SUPPLEMENTAL

Hydrophobic Treatment Enabling Analysis of Wettable Surfaces using a Liquid Microjunction Surface Sampling Probe/Electrospray Ionization-Mass Spectrometry System

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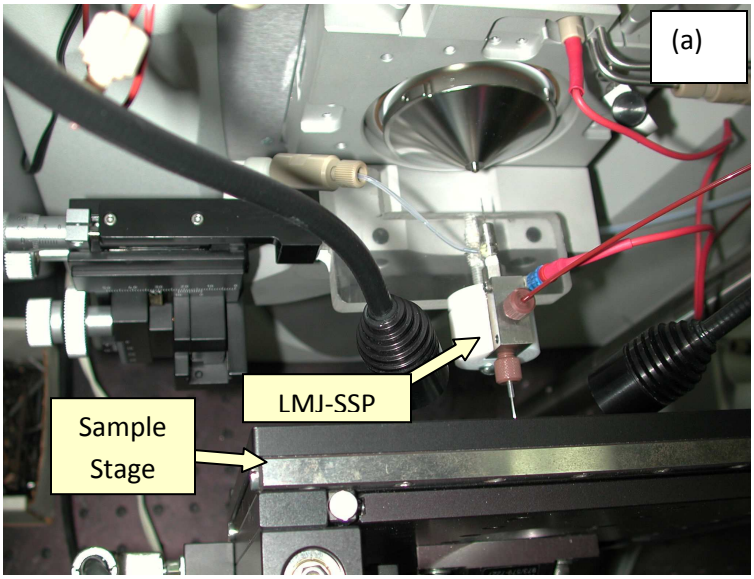
Figure S1. Photographs showing the LMJ-SSP setup on LTQ mass spectrometer. (a) Closeup view of LMJ-SSP and atmospheric pressure interface region of mass spectrometer. (b) Wide angle view of complete instrumental setup.



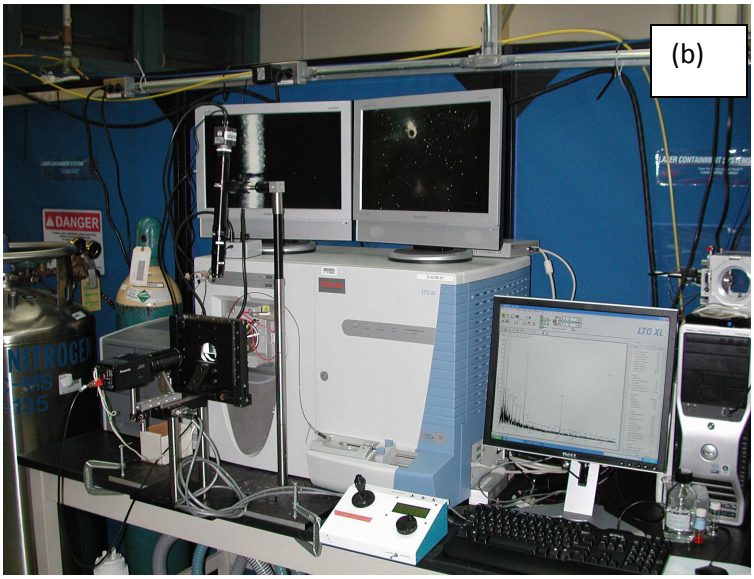


Figure S2. Multiple absorbent surface types were successfully treated to created hydrophobic character needed for successful LMJ-SSP analysis. Beading of water on surface is one test used to gauge the quality of surface treatment.

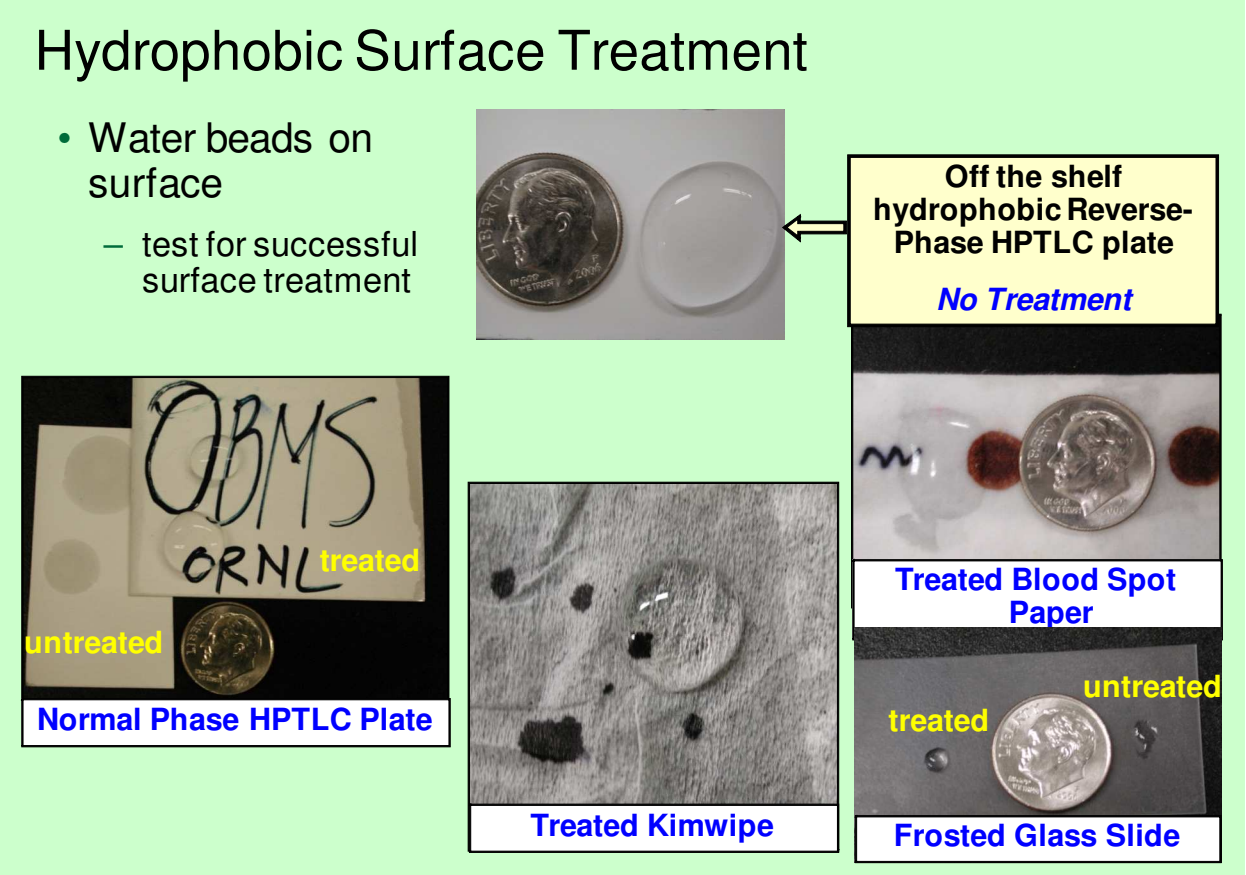


Figure S3. (a) Silicone treated kimwipe marked prior to treatment with black sharpie marker lines. (b) Extracted ion current profile for the black dye component (*m/z* 372) obtained during LMJ-SSP scan at 100 µm s^{-1} along treated kimwipe. (c) Averaged mass spectrum acquired over the line labeled (c) on the kimwipe. The extraction solvent was composed of 60/40 methanol/water (v/v). Data was acquired in full scan mode (*m/z* 150 – 2000).

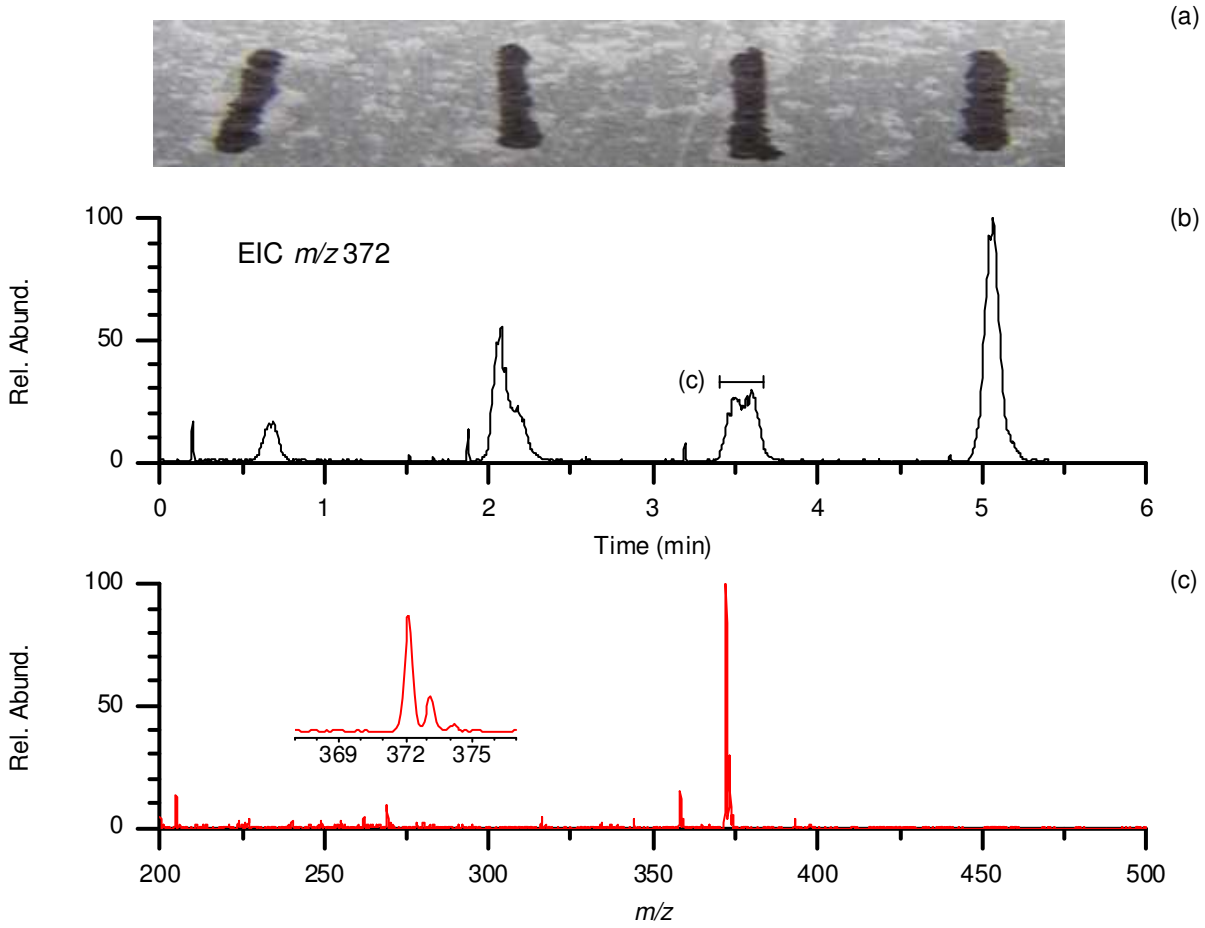


Figure S4. Representative mass spectrum of silicone polymer signal that is observed when treated surfaces are not prepared properly.

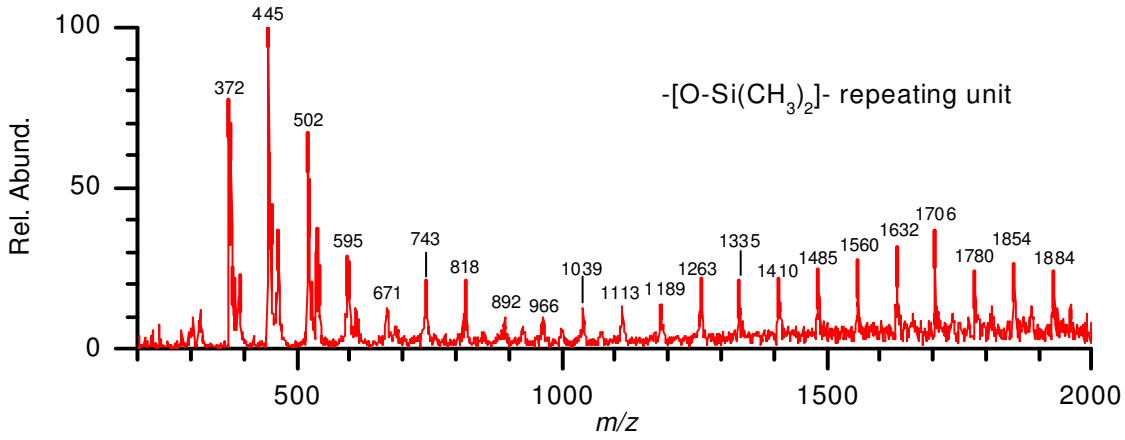


Figure S5. Peptide ID Information

Amino acids in black font and underlined was identified by MS/MS database searching. Amino acids in red font were not identified.

BSA Digest

Proteochrome HPTLC cellulose plate

MKWVTFISLLLLFSSAYSRGVFRRDTHKSEIAHRFKDLGEEHFKGLVLIAFSQYLQQCPF
DEHVKLVNELTEFAKTCVADESHAGCEKSLHTLFGDELCKVASLRETYGDMADCCEKQE
PERNECFLSHKDDSPDLPKLKPDPNTLCDEFKADEKKFWGKYLYEIARRHPYFYAPELLY
YANKYNGVFQECCQAEDKGACLLPKIETMREKVLTSSARQRLRCASIQKFGERALKAWS
VARLSQKFPKAEFVEVTKLVTDLTKVHKECCHGDLLECADDRADLAKYICDNQDTISSK
LKECCDKPLLEKSHCIAEVEKDAIPENLPPLTADFAEDKDVCKNYQEAKDAFLGSFLYEY
SRRHPEYAVSVLLRLAKEYEATLEECCAKDDPHACYSTVFDKLKHLVDEPQNLIKQNCD
QFEKLGEYGFQNALIVRYTRKVPQVSTPTLVEVSRSLGKVGTRCCTKPESERMPCTEDYL
SLILNRLCVLHEKTPVSEKVTKCCTESLVNRRPCFSALTPDETYVPKAFDEKLFTFHADIC
TLPDTEKQIKKQTALVELLKHKPKATEEQLKTVMENFVAFVDKCCAADDKEACFAVEGP
KLVVSTQTALA

Sequence Coverage 40.5%

Proteochrome HPTLC silica gel 60 plate

MKWVTFISLLLLFSSAYSRGVFRRDTHKSEIAHRFKDLGEEHFKGLVLIAFSQYLQQCPF
DEHVKLVNELTEFAKTCVADESHAGCEKSLHTLFGDELCKVASLRETYGDMADCCEKQE
PERNECFLSHKDDSPDLPKLKPDPNTLCDEFKADEKKFWGKYLYEIARRHPYFYAPELLY
YANKYNGVFQECCQAEDKGACLLPKIETMREKVLTSSARQRLRCASIQKFGERALKAWS
VARLSQKFPKAEFVEVTKLVTDLTKVHKECCHGDLLECADDRADLAKYICDNQDTISSK
LKECCDKPLLEKSHCIAEVEKDAIPENLPPLTADFAEDKDVCKNYQEAKDAFLGSFLYEY
SRRHPEYAVSVLLRLAKEYEATLEECCAKDDPHACYSTVFDKLKHLVDEPQNLIKQNCD
QFEKLGEYGFQNALIVRYTRKVPQVSTPTLVEVSRSLGKVGTRCCTKPESERMPCTEDY
LSLILNRLCVLHEKTPVSEKVTKCCTESLVNRRPCFSALTPDETYVPKAFDEKLFTFHADI
CTLPDTEKQIKKQTALVELLKHKPKATEEQLKTVMENFVAFVDKCCAADDKEACFAVEG
PKLVVSTQTAL

Sequence Coverage 60.5%

Lysosyme Digest

Proteochrome HPTLC cellulose plate

KVFGRCELAAAMKRHGLDNYRGYSLGNWVCAAKFESNFNTQA
TNRNTDGSTDYGILQINSRWWCNDGRTPGSRNLCNIPCSALLSS
DITASVNCAKKIVSDGNGMNAWVAWRNRCKGTDVQAWIRGCRL

Sequence Coverage 75.2%

Proteochrome HPTLC silica gel 60 plate

KVFGRCELAAAMKRHGLDNYRGYSLGNWVCAAKFESNFNTQA
TNRNTDGSTDYGILQINSRWWCNDGRTPGSRNLCNIPCSALLSS
DITASVNCAKKIVSDGNGMNAWVAWRNRCKGTDVQAWIRGCRL

Sequence Coverage 88.4%

Myoglobin Digest

Proteochrome HPTLC cellulose plate

GLSDGEWQQV LNVWGKVEAD IAGHGQEVLI RLFTGHPETL
EKFDKFKHLKTEAEMKASEDLKKHGTVVLT ALGGILKKKG HHEAELKPLA
QSHATKHKIP IKYLEFISDA IIHVLHSKHPGDFGADAQGA MTKALELFRN
DIAAKYKELG FQG
Sequence Coverage 98.0%

Proteochrome HPTLC silica gel 60 plate

GLSDGEWQQV LNVWGKVEAD IAGHGQEVLI RLFTGHPETL
EKFDKFKHLKTEAEMKASEDLKKHGTVVLT ALGGILKKKG HHEAELKPLA
QSHATKHKIP IKYLEFISDA IIHVLHSKHPGDFGADAQGA MTKALELFRN
DIAAKYKELG FQG

Sequence Coverage 85.6%

Beta Casein Digest

Proteochrome HPTLC cellulose plate

MKVLILACLVALALARELEELNVPGEIVESLSSSEESITRINKKIEKFQSEEQQQTEDELQD
KIHPFAQTQSLVYPFPGPIPNSLPQNIPPLTQTPVVVPPFLQPEVMGVSKVKEAMAPKHKE
MPFPKYPVEPFTESQSLTLTDVENLHLPLPLLQSWMHQPHQPLPPTVMFPPQSVLSLSQS
KVLPVPQKAVPYPQRDMPIQAFLLYQEPVLGPVRGPFPIIV

Sequence Coverage 22.3%

Proteochrome HPTLC silica gel 60 plate

MKVLILACLVALALARELEELNVPGEIVESLSSSEESITRINKKIEKFQSEEQQQTEDELQD
KIHPFAQTQSLVYPFPGPIPNSLPQNIPPLTQTPVVVPPFLQPEVMGVSKVKEAMAPKHKE
MPFPKYPVEPFTESQSLTLTDVENLHLPLPLLQSWMHQPHQPLPPTVMFPPQSVLSLSQS
KVLPVPQKAVPYPQRDMPIQAFLLYQEPVLGPVRGPFPIIV

Sequence Coverage 29.5%

Bovine Cytochrome C Digest

Proteochrome HPTLC cellulose plate

GDVEKGKKIF VQKCAQCHTV EKGGKHKTGP NLHGLFGRKT GQAPGFSYTD
ANKNKGITWGEETLMEYLEN PKKYIPGTKM IFAGIKKKGE REDLIAYLKK ATNE

Sequence Coverage 90.4%

Proteochrome HPTLC silica gel 60 plate

GDVEKGKKIF VQKCAQCHTV EKGGKHKTGP NLHGLFGRKT GQAPGFSYTD
ANKNKGITWGEETLMEYLEN PKKYIPGTKM IFAGIKKKGE REDLIAYLKK ATNE

Sequence Coverage 89.4%