

Analytical and Bioanalytical Chemistry

Electronic Supplementary Material

Metabolite extraction from adherently growing mammalian cells for metabolomics studies: Optimization of harvesting and extraction protocols

Katja Dettmer, Nadine Nürnberger, Hannelore Kaspar, Michael A. Gruber, Martin F. Almstetter, Peter J. Oefner

Table S1 Results of the Tukey range test applied to the data presented in table 3-4. For each quantified metabolite all pair wise solvent comparisons were tested for scraped and trypsinated cells. Only solvent comparisons are listed that yielded significantly different metabolite recoveries with a P-value < 0.05. Extraction solvents are coded by a letter as shown in table 3-5.

Metabolite	Scrape	Trypsin
Alanine	A:D, B:D, C:D, E:D, F:D, G:D	A:B, A:D, B:D, C:D, E:D, F:A, F:D, G:B, G:D
Glycine	A:D, B:D, C:D, E:D, F:D, G:D	A:D, B:D, C:D, E:D, F:D, G:D
Valine		
Leucine	A:D, C:D, E:D, G:D	A:D, B:D, C:D, E:D, F:A, F:D, G:D
Iso-Leucine	A:D	A:D, C:D, E:D, F:A, F:G, G:D
Proline	A:D, B:D, C:D, E:D, F:D, G:D	A:B, B:D, C:D, E:D, F:A, F:D, F:G, G:D
Asparagine		
Aspartate	A:D, B:D, C:D, E:D, F:D, G:D	
Methionine		
Glutamate	C:B, F:C	
Phenylalanine	A:D	A:D, C:D, F:D
Ornithine	A:D, A:G, B:D, C:D, E:D, F:D, G:D	A:E, B:E
Lysine	A:D, A:G, B:D, C:D, C:E, E:D, F:C, F:D, F:G, G:B, G:D, G:E	A:D, B:D, C:A, C:B, C:D, E:D, F:D, G:D
Histidine	A:B, C:B, G:B	
Tyrosine	A:B, A:D, B:D, C:B, C:D, E:D, F:A, F:C, F:D, G:D	B:D, F:A, F:D, F:G, G:B
Tryptophan		A:B, F:A, F:G, G:B
Lactate		
Succinate		A:B
Fumarate	A:E, A:G, B:E, C:E, C:G, F:A, F:B, F:C, G:B	A:E, A:G, C:G, F:A, G:B
Malate		
Citrate	A:B, A:G, B:E, C:A, C:B, C:E, C:G, F:A, F:B, F:C, F:E, F:G, G:E	A:B, A:E, A:G, C:A, C:B, C:G, F:A, F:B, F:C, F:E, F:G
Glucose	A:E, B:E, C:E, F:E, G:E	B:E, F:E
G6P	A:G, C:A, C:D, C:E, F:C, F:G, G:D, G:E	F:B, F:C, F:E, F:G
Sucrose	A:D, A:E, B:D, B:E, C:D, C:E, E:D, F:D, F:E, G:D, G:E	A:E, B:E, C:D, C:E, E:D, F:E, G:E
Glycerol-1P	A:D, A:E, B:D, B:E, C:D, C:E, E:D, F:D, F:E, G:D, G:E	A:D, A:E, B:D, B:E, C:D, C:E, E:D, F:D, F:E, G:D, G:E