198, 202  
 hit-and-run, in 174  
 human, recovery 60, 157, 202  
 packaging 157, 174, 201  
 poisoning, in 209-210  
 sample storage 64-65, 174, 201  
 toxicology sample 197-198, 200, 202,  
 205, 208

## V

Vaginal secretions  
 as biohazard 236  
 DNA analysis 60  
 Vehicle 1, 17, 24-27, 39, 60, 65, 80-81,  
 84, 143, 147, 166, 169-176, 230  
 arson, in 220-221  
 burglary, used in 136  
 criminal damage to 169-170  
 fiber transfer 176  
 fingerprints 174, 238  
 fractured parts from 143-144, 166, 172  
 hit-and-run, in 151, 157, 171-176  
 impoundment 169  
 moving 175  
 note in area of crime scene 171  
 paint samples 152-153, 172, 175  
 physical impressions left by 173  
 repainted 170  
 sketches of 47, 176  
 skid damage 169  
 stolen 170  
 stripped parts, matching 170  
 submission of 16  
*See also Hit-and-run; Impressions; Tires*  
 Veterinarian 206, 208  
 poisoning procedure 210  
 Victim 1-3, 14, 45, 51, 67-69, 71, 76-77,  
 102, 113, 136, 157, 159-160, 166, 171-177,  
 189, 191-192, 205, 220, 228  
 photography 36-37, 177-179, 181,  
 184-185, 187  
 recovery of body fluids and 173, 179,  
 209

tissue from 60-61, 64-65, 73, 180-181,  
 189-190, 203, 209  
 Video taping, Video tapes 39-44  
 authentication 40  
 duplicating 39, 42-43  
 not recommended as exclusive 40  
 procedures 40-41  
 submitting 42-43  
 usefulness 17  
 Video recordings  
 audio slate 40, 240  
 crime scenes, of vii, 3, 39-42  
 criminal investigations, in 39  
 interviews and interrogations, of 39  
 labeling 40  
 Laboratory examinations of 39-40  
 sealing 43-44  
 uses of 39  
 viewing 43  
 write protecting 42-43  
 Vitreous humor 202, 210  
 autopsy recovery 202  
 Vomit 209  
 as biohazard 236  
 DNA analysis 60, 62, 64-65

## W

Water 62, 110-111, 169  
 dilution of urine samples 200-201  
 distilled, used in Biological Specimens 239  
 kit 237-239  
 drying wet clothing 157  
 evidence packaging, and 5-8, 68-69  
 metal immersed in 75  
 mixing dental plaster, in 90-91, 93, 95  
 Wood 87, 135, 139, 141, 157, 165, 189, 193  
 evidentiary value 163  
 sawdust adhering to shoes 163  
 submission procedure 163  
 Wound areas  
 autopsy procedure 179-181  
 autopsy recovery 179-181  
 photography at autopsy 179

## X

X-rays 28  
 autopsy 177, 179  
 dental identification 187, 189-195  
 to locate dislodged teeth or  
 fragments 189  
 unknown deceased identification 185, 187

## Y

Y chromosome DNA 57-58  
 STR testing 59