

Materials List for:

Sampling Strategies and Processing of Biobank Tissue Samples from Porcine Biomedical Models

Andreas Blutke¹, Rüdiger Wanke¹

¹Institute of Veterinary Pathology at the Centre for Clinical Veterinary Medicine, LMU Munich

Correspondence to: Andreas Blutke at blutke@patho.vetmed.uni-muenchen.de

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Materials

Name	Company	Catalog Number	Comments
Agar	Carl Roth GmbH, Germany	Agar (powder), Cat.: 5210.3	Dissolve approximately 1 g of agar in 10 ml cold water in a glass or plastic beaker, heat in microwave-oven at 700 W, boil the solution twice with rigorous stirring. Cast into mold while still warm and let solidify. Caution: While handling with hot liquid agar, wear protective goggles and gloves.
Caliper	Hornbach Baumarkt GmbH, Bornheim, Germany	Schieblehre Chrom/Vernickelt 120 mm Cat.: 3664902	Any kind of caliper (mechanical or electronic) will do as well.
Casting molds (metal)	Engelbrecht Medizin & Labortechnik, Edermünde, Germany	EinbettSchälchen aus Edelstahl, 14 x 24 x 5 mm, Cat.: 14302b	Any other kind of metal casting mold used for paraffin-embedding will do as well.
Copy templates of cross grids (5mm - 6 cm)	n.a.	n.a.	Copy templates of cross grids (5mm - 6 cm) are provided in the supplemental data file of Albl et al. Toxicol Pathol. 44, 414-420, doi: 10.1177/0192623316631023 (2016)
Copy templates of equiangular and cosine-weighted circles	n.a.	n.a.	Copy templates of equiangular and cosine-weighted circles are provided in Nyengaard & Gundersen . Eur Respir Rev. 15, 107-114, doi: 10.1183/09059180.00010101 (2006) and in Gundersen et al. Stereological Principles and Sampling Procedures for Toxicologic Pathologists. In: Haschek and Rousseaux's Handbook of Toxicologic Pathology. 3rd ed, 215-286, ISBN: 9780124157590 (2013).
Foldback clamps (YIHAI binder clips, 15 mm and 19 mm)	Ningbo Tianhong Stationery Co Ltd., China	Y10006 and Y10005	Any other type of standard office foldback clamps will do as well.
Forceps (anatomical)	NeoLab Migge GmbH, Heidelberg, Germany	neoLab Standard -Pinzette 130 mm, anatomisch, rund, Cat.: 1-1811	Any type of anatomical forceps will do.
Formaldehyde-solution 4%	SAV-Liquid Produktion GmbH, Flintsbach, Germany	Formaldehyd 37/40 %, Cat.: 1000411525005	Dilute to 4% from concentrated solution. Buffer to neutral pH. Wear appropriate eye-, hand- and respiratory protection. Process tissue samples fixed in formaldehyde solution under an exhaust hood and wear protective goggles and laboratory gloves.

Graph paper (for calibration)	Büromarkt Böttcher AG, Jena, Germany. www.buromarkt-ag.de	Penig Millimeterpapier A4, Cat.: 2514	Any type of graph paper (scaled in millimeter) will do.
Laboratory beakers (5ml, 10 ml, 50 ml, 100 ml)	NeoLab Migge GmbH, Heidelberg, Germany	Becherglas SIMAX® , niedrige Form, Borosilikatglas 3.3 Cat.: E-1031, E-1032, E-1035, E-1036	Any kind of glass- or plastic beakers of 5 – 100 ml volume will do.
Laboratory scale(s)	Mettler Toledo GmbH, Gießen, Germany	PM6000	Any standard laboratory scales with measuring ranges between 0.1 mg to approximately 20 g, respectively between 100 mg to approximately 500 g will do
	Sartorius AG, Göttingen, Germany	BP61S	
Microtome blades	Engelbrecht Medizin & Labortechnik, Edermünde, Germany	FEATHER Microtome blades S35, Cat.:14700	Any kind of single-use microtome blades will do.
Morphometry/planimetry software/system	National Institute of Health (NIH)	ImageJ	Download from https://www.imagej.nih.gov/ij/ (1997).
Zeiss-Kontron, Eching, Germany	Videoplan™ image analysis system	Out of stock	
Photo camera	Nikon	D40	Any kind of digital photcamera that can be mounted to a tripod will do.
Plastic transparencies	Avery Zweckform GmbH, Oberlaindern, Germany	Laser Overhead-Folie DIN A4 Cat.: 3562	Any (laser)-printable plastic transparency will do.
Random number tables	n.a.	n.a.	Random number tables can conveniently be generated (with defined numbers of random numbers and within defined intervals), using random number generators, such as: https://www.random.org/
Razor blades	Plano GmbH, Wetzlar, Germany	T5016	Any kind of razor blades will do.
Ruler	Büromarkt Böttcher AG, Jena, Germany. www.buromarkt-ag.de	Office-Point Lineal 30 cm, Kunststoff, transparent, Cat.: ln30	Any kind of cm-mm-scaled ruler will do as well.
Saline (0.9%)	Carl Roth GmbH, Germany	Natriumchlorid, >99% Cat.: 0601.1	To prepare 0.9% saline, dissolve 9 g NaCl in 1000 ml of distilled water at 20°C.
Scalpel blades	Aesculap AG & Co KG, Tuttlingen, Germany	BRAUN Surgical blades N°22	Any kind of scalpel blades will do.
Scanner	Hewlett-Packard	hp scanjet 7400c	Any type of standard office scanner capable of scanning with resolutions from 150-600 dpi will do.
Slicing devices	n.a.	n.a.	Examples for self constructed slicing devices can be found in Knust, et al. Anatomical record. 292, 113-122, doi: 10.1002/ar.20747 (2009) and in the supplemental data file of Albi et al. Toxicol Pathol. 44, 414-420, doi: 10.1177/0192623316631023 (2016).
Spherical casting molds (e.g., in 25.5 mm diameter)	Pralinen-Zutaten.de, Windach, Germany	Pralinen-Hohlkugeln Vollmilch, 25.5 mm	Spherical casting molds can as well be self-constructed, or obtained from other confectioner suppliers (for for pralines). The casting molds indicated here are actually the package/wrapping of hollow pralines bodies (first eat the pralines and then use the package for generation of i-sector sections)

Thin wire	Basteln & Hobby Schobes, Straßfurth, Germany. www.bastel- welt.de	Messingdraht (0.3 mm) Cat.: 216464742	Any other kind of thin wire will also do.
Tissue paper	NeoLab Migge GmbH, Heidelberg, Germany	Declicate Task Wipes-White, Cat.: 1-5305	Any other kind of laboratory tissue paper will do as well.
Waterproof pen	Staedler Mars GmbH & Co KG, Nürnberg, Grmany	Lumocolor permanent 313, 0.4 mm, S, black, Cat.: 313-2	Any other kind of waterproof pen will do as well.