Infanticide : Medico-Legal Aspects

From the Miracles de Nostre Dame,
The Hague Kb. 71 A 24 (from the year 1327)

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Legal Basis: Article 255, RPC
Definition and Elements

- “The killing of a child less than three days of age, whether by the parent, grandparent, or any other person.”
- **Elements:**

1. A child was killed.
2. The child was less than three days old.
3. The offender is any person (including mother or relative).
4. The child was born alive (must be proven).

Legal Basis: Article 255, RPC
Nature of the offense and who may file

- **Public Crime – Prosecuted *de oficio***
- **Any person with knowledge may file or report**
- **No need for a private complainant**

Complainant	Authority / Legal Basis
Any private citizen	Rule 110, Sec. 3, Rules of Criminal Procedure
Police or Barangay officials	Upon discovery of the infant's death
Doctors, nurses, social workers	Mandatory reporters under R.A. 7610 and R.A. 9262
Parent, guardian, or relative	May also file but not required

Legal Basis: Article 255, RPC
Prosecution process

Stage	Action and Responsible Authority	Legal Basis / Rule
1. Discovery and Reporting	Infant's body is discovered; barangay or police are notified; medico-legal autopsy is conducted to determine live birth and cause of death.	Art. 255, Revised Penal Code; R.A. 7610 (mandatory reporting).
2. Filing of Complaint-Affidavit	A sworn complaint is filed before the City or Provincial Prosecutor by any private citizen, police, or health worker.	Rule 110, Sec. 3, Rules of Criminal Procedure.
3. Preliminary Investigation	The public prosecutor examines evidence and witnesses to determine probable cause.	Rule 112, Rules of Criminal Procedure.
4. Filing of Information in Court	If probable cause exists, the prosecutor files an Information for Infanticide before the Regional Trial Court.	Rule 110, Sec. 7, Rules of Criminal Procedure.
5. Warrant of Arrest and Arraignment	The RTC issues a warrant of arrest; the accused is arraigned and enters a plea.	Rule 112, Sec. 6; Rule 116, Sec. 1, Rules of Criminal Procedure.
6. Trial and Judgment	Prosecution presents evidence — medico-legal expert testifies on live birth; court renders decision.	Rule 130, Rules of Evidence.

Legal Basis: Article 255, RPC
Evidentiary requirements

To Prove Infanticide, the prosecution must show:

1. The child was born alive.
2. The child was under three days old.
3. The accused intentionally caused death.
4. Identity of the perpetrator.

Key Evidence Presented:

- Medico-legal autopsy report (lung, cord, otic, neurological tests)
- Photographs and slides showing vital reactions
- Witness affidavits (midwife, neighbors, health staff)
- Confession or circumstantial evidence of killing

Legal Basis: Article 255, RPC
Role of the Medico-Legal Expert

- Establish live birth through physiological signs
- Identify the cause and manner of death
- Present autopsy report and expert testimony
- Correlate findings with legal definitions of infanticidedf

Evidence Often Presented:

- Autopsy photographs and diagrams
- Microscopic slides (cord, lungs, brain)
- Expert explanation linking findings to “proof of life”

Legal Basis: Article 255, RPC
Penalties and Related Offenses

Circumstance	Crime	Penalty
Infant < 3 days old killed	Infanticide	Reclusion perpetua to death
Mother kills to conceal dishonor	Infanticide (mitigated)	Reclusion temporal
Infant > 3 days old killed by parent	Parricide	Reclusion perpetua
Death before complete delivery	Abortion	Reclusion temporal
Neglect leading to death	Child abuse / reckless imprudence	Under R.A. 7610

Psychological Factors

- Postpartum psychosis (~1 per 1000 births)
- Postpartum depression and psychological distress
- Cognitive disorganization, delusions, impaired judgment

Social & Cultural Drivers

- Concealment of dishonor (explicit in Art. 255)
- Poverty, abandonment, intimate-partner violence
- Lack of social support or access to healthcare

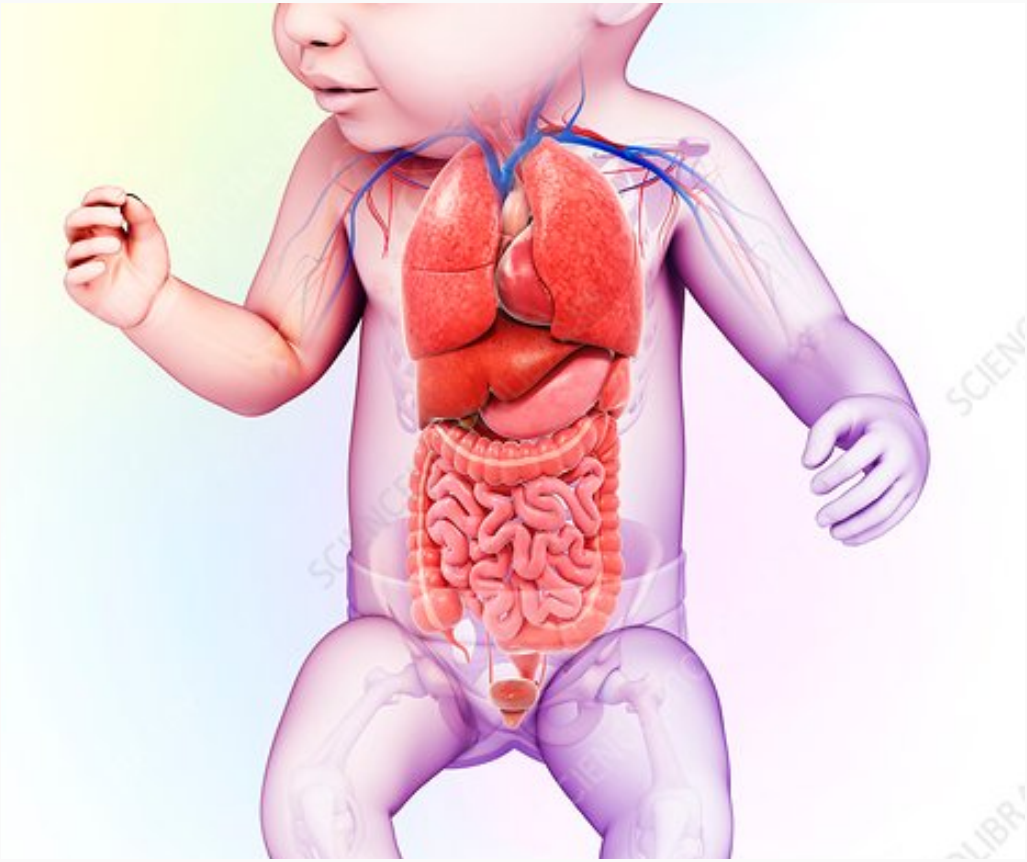
Statistical Context

- No dedicated national infanticide database
- PNP 2023: ≈ 17 600 child-abuse cases (not disaggregated)
- PSA & UNICEF data → health, not criminal figures

Distinguishing Live Birth vs Stillbirth

- Breslau's First and Second Lift Tests
- Hydrostatic (Lung-Float) Test
- Histological (Microscopic) Test of Lung Tissue
- Ploucquet's Test
- Circulatory Test
- Umbilical and Placental Signs
- Otic (Ear) and Neurological Tests

Breslau’s First and Second Lift Tests



Science Photo

Breslau's First and Second Lift Tests
Introduction and Purpose

- Named after German physician Breslau (19th century).
- Used to determine whether a newborn had breathed after birth.
- Serve as anatomical tests performed before the hydrostatic test.
- Observe lung expansion and diaphragm position as indicators of respiration.

Breslau's First and Second Lift Tests
Principle and Physiologic Basis

- Before respiration → lungs small, dense, unexpanded → diaphragm high.
- After respiration → lungs expand, push diaphragm downward.
- Lung buoyancy and diaphragm position reflect aeration and elasticity.

Breslau's First and Second Lift Tests

Breslau's First Lift Test

Step	Observation	Interpretation
Open thorax, leave lungs and heart in situ. Gently lift lungs upward with forceps.	Diaphragm moves upward → lungs heavy and unexpanded.	Stillbirth (no respiration)
	Diaphragm remains fixed → lungs elastic and expanded.	Live birth (respiration occurred)

Breslau's First and Second Lift Tests

Breslau's Second Lift Test

Step	Observation	Interpretation
Remove heart and lungs together (heart–lung block) and place in water.	Lungs float, heart sinks → lungs aerated.	Live birth proven
	Lungs and heart sink together → lungs unaerated.	Stillbirth

Breslau's First and Second Lift Tests

Breslau's Second Lift Test

Step	Observation	Interpretation
Remove heart and lungs together (heart–lung block) and place in water.	Lungs float, heart sinks → lungs aerated.	Live birth proven
	Lungs and heart sink together → lungs unaerated.	Stillbirth
Stomach–Intestinal Float Test	Stomach and instestines in water floats → infant swallowed air	Live birth proven
	Stomach and instestines in water sinks → infant did not swallow air	Stillbirth

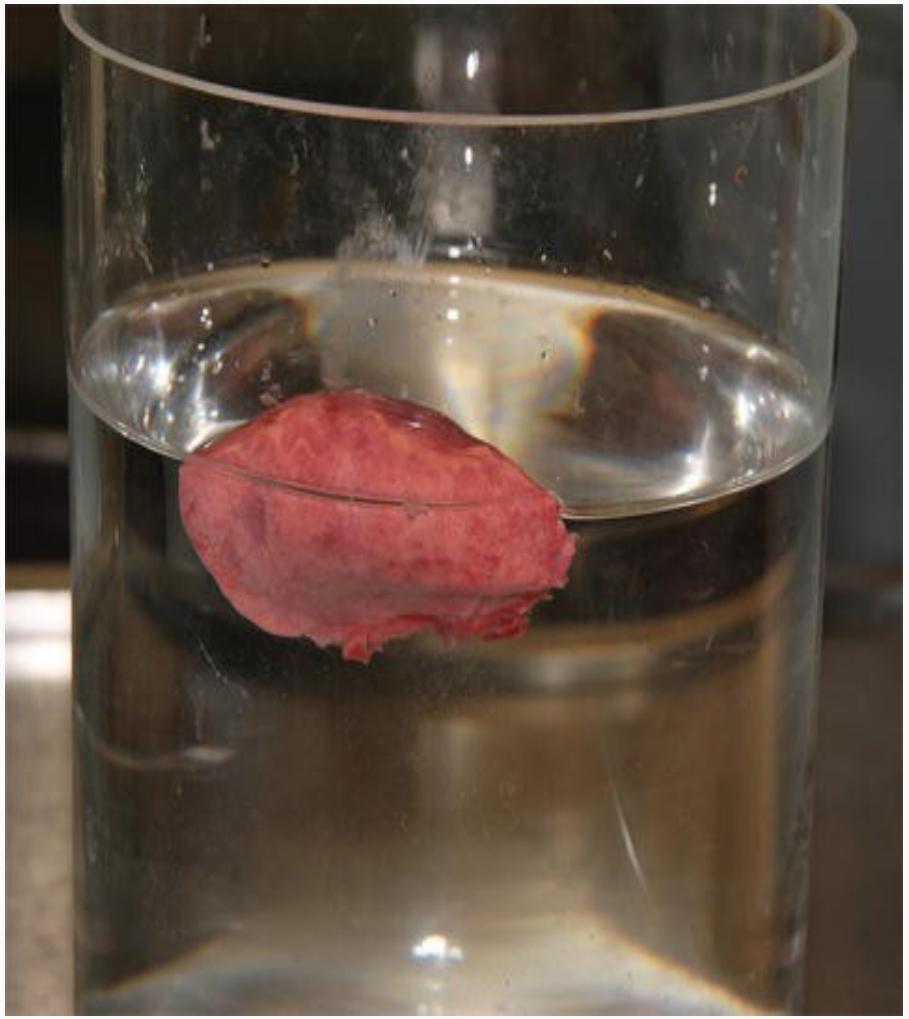
Breslau's First and Second Lift Tests
Medico-Legal Significance

Aspect	Description
Purpose	Quick anatomical test to show respiration.
Basis	Lung expansion and diaphragm displacement after breathing.
Legal Relevance	Supports proof of live birth (Art. 255, RPC).
Value	Simple, immediate indicator before hydrostatic test.
Limitations	Decomposition gases or artificial inflation may cause false results. Must correlate with other tests.

Breslau's First and Second Lift Tests
Summary

Test	Main Indicator	Inference
First Lift Test	Diaphragm stationary when lungs lifted	Respiration occurred
First Lift Test	Diaphragm rises with lungs	Stillbirth
Second Lift Test	Lungs float, heart sinks	Live birth
Second Lift Test	Lungs and heart sink together	Stillbirth

Hydrostatic (Lung-Float Test)



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Hydrostatic (Lung Float Test)
Scientific Basis

- Based on aeration of lungs after respiration
- Aerated lungs → less dense → float in water
- Unaerated lungs → denser → sink

Hydrostatic (Lung Float Test)
Procedure and Interpretation

1. Remove lungs intact during autopsy.
2. Immerse whole lungs, then each lobe.
3. Observe if they float or sink.

Result	Interpretation
Float	Probable live birth
Sink	Stillbirth / no respiration

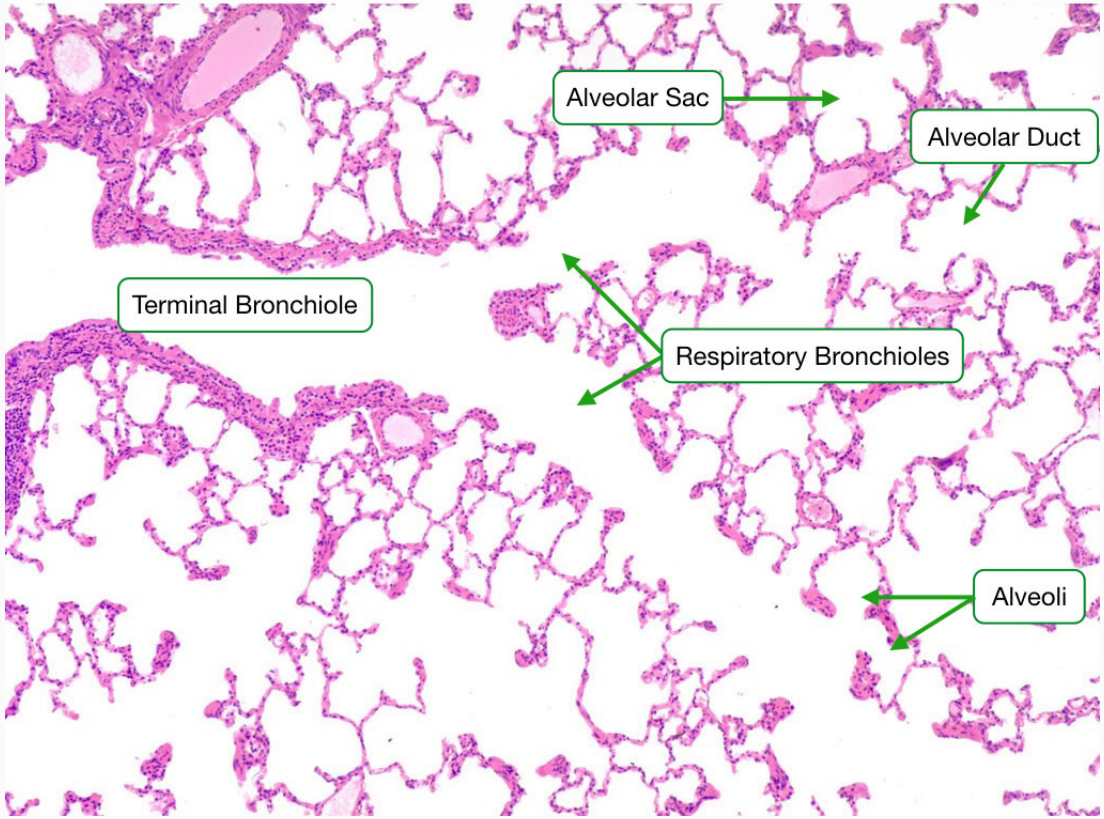
Springer Link

Hydrostatic (Lung Float Test)
Limitations and Sources of Error

Error Source	Effect	Explanation
Decomposition	False positive	Putrefaction gases make lungs float
Artificial respiration	False positive	Introduced air mimics breathing
Prematurity/disease	False negative	Lungs fail to expand fully
Partial respiration	Mixed	Some lobes float, others sink

Histological (Microscopic) Test of Lung Tissue

Lung Tissue



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Histological (Microscopic) Test of Lung Tissue
Purpose and Principle

- Confirms whether an infant breathed after birth
- Examines alveoli under microscope for air expansion
- Based on microscopic *docimasia* — proof of respiration
- Key medico-legal tool in proving live birth

Histological (Microscopic) Test of Lung Tissue

Microscopic Findings

Feature	Stillborn (No Respiration)	Live-born (Respired)
Alveoli	Collapsed, compact	Expanded, airy, irregular
Septal walls	Thick, close together	Thin, stretched
Gross color	Dark red-purple, solid	Pink, spongy
Capillaries	Minimal aeration	Engorged, active
H&E appearance	Dense eosinophilic tissue	Many pale empty spaces

Histological (Microscopic) Test of Lung Tissue

Unexpanded and Expanded Alveoli

Unexpanded lung

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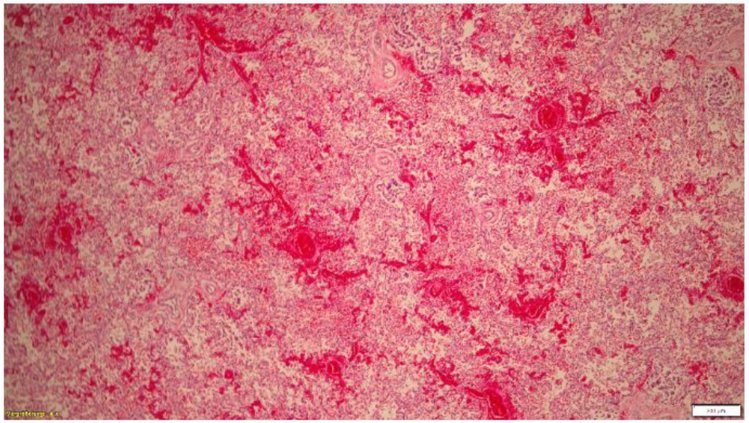

Partially expanded lung

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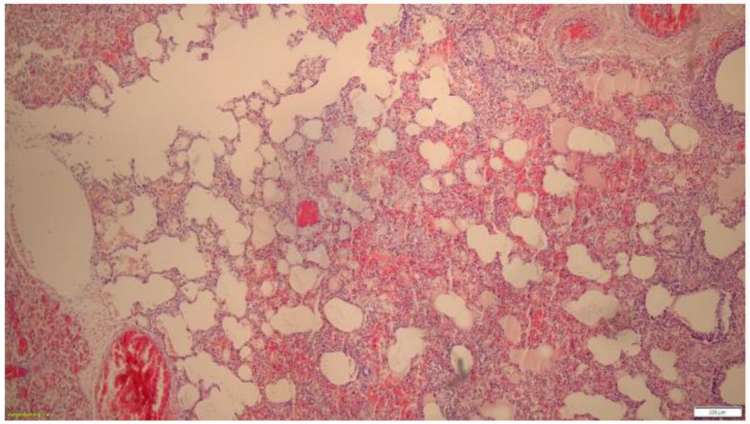

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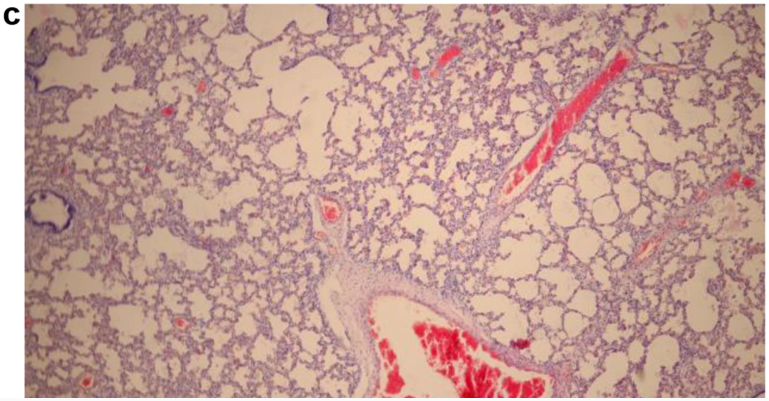


Fully expanded lung

Histological (Microscopic) Test of Lung Tissue
Supporting and Limiting Factors

Supporting clues

- Air in bronchioles, ducts, and alveoli
- Leukocytes or macrophages in alveolar spaces → vital reaction
- Cord drying & inflammation (confirmatory)

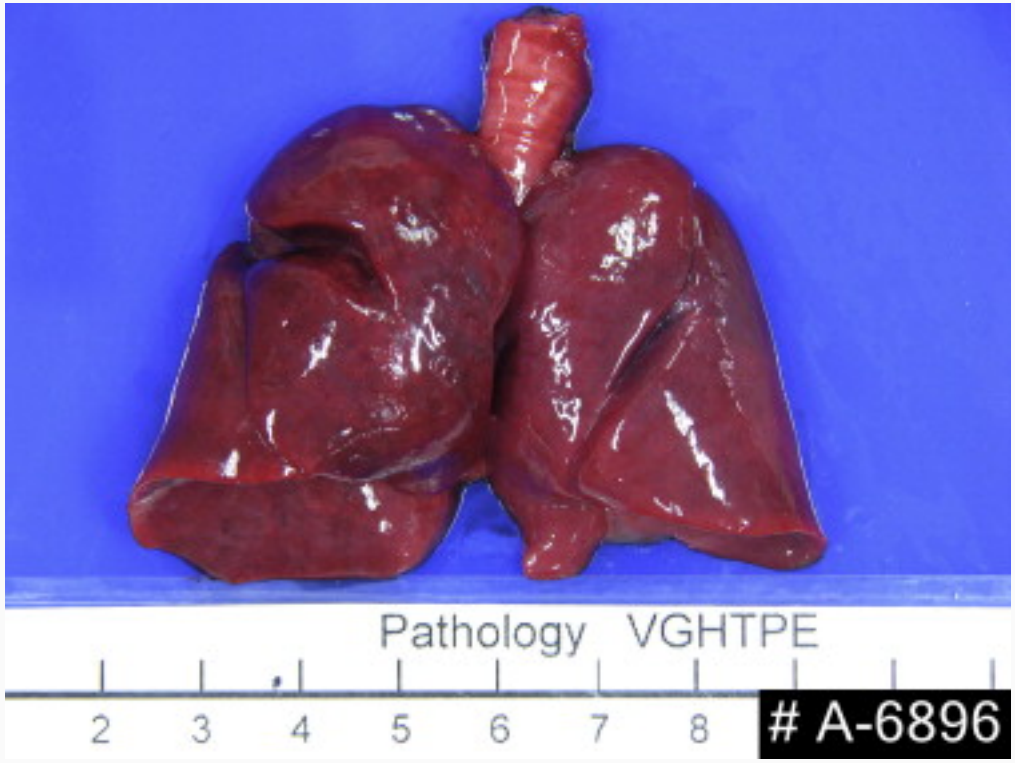
Limitations

- Prematurity: incomplete alveolar development
- Partial respiration: some lobes aerated only

Histological (Microscopic) Test of Lung Tissue
Medico-Legal and Evidentiary Value

- Most confirmatory test for respiration
- Not affected by decomposition or resuscitation
- Used by NBI / PNP medico-legal officers in infanticide cases
- Accepted by courts (People v. Adalia, 2020)
- Supports element of live birth (Art. 255, RPC)

Plocquet's Test



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Ploucquet's Test
Purpose and basis

- Also called the "Lung Density Test" or "Relative Weight of the Lungs" Test
- Developed by Johann Friedrich Ploucquet (1780s)
- Determines if infant breathed after birth
- Based on lung-to-body weight ratio
- Aerated lungs = lighter, larger proportion of body weight

Ploucquet's Test
Procedure, Calculation, and Interpretation

1. Weigh the entire infant at autopsy.
2. Remove and weigh both lungs together.
3. Compute:
   Ploucquet's Ratio=Weight of lungs/Body weight

Interpret results:

Ratio	Interpretation
1:35 or higher	Respired (live-born)
1:70 or lower	Stillborn (no respiration)

Ploucquet's Test
Medico-Legal Significance

- Provides quantitative evidence of respiration
- Supports hydrostatic and histologic tests
- Useful when results are equivocal or decomposed
- Helps prove live birth (Art. 255, RPC)

Ploucquet's Test
Limitations

- **Gestational age:** premature lungs weigh less
- **Decomposition:** gas alters weight
- **Pulmonary disease:** edema or infection increases weight
- Always correlate with:
  - Microscopic alveolar expansion
  - Air in stomach/intestine
  - Cord inflammation & vital reactions

Ploucquet's Test
Evidence to Present in Court

- **Autopsy report:** lung & body weights, computed ratio
- **Lab worksheet:** scale readings & calibration
- **Photographs:** lungs, weighing process
- **Expert testimony:** explains ratio and physiology
- **Reference texts:** Knight's and DiMaio's Forensic Pathology

Fodere's Test

Lung Specific Gravity Test

Fodere's Test
Origin and Purpose

- Developed by François-Emmanuel Fodéré (1764–1835)
- One of the earliest forensic tests for proof of live birth
- Also called the "Lung Specific Gravity Test"
- Measures density difference between aerated and unaerated lungs
- Confirms if the infant breathed after birth

Fodere's Test
Principle and Scientific Basis

Condition	Lung Density	Behavior in Water	Inference
Non-respired (stillbirth)	> 1.000 (heavier than water)	Sink	No respiration
Respired (live birth)	< 1.000 (lighter than water)	Float	Infant breathed

Fodere's Test
Procedure

Step	Description
1. Weigh the lungs in air	Carefully remove both lungs and record their dry weight.
2. Weigh in water	Suspend the lungs in water to measure buoyancy (apparent weight loss).
3. Compute specific gravity	SG = Weight in air ÷ Loss of weight in water.
4. Compare with 1.000	If < 1.000 → aerated lungs → proof of life.

Fodere's Test
Interpretation and Medico-Legal Value

Finding	Interpretation / Legal Significance
SG < 1 (lungs float)	Aerated lungs → respiration occurred → live birth proven
SG > 1 (lungs sink)	Lungs unaerated → stillbirth
Mixed result	Partial respiration or artificial inflation; must correlate with other findings.

Fodere's Test
Limitations and Court Evidence

Limitations:

- Decomposition gases may cause false floating.
- Artificial inflation can mimic respiration.
- Lung disease or prematurity alters density.
- Requires precise measurement instruments.

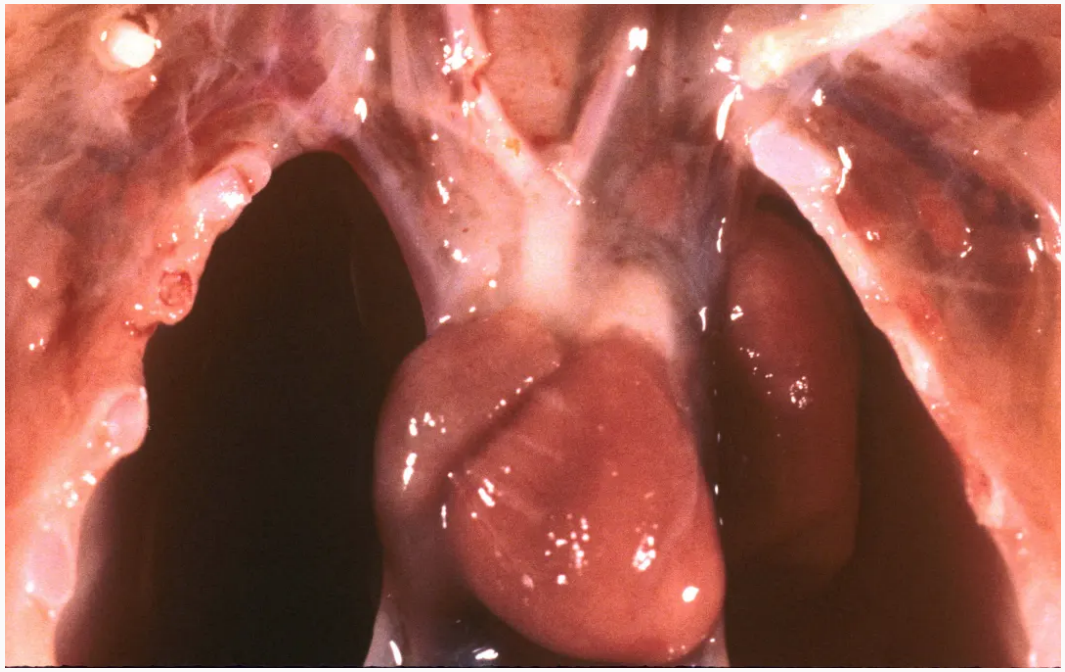
Court Evidence:

- Autopsy report with lung weights and SG computation.
- Photographs showing floating or submerged lungs.

Fodere's Test
Summary

Aspect	Description
Principle	Determines lung density vs. water (specific gravity).
Purpose	To confirm that the infant breathed and lived after birth.
Key Indicator	SG < 1 → aerated lungs → live birth.
Legal Value	Quantitative support for hydrostatic test; admissible evidence.
Limitations	Decomposition gases, artificial inflation, disease.

Circulatory Test



The Autopsy Book

Circulatory Test
(Heart–Blood or Vascular Test of Life)

- Based on proof of blood circulation after complete birth
- Confirms that the heart beat and pumped blood independently
- Supports evidence of respiration and live birth
- Used in infanticide investigations (Art. 255, RPC)

Circulatory Test
Physiologic Basis

First breath triggers:

- Expansion of lungs
- Opening of pulmonary circulation
- Closure of fetal shunts (foramen ovale, ductus arteriosus)

- Circulated blood becomes oxygenated (bright red)
- Deoxygenated blood in stillbirths remains dark and uncoagulated

Circulatory Test
Procedure and Findings

Step	Finding	Interpretation
1. Open thorax	Firm fibrin clots in heart	Circulation occurred
2. Inspect vessels	Bright red blood	Oxygenated – live birth
3. Examine organs	Lividity in skin or viscera	Gravity pooling after circulation
4. Check cord	Clot at stump	Vital reaction, active detachment

Circulatory Test
Medico-Legal Value and Limitations

Value:

- Supports proof of life after birth
- Corroborates lung and cord findings
- Admissible as expert testimony and autopsy report evidence

Limitations:

- Clots may form postmortem if death occurred intrapartum
- Lividity may appear even after intrauterine death

Must correlate with:

- Hydrostatic and histologic tests

Circulatory Test
Evidence Presented in Court

- Autopsy report → heart findings, clotted blood, organ color
- Photographs → heart chambers, lividity patterns
- Microscopy (optional) → red cell aggregation or fibrin
- Expert testimony:
  - Explains physiology of circulation
  - Correlates with lung and cord findings

Circulatory Test
Summary Table

Indicator	Finding in Live-born	Finding in Stillborn
Heart blood	Clotted, fibrinous	Fluid, dark
Organ color	Pink to reddish	Deep blue-purple
Lividity	Present	Absent
Cord stump	Drying, blood clot	Fresh, unreactive
Medico-legal value	Supportive of life	Suggests intrauterine death

Umbilical and Placental Signs of Live Birth

Americord

Umbilical and Placental Signs of Live Birth
Purpose and Principle

- Detect vital reactions (drying, inflammation, vascular change) in cord & placenta
- Show that separation from mother was biologic, not post-mortem
- Help establish proof of live birth in infanticide (Art. 255 RPC)

Umbilical and Placental Signs of Live Birth
Procedure, Observations, and Interpretation

Step / Procedure	Observations (Macroscopic & Microscopic)	Interpretation / Medico-Legal Meaning
1. External inspection of umbilical cord stump	Cord is dry, shriveled, and brownish crusted; edges retracted and leathery	Exposure to air and dehydration occurred → infant lived after birth
	Cord is moist, soft, gelatinous, fresh in appearance	No postnatal drying → likely stillbirth or death immediately after delivery
2. Measurement of cord length and rupture or clamp site	Normal length (≈ 5–7 cm from umbilicus) with smooth retraction or clean cut	Vital separation after delivery; cord severed while circulation active
	Irregular tear or jagged end, no retraction	Post-mortem rupture or traumatic separation

Umbilical and Placental Signs of Live Birth
Procedure, Observations, and Interpretation

Step / Procedure	Observations (Macroscopic & Microscopic)	Interpretation / Medico-Legal Meaning
3. Examination of umbilical vessels (gross)	Vessels collapsed and contain clotted blood	Circulation and coagulation occurred → evidence of life
	Vessels engorged with fluid, dark blood	Blood did not circulate or clot → fetal death before respiration
4. Histologic section of cord stump	Neutrophil / macrophage infiltration in Wharton's jelly and vessel walls	Vital reaction → living tissue response after birth
	No inflammatory cells; autolytic change only	No biologic response → death before circulation

Umbilical and Placental Signs of Live Birth
Procedure, Observations, and Interpretation

Step / Procedure	Observations (Macroscopic & Microscopic)	Interpretation / Medico-Legal Meaning
5. Placental examination (maternal & fetal surfaces)	Normal detachment plane, clotted blood at insertion site	Placenta separated after circulation began; supports live birth
	Fluid, non-clotted blood or decomposition of placental tissue	Indicates no active circulation at delivery (stillbirth)
6. Examination of cord stump thrombus	Fibrin thrombus present in umbilical vein or artery	Confirms that blood flow and clotting occurred postnatally
	No thrombus formation	No active circulation or coagulation → intrauterine death

Umbilical and Placental Signs of Live Birth
Procedure, Observations, and Interpretation

Step / Procedure	Observations (Macroscopic & Microscopic)	Interpretation / Medico-Legal Meaning
7. Microscopic timing indicators	Early drying (0–2 hrs) → superficial crust only; inflammation begins at 4–8 hrs	Infant survived briefly (1–8 hrs) after birth
8. Documentation for court	Photographs, autopsy notes, histology slides showing drying and inflammatory reaction	Admissible medico-legal evidence supporting proof of live birth under Art. 255 RPC

Umbilical and Placental Signs of Live Birth
Limitations

Interpretive Cautions

- Artificial drying may mimic vital reaction
- Decomposition destroys cell details
- Prematurity affects drying rate
- Inflammatory cells take hours to appear
  ➡ Correlate with lung, cord, and circulatory tests

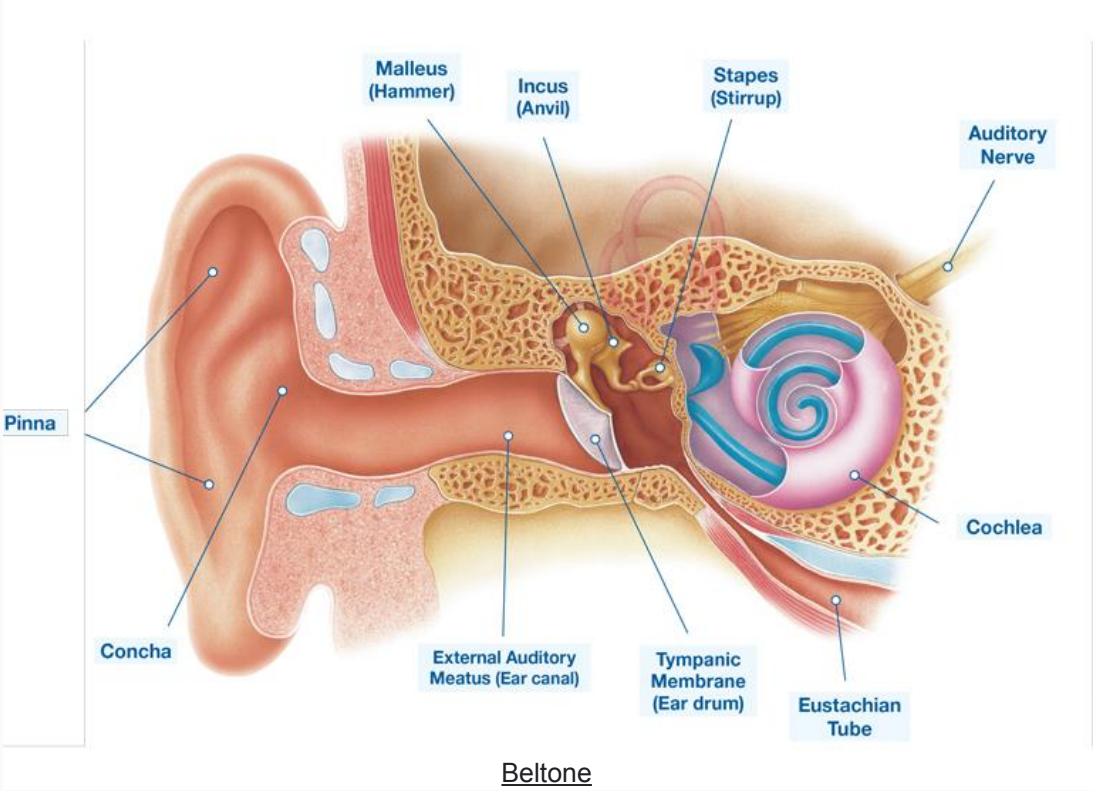
Umbilical and Placental Signs of Live Birth
Evidence Presented in Court

- Autopsy report – cord length, color, crust, clots
- Photographs – cord stump and placenta
- Histopathology slides/report – vital reaction
- Expert testimony – explains biologic response and correlation

Umbilical and Placental Signs of Live Birth
Summary

Aspect	Indicator	Interpretation	Evidentiary Value
Cord appearance	Dry / crusted	Survived post-delivery	Strong
Inflammation	Neutrophils / macrophages	Vital reaction	Confirmatory
Thrombus	In cord vessels	Circulation occurred	Supportive
Placenta	Clotted blood	Active detachment	Supportive
Limitations	Artificial drying, decomposition	False appearance	Must correlate

Otic and Neurological Tests for Determining Live Birth



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Otic and Neurological Tests
Purpose

- Supplementary tests to confirm independent life after birth
- Detect physiological reactions that occur only in a living newborn
- Otic Test → Air entry into middle ear & mastoid cells
- Neurological Test → Brain circulation, hemorrhage, or vital reaction
- Support the legal element of live birth (Art. 255 RPC)

Otic and Neurological Tests
Medical / Physiologic Basis

Test	Physiologic Basis
Otic (Ear)	Air passes from nasopharynx through Eustachian tube into middle ear when the infant breathes or cries. Air bubbles prove respiration.
Neurological	Heart and lung function send oxygenated blood to the brain; vital hemorrhage or cellular reaction shows active circulation after birth.

Otic and Neurological Tests
Procedure, Observations, and Interpretation

Procedure	Observation	Interpretation
Wreden's Test: Examine tympanic cavity & mastoid under water	Air bubbles escape	Air entered via respiration → live birth
Examine ear mucosa microscopically	Congestion, epithelial desquamation	Vital circulation → proof of life
Open skull; inspect brain	Localized subdural or intracerebral hemorrhage	Circulatory activity → postnatal survival
Histologic study of brain	RBC extravasation + macrophages	Vital reaction, indicates living tissue
No air / no reaction	Fluid-filled cavity, autolysis	Stillbirth or intrauterine death

Otic and Neurological Tests
Evidence to Present in Court

- **Autopsy Report:** ear and brain findings, description of air or hemorrhage
- **Photographs / Diagrams:** temporal bone with air bubbles, brain surface
- **Histopathology Slides:** mucosal congestion, vital hemorrhage
- **Expert Testimony:** explains how findings prove respiration & circulation

Otic and Neurological Tests
Evidentiary Value

Aspect	Assessment
Scientific Basis	Sound physiology; accepted in forensic pathology
Strength	Moderate supportive evidence of live birth
Limitations	Air may form from decomposition gases; birth trauma may cause non-vital hemorrhage
Admissibility	Accepted as expert evidence (Rule 130 §49 Rules on Evidence)
Legal Value	Corroborative, not conclusive—strengthens proof of live birth

Summary

- Infanticide remains a rare but grave offense.
- Interdisciplinary cooperation—law, medicine, psychology—is essential.
- Prevention through mental-health support and social protection.

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