

	SPCA	SPFM with directionality and steady state regularization				
Total amount of internal metabolites produce or consumed by Principal fluxes ($ Sw _1$)	42.82	38.80	23.43	8.56	0.34	
'H+ [lipid particle]'	4.7385	-0.0653	0.04688	0	0	
'H2O [lipid particle]'	-4.738	0	0	0	0	
'palmitoleate [lipid particle]'	1.2581	0	0	0	0	
'oleate [lipid particle]'	1.2581	0	0	0	0	
'palmitate [lipid particle]'	1.1112	0	-0.0469	0	0	
'stearate [lipid particle]'	1.1112	0	-0.0469	0	0	
'phosphate [cytoplasm]'	0.7115	-0.0393	-0.0469	-0.077	0	
'S-adenosyl-L-methionine [endoplasmic reticulum membrane]'	-0.462	0	0.0	0	0	
'S-adenosyl-L-homocysteine [endoplasmic reticulum membrane]'	0.4619	0	0	0	0	
'H+ [cytoplasm]'	0.387	839	0.09376	-0.077	0	
'coenzyme A [lipid particle]'	0.3719	17	0.04688	-0.077	0	
'oleoyl-CoA [lipid particle]'	-0.372	-0.045	0	0	0	
'H2O [cytoplasm]'	-0.32	-0.203	0.04688	0.2316	0.1715	
'ATP [cytoplasm]'	-0.317	-0.8209	-0.4219	0.0771	0	
'ADP [cytoplasm]'	0.224	21	0	0	0	
'carbon dioxide [cytoplasm]'	0.2193	334	0.32817	0	0	
'D-glucose [cytoplasm]'	0.1732	0	0	0	0	
'NADPH [endoplasmic reticulum membrane]'	-0.17	-0.0653	-0.1875	0	0	
'NADP(+) [endoplasmic reticulum membrane]'	0.1702	26	0.18752	0	0	
'alpha-D-mannosyl-beta-D-mannosyldiacetylchitobiosyldiphosphodolichol [Golgi]'	0.1671	0	0	0	0	
'beta-D-mannosyldiacetylchitobiosyldiphosphodolichol [Golgi]'	-0.167	0	0	0	0	
'GDP [Golgi]'	0.1671	48	-0.0469	0	0	
'GDP-alpha-D-mannose [Golgi]'	-0.167	-0.2212	-0.0469	0	0	
'H+ [Golgi]'	0.1671	44	0.04688	0	0	
'malonyl-CoA [endoplasmic reticulum membrane]'	-0.166	0	0	0	0	
'carbon dioxide [endoplasmic reticulum membrane]'	0.1662	0	0	0	0	
'coenzyme A [endoplasmic reticulum membrane]'	0.1662	0.6546	0.28128	0	0	
'H+ [peroxisome]'	0.16	284	0.75009	0.0772	0	
'carbon dioxide [mitochondrion]'	0.1525	0	0.09376	0	0	
'acetyl-CoA [cytoplasm]'	-0.151	85	0	0	0	
'coenzyme A [cytoplasm]'	0.1506	-0.0559	0	0	0	
'H2O [nucleus]'	0.127	-0.164	-0.0469	0	0	
'leukotriene A4 [cytoplasm]'	0.127	-0.164	-0.1406	0	0	
'leukotriene A4 [nucleus]'	0.127	-0.164	-0.1406	0	0	
'H+ [endoplasmic reticulum membrane]'	0.1255	36	0.2344	-0.077	0	
'biotin [cytoplasm]'	-0.123	65	0.04688	0	0	
'dethiobiotin [cytoplasm]'	0.123	-0.1586	-0.0938	0	0	
'polysulphur [cytoplasm]'	0.123	-0.1586	-0.0469	0	0	
'UDP [cytoplasm]'	0.1196	32	0.04688	0	0	
'L-aspartate [cytoplasm]'	-0.118	84	0	0.0772	0	
'6-(alpha-D-glucosaminy)-O-acyl-1-phosphatidyl-1D-myo-inositol [endoplasmic reticulum]'	-0.117	94	0	0.0772	0	

changeInMetabolites for SPFM deriving by analysisi all samples

'coenzyme A [endoplasmic reticulum]'	-0.117	0.2194	0.09376	0	0
'palmitoyl-CoA [endoplasmic reticulum]'	0.1169	-0.1509	-0.0469	0	0
'L-serine [cytoplasm]'	-0.115	32	-0.0469	-0.077	0
'coenzyme A [peroxisome]'	0.1091	-1.3602	-0.7501	0	0
'H2O [peroxisome]'	-0.109	-1.8485	-0.7032	-0.077	0
'ammonium [cytoplasm]'	-0.108	82	0.09376	0.0772	0
'UDP-D-glucose [cytoplasm]'	-0.102	-0.0004	0	0	0
'NADP(+) [cytoplasm]'	0.0965	35	-0.0469	0	0
'NADPH [cytoplasm]'	-0.096	-0.0564	0.04688	0	0
'UMP [cytoplasm]'	0.0964	23	0	0	0
'1-acyl-sn-glycerol 3-phosphate (16:0) [lipid particle]'	-0.093	84	0	0	0
'1-acyl-sn-glycerol 3-phosphate (16:1) [lipid particle]'	-0.093	84	0	0	0
'1-acyl-sn-glycerol 3-phosphate (18:0) [lipid particle]'	-0.093	84	0	0	0
'1-acyl-sn-glycerol 3-phosphate (18:1) [lipid particle]'	-0.093	84	0	0	0
'phosphatidate (1-16:0, 2-18:1) [lipid particle]'	0.093	0	0	0	0
'phosphatidate (1-16:1, 2-18:1) [lipid particle]'	0.093	0	0	0	0
'phosphatidate (1-18:0, 2-18:1) [lipid particle]'	0.093	0	0	0	0
'phosphatidate (1-18:1, 2-18:1) [lipid particle]'	0.093	0	0	0	0
'H+ [mitochondrion]'	-0.088	753	-0.1875	0.4629	0
'diphosphate [cytoplasm]'	0.0839	85	0.14064	0	0
'orotidine 5"-(dihydrogen phosphate) [cytoplasm]'	-0.082	0	0	0	0
'6-O-{alpha-D-mannosyl-(1->2)-alpha-D-mannosyl-(1->6)-2-O-[(2-aminoethyl)phosphoryl]-alpha-D-mannosyl-(1->4)-alpha-D-glucosaminy]-O-acyl-1-phosphatidyl-1D-myo-inositol [endoplasmic reticulum]'	-0.081	0.1041	0.09376	0	0
'phosphate [mitochondrion]'	-0.076	0	0	-0.077	0
'glycogen [cytoplasm]'	0.0763	0	-0.0469	0	0
'AMP [cytoplasm]'	0.0756	459	0.14064	0	0
'6-(alpha-D-glucosaminy)-1-phosphatidyl-1D-myo-inositol [endoplasmic reticulum]'	0.0745	-0.0962	0	0	0
'L-cysteine [cytoplasm]'	-0.073	-0.0477	0	0	0
'H+ [vacuole]'	-0.073	-0.2228	-0.1406	0.0772	0
'L-isoleucine [cytoplasm]'	0.0715	-0.1101	-0.0469	0	0
'L-isoleucine [vacuole]'	-0.072	0.1101	0.09376	0.0772	0
'L-leucine [vacuole]'	-0.072	0.1101	0.09376	0.0772	0
'L-tyrosine [vacuole]'	-0.072	074	0.09376	0.0772	0
'(R)-pantothenate [cytoplasm]'	-0.069	49	0	0	0
'acetate [cytoplasm]'	0.0692	-0.0559	0	0	0
'chitin [cytoplasm]'	-0.069	0	0	0	0
'chitosan [cell envelope]'	0.0692	0	0	0	0
'6-O-{alpha-D-mannosyl-(1->6)-2-O-[(2-aminoethyl)phosphoryl]-alpha-D-mannosyl-(1->4)-alpha-D-glucosaminy]-O-acyl-1-phosphatidyl-1D-myo-inositol [endoplasmic reticulum]'	0.069	-0.0891	-0.0938	0	0
'dolichyl D-mannosyl phosphate [endoplasmic reticulum]'	0.069	-0.0891	-0.0469	0	0
'sulphate [cytoplasm]'	0.0686	0	0	0	0
'ADP [nucleus]'	0.064	49	0	0	0
'ATP [nucleus]'	-0.064	-0.2075	0	0	0