Tissue Embedding and Block Banking IMPC_BLK_001

Purpose

Collect and fix a standard list of tissues from the complete necropsy (see IMPC Gross Pathology & Tissue Collection SOP)

Trim the fixed tissues into cassettes for processing

Embed the tissues in paraffin in a standard orientation

Experimental Design

Minimum number of mutant animals: 2 mutant males + 2 mutant females

Minimum age of animals: 16 weeks

Procedure

1. The following 29 tissues are collected and wet fixed at necropsy (according to IMPC Gross Pathology & Tissue Collection SOP)

Adrenal gland	Heart	Mammary gland	Skin	Thymus
Brain	Kidney	Ovary	Small intestine	Thyroid
Epididymis	Large intestine	Pancreas	Spinal cord	Trachea
Esophagus	Liver	Prostate	Spleen	Urinary bladder
Eye with optic nerve	Lung	Seminal vesicles	Stomach	Uterus
Gall bladder	Lymph node	Skeletal muscle	Testes	

2. Trim the fixed tissue into labelled cassettes for processing according to Centre-specific SOP

3. Process the cassettes according to Centre-specific SOP

4. Embed the tissues in paraffin using the orientation below:

Tissue	Number of Tissue Pieces	Embedding Orientation
Brain	Up to 5	Transverse or Mid-sagittal
Eye with optic nerve	1 (per eye)	Sagittal (optic nerve parallel to cassette surface)
	1 (per eye)	Sagittal (within skull)
Spinal cord	Up to 6	Cross
Thymus	1	Flat
Thyroid	1 (with trachea)	Cross

Heart	1	Sagittal
Trachea	1 (with thyroid)	Cross
Esophagus	1	Cross
Lung	Up to 5	Cross or Sagittal
Liver	Up to 2	Cross
Gall bladder	1 (with liver)	Cross
Stomach	Up to 2	Cross
Small intestine	3	Cross (duodenum, jejunum, ileum)
Large intestine	3	Cross (cecum, colon, rectum)
Pancreas	1	Flat
Spleen	1	Flat
Kidney	2	Cross and Sagittal
Adrenal gland	At least 1	Cross or Sagittal
Mammary gland	At least 1 (with skin)	Flat
Lymph node	At least 1	Flat
Skin	Up to 5	Cross on edge
Skeletal muscle	At least 1	Cross
Urinary bladder	1	Flat
Testes	At least 1	Flat
Epididymis	At least 1	Flat
Prostate	1	Flat
Seminal vesicles	At least 1	Flat
Ovary	At least 1	Flat
Uterus	1	Flat

Notes

The age of the animals at which they undergo this procedure is an important data. It is, however, derived from the date of birth and the date of necropsy of the animal, the latter being a metadata parameter. Similar situation applies to the number of animals that a centre has submitted to this procedure – it will also be derived and subject to quality control of the data.

Parameters

	Version	Type	Increment	Option	Derived	Unit	Data Type
Brain IMPC_BLK_010_001	1.1	simpleParameter		Blocked banked			TEXT
Eye 1 with optic nerve (optic nerve parallel to cassette surface)	1.1	simpleParameter		Blocked banked			TEXT

	Version	Type	Increment	Option	Derived	Unit	Data Type
IMPC_BLK_011_001							
Eye 2 with optic nerve (within skull) IMPC_BLK_012_001	1.1	simpleParameter		Blocked banked			TEXT
Spinal cord IMPC_BLK_013_001	1.1	simpleParameter		Blocked banked			TEXT
Thymus IMPC_BLK_014_001	1.1	simpleParameter		Blocked banked			TEXT
Thyroid IMPC_BLK_015_001	1.1	simpleParameter		Blocked banked			TEXT
Heart IMPC_BLK_016_001	1.1	simpleParameter		Blocked banked			TEXT
Trachea IMPC_BLK_017_001	1.1	simpleParameter		Blocked banked			TEXT
Esophagus IMPC_BLK_018_001	1.1	simpleParameter		Blocked banked			TEXT
Lung IMPC_BLK_019_001	1.1	simpleParameter		Blocked banked			TEXT
Liver IMPC_BLK_020_001	1.1	simpleParameter		Blocked banked			TEXT
Gall bladder IMPC_BLK_021_001	1.1	simpleParameter		Blocked banked			TEXT
Stomach IMPC_BLK_022_001	1.1	simpleParameter		Blocked banked			TEXT
Small intestine IMPC_BLK_023_001	1.1	simpleParameter		Blocked banked			TEXT
Large intestine IMPC_BLK_024_001	1.1	simpleParameter		Blocked banked			TEXT
Pancreas IMPC_BLK_025_001	1.1	simpleParameter		Blocked banked			TEXT
Spleen IMPC_BLK_026_001	1.1	simpleParameter		Blocked banked			TEXT
Left Kidney IMPC_BLK_027_001	1.1	simpleParameter		Blocked banked			TEXT
Right Kidney IMPC_BLK_028_001	1.1	simpleParameter		Blocked banked			TEXT

	Version	Type	Increment	Option	Derived	Unit	Data Type
Left Adrenal gland IMPC_BLK_029_001	1.1	simpleParameter		Blocked banked			TEXT
Right Adrenal gland IMPC_BLK_030_001	1.1	simpleParameter		Blocked banked			TEXT
Mammary gland IMPC_BLK_031_001	1.1	simpleParameter		Blocked banked			TEXT
Lymph node IMPC_BLK_032_001	1.1	simpleParameter		Blocked banked			TEXT
Skin IMPC_BLK_033_001	1.1	simpleParameter		Blocked banked			TEXT
Skeletal muscle IMPC_BLK_034_001	1.1	simpleParameter		Blocked banked			TEXT
Urinary bladder IMPC_BLK_035_001	1.1	simpleParameter		Blocked banked			TEXT
Testes IMPC_BLK_036_001	1.1	simpleParameter		Blocked banked			TEXT
Epididymis IMPC_BLK_037_001	1.1	simpleParameter		Blocked banked			TEXT
Prostate IMPC_BLK_038_001	1.1	simpleParameter		Blocked banked			TEXT
Seminal vesicles IMPC_BLK_039_001	1.1	simpleParameter		Blocked banked			TEXT
Ovary IMPC_BLK_040_001	1.1	simpleParameter		Blocked banked			TEXT
Uterus IMPC_BLK_041_001	1.1	simpleParameter		Blocked banked			TEXT
Additional tissues IMPC_BLK_042_001	1.1	simpleParameter		Blocked banked			TEXT

Metadata

	Version	Type	Increment	Option	Derived	Unit	Data Type
Experimenter ID IMPC_BLK_003_001	1.0	procedureMetadata					TEXT
Fixative IMPC_BLK_006_001	1.2	procedureMetadata		10% neutral buffer formalin			TEXT
Tissue storage ID(s)	1.1	procedureMetadata					TEXT

	Version	Type	Increment	Option	Derived	Unit	Data Type
IMPC_BLK_007_001							
Embedding medium IMPC_BLK_008_001	1.0	procedureMetadata		Paraffin			TEXT
Date of sacrifice IMPC_BLK_001_001	1.0	procedureMetadata					DATETIME
Date of necropsy IMPC_BLK_002_001	1.0	procedureMetadata					DATETIME