Lab-on-a-tissue : optimization of on-tissue chemistry for improved mass spectrometry imaging

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APPENDIX

List of abbreviations

9-AA	9-aminoacridine
ACN	Acetonitrile
ADC	Adenocarcinoma
APCI	Atmospheric pressure chemical ionization
CE	Capillary electrophoresis
CEA	Carcinoembryonic antigen
CHCA	α-cyano-4-hydroxycinnamic acid
CID	Collision-induced dissociation
CMC	Carboxymethyl cellulose
COX7A	Cytochrome C oxidase 7A2
CRC	Colorectal carcinoma
CSV	Comma-separated values
Da	Dalton
DC	Direct current
DESI	Desorption electrospray ionization
DHB	2,5-dihydroxybenzoic acid
DSC	Dice similarity coefficient
DTT	Dithiothreitol
ECM	Extracellular matrix
EDD	Electron-detachment dissociation
EDTA	Ethylenediaminetetraacetic acid
ER	Endoplasmatic reticulum
ESI	Electrospray ionization
ETD	Electron-transfer dissociation
FA	Formic acid
FDR	False discovery rate
FFPE	Formalin-fixed paraffin embedded
FID	Free-induction-decay
FT	Fourier transform
FTICR	Fourier transform ion cyclotron resonance
FTMS	Fourier transform mass spectrometry
GnT-V	*N*-acetylglucosaminyl-transferase V
HCD	Higher-energy collisional dissociation
H&E	Haematoxylin & eosin staining
HEPES	4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
HG-MSI	Histology-guided mass spectrometry imaging
HIAR	Heat-induced antigen retrieval
HILIC	Hydrophilic interaction liquid chromatography
HRAM	High-resolution, accurate mass
ICR	Ion cyclotron resonance
IGF1R	Insulin-like growth factor 1 receptor
IHC	Immunohistochemistry
ILRS	Isotopically-labeled reference standard
IMS	Ion mobility separation
INT	Intermediate grade MLS
IRMPD	Infrared multi-photon dissociation
ITO	Indium-tin-oxide
LAESI	Laser ablation electrospray ionization
LC	Liquid chromatography
LESA	Liquid extraction surface analysis
LLO	Lipid-linked oligosaccharide
LMJ-SSP	Liquid microjunction surface sampling
LMS	Leiomyosarcoma
LPS	Liposarcoma
MALDI	Matrix-assisted laser desorption/ionization
MAP6	Microtubule associated protein 6
MBP	Myelin basic protein
MFS	Myxofibrosarcoma
MLS	Myxoid liposarcoma
MMP2	Matrix metalloproteinase 2
mmu	Millimass units
MRM	Multi reaction monitoring
MS	Mass spectrometry
MSI	Mass spectrometry imaging
MS/MS	Tandem mass spectrometry
MWCO	Molecular weight cut off
MYX	Myxoid MLS
m/z	mass-to-charge ratio
NETD	Negative electron transfer dissociation
NSCLC	Non-small cell lung cancer
OCT	Optimal cutting temperature
OS	Osteosarcoma
PC	Phosphatidylcholines
PEG	Polyethylene glycol
PEV	Polyethylene vinyl
pHPMA	Poly[N-(2-hydroxy-propyl)-methacryl-amide]
PIK3CA	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform
PNGase F	Peptide N-glycosidase F
ppm	Parts-per-million
PTEN	Phosphatase and tensin homolog
qTOF	Quadrupole-time-of-flight
RC	Round cell MLS
RF	Radio frequency
ROI	Region of interest
SA	Sinapic acid
SIMS	Secondary ion mass spectrometry
S/N	Signal-to-noise
SPE	Solid phase extraction
SPTN1	Spectrin-1
SqCC	Squamous cell carcinoma
STS	Soft tissue sarcoma
TCEP	Tris(2-carboxyethyl)phosphine
TFA	Trifluoroacetic acid
TG	Triglyceride lipids
TMA	Tissue microarray
TOF	Time-of-flight
TSP2	Thrombospondin-2
UPS	Undifferentiated pleomorphic sarcoma