## **Source codes:**

**BS:** Bernard Spilsbury\*

CCA: Celebrated Criminal Cases of America

**COU:** Crime Out of Hand **DP:** The Detective Physician

**DLM:** The Doctor looks at Murder\*

**DMTT:** Dead Men Tell Tales **EXM:** Exhumation of a Murder\* **EOM;** Elements of Murder\*

FCSC: Forensic Chemistry and Scientific Criminal Investigation

**FOF:** Father of Forensics\*

LMT: Legal Medicine and Toxicology\*

PM: Poison Mysteries\*
POP: Power of Poison\*
PT: The Poison Trail
SNY: Sins of New York

STC: Science and the Criminal\*

**SVC:** Science versus Crime **TAC:** 12 Against Crime

**TH**: Thunderstruck

## **GUIDE SECTION**

Accidental poisonings: SVC-166 (roach powder mistaken for flour?)

Aconite – Lamson; Perley Mordecai, dentist who put aconite in filling, SVC-158; history and superstition (queen mother of poisons, wolf's bane), PM-70-71, untraceable in body, Lamson –PM-71-72

Alkaloidal poisons – (morphine, strychnine, etc.) chapter by Prescott and Webster in LMT, 416-602, includes biologic tests, testing in dogs and frogs, cases

Alcohol - LMT-604-626 (in Gettler chapter, includes methyl, ethyl and higher alcohols, toxicity, tests, etc.); prohibition act –978-982

Analysis – Marsh tests, etc, EOM-149-151;

Antimony – Smethurst trial, problems of proof (POP-37); EOM-197-257 (section), includes toxicity (197), in body, 198-199, in medicine, 200-208; as poison, 218; poisoners, including Palmer, Pritchard, Bravo, and Chapman (all pre 1900); history and

<sup>\*</sup> book in personal library

superstition-PM-98-100, 337-344 (Chapman, includes detailed list of poison in body parts);

Armstrong (1921) – BS-126-147, jars of body parts, BS-141; spilsbury on witness stand, BS-143; FOF-98-120 (willcox analysis, spilsbury on stand), PM-385-400 (with willcox and spilsbury testimony); EXM (Details of trial, grisly description of digging up his wife, of suspicious chemist who researches the poison himself, the role of the local doctor in getting police involved, Willcox and Spilsbury's work, and the effect of the poisonings on all involved.)

Arsenic – Smith trial, Maybrick trial (household use of arsenic, enough to poison 50) POP-27-32; evidence of (POP-46); uses of arsenic, arsenic eaters, 1889 Maybrick trial (POP-140-144); Mrs. Archer-Mulligan, CT, killed inmates in nursing home to underwrite church organ (SVC-158-159); body preservation, seddon, BS-65; estimate of arsenic in body, BS-63; detection of (Armstrong case, BS-134); mercy killing, BS-220; Sydney-Duff mystery, BS-249-254 (doctors never think of poison); Armstrong autopsy, arsenic as "lethal mimic", arsenic in hair FOF-110-114; Arsenic section- EOM-93-103; in the body, EOM-95; tolerance, EOM-102; medicinal, EOM-104; colorless, tasteless, EOM-139; Maybrick, EOM-171-193 (review of trial); attempt to assassinate head of Scotland Yard, 1922- PM-195; poisoned coffee at party, kills two, 1911, Dalkeith, England, PM 369-369-371; Edward Black kills wife in Cornwell, 1921, Willcox testifies about amount in body, PM-381-384; SNY-163-178 (1916, Arthur Waites kills in-laws for inherit money, pretends to be a doctor); DLM-as popular murder tool, easy availability (list of sources) 160-164; clinical symptoms-PT-38-41, 43-45 (arsenic murder of Lizzie Cook, body exhumed in Boston), 59, 278-281 (arsenic as primary murder tool); arsenic in nature-281-284; arsenic absorbed into body 284-286; CCA-133-138 (Cornelia Botkin, poisoned candy, 1898, believed to have influenced Molineux); Martha Bowers, killed husband, 1903, CCA-158-160; DP-56 (famous arsenic trials, includes calculation of poison in organs); 145 (Greenwood case0, 208 Pace case (arsenic in sheep dip, wife tried but not convicted), LMT-207-263 (poisoners, types of arsenic, symptoms, acute and chronic poisoning, fatal period, post mortem appearance, arsenic eating, normal exposure; LMT-781-784 (in industrial poison chapter, arsenic trioxide);

Arsenic Murder Ring (Philadelphia, 1930s)- EOM-145

Acquiring poison – Lamson, Vaquier, Crippen, Seddon (POP 87-114); SVC-162 (cynanides in photography and jewelry trade; oxalic acid in metal polish and hatcleaning, cyanide of mercury in Prussian Blue paint); Fowler's solution- PT-289-290

Autopsy – LMT-36-39; LMT-78-122 (organ by organ)

Barbituates – PD-254-275; LMT (Gettler chapter, Barbital)

Behavior of poisoners, evidence of amorality: Armstrong case, pattern, Neill Cream, Lamson, Seddon, Vaquier (POP 47-620

Carbolic acid- LMT (Gettler chapter) 701-708 (poisoning with cleaning solution)

Carbon Monoxide – TAC-12-15 (Gonzales solves family death, exonerates husband in NYC), 67 (Gettler studies CO levels in blood to solve case); DLM-249, Trapia case (girlfriend dies of CO, thinks killed her, chops up body and dumps pieces in river, Norris solves (DLM-272-2760; LMT – see illuminating gas;

Chloroform – Bartlett trial (POP 25-16, 193-212); TAC-60-62 (Gettler works out chloroform toxicity to solve murder case); Rice murder, buggled-DLM-171; CCA-635-640 (Rice murder); LMT-639-650 (Gettler chapter, tests, cases, etc.)

Circumstantial evidence – POP 13-15

Coroners: history of profession, problems in early 20<sup>th</sup> century with corruption, specific New York examples (DLM-13-34)

Crippen – BS-39-54; FOF-7-32; DMTT-86-101 (includes look at Smethurst case and errors, Willcox and critical look at Spilsbury); TM-306 (rotting body); DP- 23-33 (includes tests of hyoscine, pieces of body divided into jars, melting point problems in testimony with older methods, cat tested tested named Crippen) – Crippen possed the little knowledge that is dangerous, preserved viscera by using quicklime)

Curare – BS-97

Cyanide – Knickerbocker club case, killer Roland Molineux, poison in candy and medicine, (1898)- PN-329-332; poisoned chewing gum case (1911), Cumberland, MD,;Grace Loeser and Mr. Trigg, pre-marriage deaths, PM-332-334; STC-116-118 (1907, Brinkley, England, kills couple with cyanide in beer); PT-250-277 (boos declares most effective poison, Jessie Costello case (1934, brief mention, acquitted of killing husband, describes tests in body), clergyman killer, scientist mixes with lemonade to commit suicide; woman receives poisoned wine and dies; the mercier case (1924), husband kills wife with cyanide in Pittsfield, MA; LMT-674-691 (Gettler chapter, includes case studies, tests, detection in blood, and sources, including fruit);

Death certificates – doctors' complicity (POP 114-137); BS-71 (veronal, hostile doctor); BS-251 (Sydney-duff case), FOF-186-187 (Sydney-duff)

Detestable nature – judge's comments in 1924 Vauier trial (POP-11)

Diagnosis – LMT-24-28; chemical analysis (LMT-39-68 (includes various tests and tables on poisonings in NYC and Chicago, 1918-1980)

Digitalis – PT-144-146; LMT-743-748 (Gettler chapter)

Dose – EOM-xiii

Early toxicology – POP 21-23 (blandy and palmer trials); SVC 159-160

Expert testimony, faith in science – more than 50 scientists called in Palmer trial (POP 37); no one can escape toxicologist (SVC-157, 169); note see SPILSBURY; STC-19-20 (arsenic error by scientist in Smethurst trial); COU-88 (limerick parody); advice on testimony, DLM-210-224 (sparring with lawyers); errors in Maybrick and Smethurst trials (FCSC-281)

Gas deaths – carbon monoxide, illuminating gas, cynanogen – DLM-256-261 (includes idea for murdering with dry ice)

Gettler, Alexander – SVC 161-166 (includes description of lab, Gettler, interview, some cases, some poisons, started in 1918); DMTT-123; TAC-59-77 (chapter, "The Professor Looks at Murder", chloroform case, bio, comparison with Norris, drowning study, CO study, fake suicide with cyanide, nurse accidentally kills baby with insecticide, poisoned pancakes, Starr Faithfull, Radium girls, advice to police in searching for poisons); DLM-55-analysis of brain for alcohol; tests 33,000 bodies for poison-165; alcohol in brain-167; faked accident, really poison suicide-170; drowning studies, drowned dogs-DLM-253

Ground glass – LMT-888-897 (Haines chapter)

Hemlock – LMT-487-495;

History of forensics, general - FOF-1-6; EOM-149; DMTT- 18-22; COU-55-87 (toxicology in Britain, includes Taylor, Pepper, Luff, Willcox, Spilsbury, operation of laboratory and tests)

History of forensics, US – DMTT-119-125 (includes fight to create professional medical examiners, Magrath, Norris, Gettler and chauffer (Charlie Lieberman)); TAC-10-13 (creation of NYC office, Norris, Gonzales, political opposition), 20-23 (operation of NY autopsy, descriptions, Country Club autopsy room); DLM (focus on New York);

History of poisons – EOM-19 (arsenic, antimony); arsenic murders, EOM-141, 151-169; STC- 171205 (early poisoning trials, includes link to witchcraft, Palmer, Blandy, Lamson)

Hyde, Thomas H. – CCA-354-368 (kills Swope family with cyanide and germs)

Hyoscine – Crippen (POP 153-154); FOF-19; history and superstition (henbane), PM-75-77; Crippen case, PM-350-361; DP-79-82 (doctor kills patient with hyoscine treatment, Willcox investigates, convicted 1914)

Illuminating gas – LMT-333-336 (see also CO), 407-411

Inorganic poisons – LMT chapter-123-289 – includes suphuric acid, arsenic, antimony, carbon dioxide, carbon monoxide, hydrochloric acid, nitric acid, phosphorus, lead, mercury

Lamson – poisoned step-brother with aconitine, PM-298-302

Magrath, George Burgess – PT-39-42- description of personality and work as Boston medical examiner, acuity on job

Mass poisoners – POP-78-86; EOM-151-163 (arsenic)

Maybrick, Florence – arsenic poisoner, PM-308; EOM-171-193;

Methods of poisoning – aconite in tooth filling (SVC-158); poisoned clothes, rings, food, PM-201-217; COU-71 (poisonous ointment spread on sandwiches)

Maybrick trial -

Morphine – 1936 Waddingham trial (POP-132-137); in society- PM-239; doctor details own death, PM-240; Devereux poisonings, London, 1905 (three bodies in a trunk), PM-347-349; SNY-115 (Carlyle Harris, Columbia medical student kills wife); PT-149-65 (use in medicine, addiction, toxicity); LMT-513-546 (cases, symptoms, difficulty with Buchanen case (451) failure to detect, post mortem evidence, separation from animal tissue, deposition in the body (543), short and long term)

Motives – describes Cream, Seddon, Vaquier, Pritchard, Crippen, etc. POP 153-182

New York medical examiners – DLM (whole book); Wallenstein report, with list of problems cited with coroners, law passed for medical examiner, pp 35-44; Norris appointed, p. 45; description of daily operations, cataloguing deaths, 46-54; example of report, DLM-576, autopsy procedures-85-102; a morning in the morgue –103-120; on scene investigations-121-139, includes a number of poison suicides; accidental deaths-141;

Nicotine – LMT-554-565

Non-alkaloidal organic poisons -chapter by Hunt and Gettler, LMT-602-769 (includes alcohol, chloral hydrate, chloroform, cyanide, carbolic acid, creosote, salicylic acid, digitalis

Nitroglycerine – SNY-115 (Adolph Meyer kills friends for insurance, laces beer, produces sunstroke symptoms)

Norris, Charles – DMTT-122-123 (bio, description), 124 (opinions on investigations); TAC-9-12 (creating the office against opposition); DLM-49 (stops employee from testifying in Hauptman's defense)

Oxgang Farm poisoning – 1937, arsenic, not proven (213-235)

Poison administration – POP 45;

Poison classification – LMT-18-20

Poisoning After Death – LMT- 861-875 (absorption by corpse)

Poison culture- PT-55-59 (live surrounded by poisons); PD-233-243 (accidental poisonings with medicine, strychnine, carbon monoxide, etc.), 308-309 (arsenic epidemic due to spraying sheep and cattle); LMT-66-68 (poison tables, 1918-1920, Chicago and new York)

Poisons and effects: Gettler's list (SVC-162-163, mentions morphine/belladonna case); LMT-21-24 ( (administration, age, disease, habit)

Poison tests- PT-319-361 (lists different methods, provides sample toxicology report); FCSC-284-285, organs to be tested; 285-287, preliminary investigation 9includes making syrup, mincing), 287-291, volatile poisons such as chloroform and cyanide; 291-315, poisons extracted with solvents, including alkaloids, morphine and strychnine, aconitine, and barbiturates, animal tests, problems in Crippen trial with melting point of hyoscine, cocaine crystals, test aconitine directly on the tongue, color changes with strychnine; 315-337, metallic poisons including arsenic, antimony, mercury and copper. Error in Maybrick in naming type of arsenic (316), reinsch test, marsh test, difference in color between mirror formed by arsenic (brown-black and glistening) and antimony (black and velvety); 337-340, carbon monoxide, tests in blood, air; 346, chart listing amount of poison in famous british killins, from lamson to cream.

Seddon case – first use of Marsh test to estimate total dose (POP-18-21); BS-55-69; FOF-34; PM-362-368 (includes testimony from Spilsbury and Willcox about using poison in body to judge administration); DP-42-55 (detailed explanation of calculations of arsenic in body, of hair absorbing arsenic after death, and of use of flypaper to produce human poison);

Spilsbury, Bernard: early life (BS-17-14); academic plodder, BS-25; pathology job, BS-31; personality, BS-33, 194-196, 201; home life, BS 35, 94; quarrel at st. mary's, BS-212-123; witness, BS-51 FOF-28, 207; pro-capital punishment, BS-123; use of sheep's head (BS-161); infallibility problem, BS-174-183, FOF-152-154; the handsomest man in London, BS-187; old instruments (invention of murder bag), BS-199, FOF-148-149; behavior at crime scene, BS 203; sense of smell, BS-205; 25,000 cases, BS-209; overwork, BS-215; last days, stroke, suicide, BS-398-413, F)F-243296-307; affair with aide(?), FOF-183; Fox trial, error in strangulation analysis, FOF-202; DMTT-117 (Brides

in the Bath, drowning experiment), 141 (very critical look at testimony); COU-61 (personality description)

Strychnine – Scottish shortbread case (POP-147-148; Poison bird case (POP 149-151); Vaquier case (BS-238-246); Neill Cream case, poisoned three women, (1890s)-PM-314-317; PT-136-138 (doctors use of strychnine as medicine, accidental strychnine poisonings, including chemist error); DP-74- (poisoning of British farmer, Thomas Roberts, investigated by Willcox, initially missed by doctor, unsolved); LMT-571-588 (includes tests, cases, statistics, fatal quantity, separation from tissues, foods, stomach(584), deposition in body)

Test problems – Smethurst trial, 1859 (POP 16); toxicologist in Jessie Costello trial in Massachusetts did not know how to test for oxalic acid (SVC-159)

Thallium – EOM-361 (section), includes history, in the body, 322-325; in nature, 328; medical, 329; in homicide, 331; Martha Lowenstein case, beheaded, 331-1333; Hussein, 337; antidotes, 338-339; Graham Young, British killer in the 1950s, 341-361

Unsolved poison murders: arsenic from fowler's solution, PT-37; polish laborer in Boston, PT-287; DP-34-37 (poison in tea, strychnine death, carbolic acid poisoning, far too easy to acquire, child bought!) 38-40 (three arsenic murders in family of guide to Lancaster Castle), 107 (cyanide killing of university student, 1914); 208-217 (Pace case in 1928, husband dies of arsenic poisoning, wife tried but not convicted, Willcox cites earlier statement about Bartlett – "in the interests of science should have told us how she did it.")

Vaquier – BS-238-246

Webster, James – FOF-182; COU-67-69 (work, personality difficulties)

Willcox, William – test on cat (BS-52); estimate arsenic in body in seddon case, BS-63-65, arsenic in blood soaked hair, BS-65, BS-2-1, predicts spilsbury will work himself to death; hyoscine, FOF-19; Seddon and arsenic, FOF-35; TH-349-353 (Willcox analyses for hyoscine, uses cat, which is named Crippen); COU-60 (personality description, deliberate and slow); DP-5-11 (professional biography);83-85 (war research), 291- post 1935 career, 311- kept and displayed Armstrong's chocolates to students, 323, death;

Women poisoners – Zwanziger, Jegado, Van der Linden (POP-144)