Electronic Supplementary Material (ESI) for RSC Advances.
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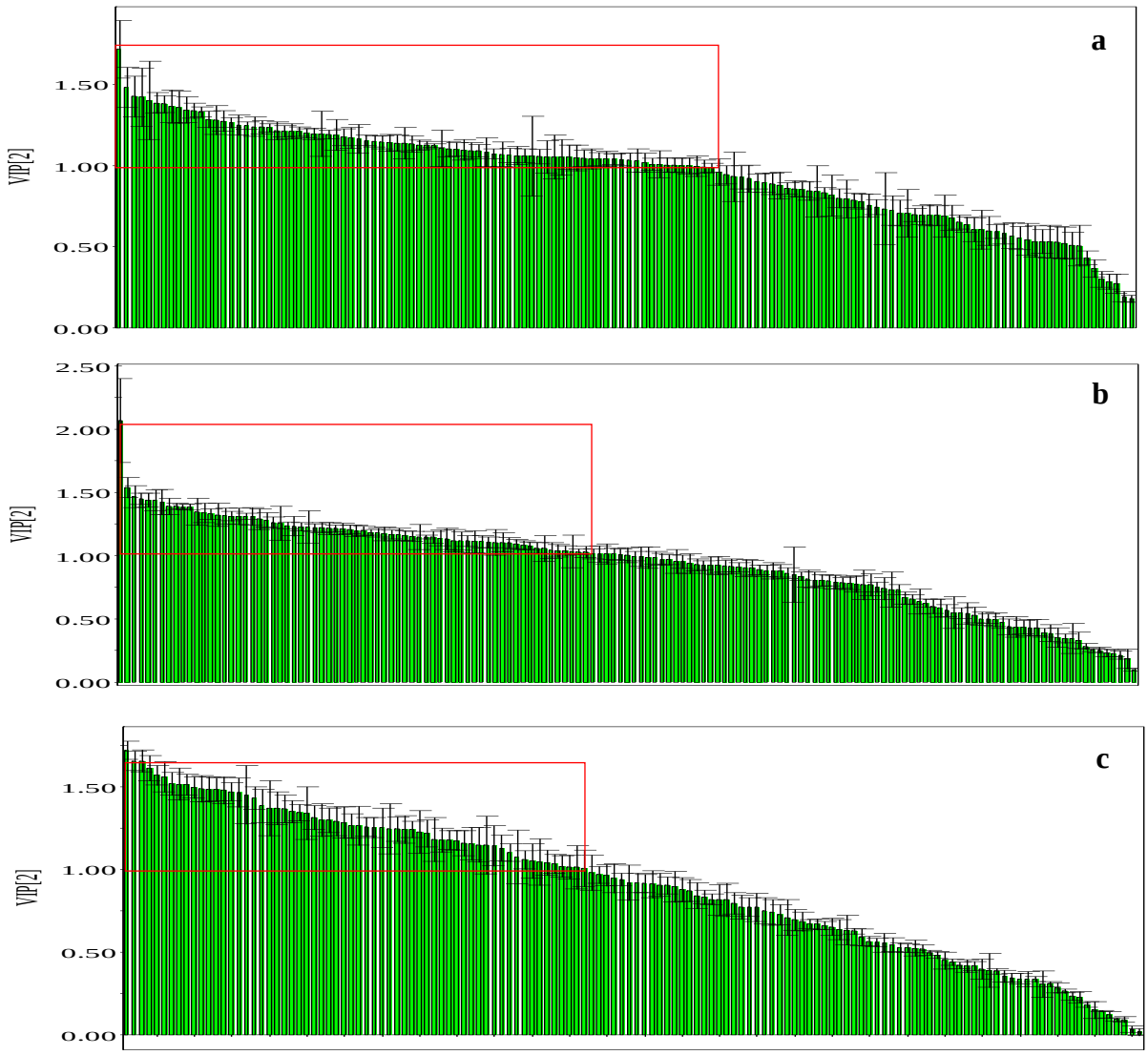
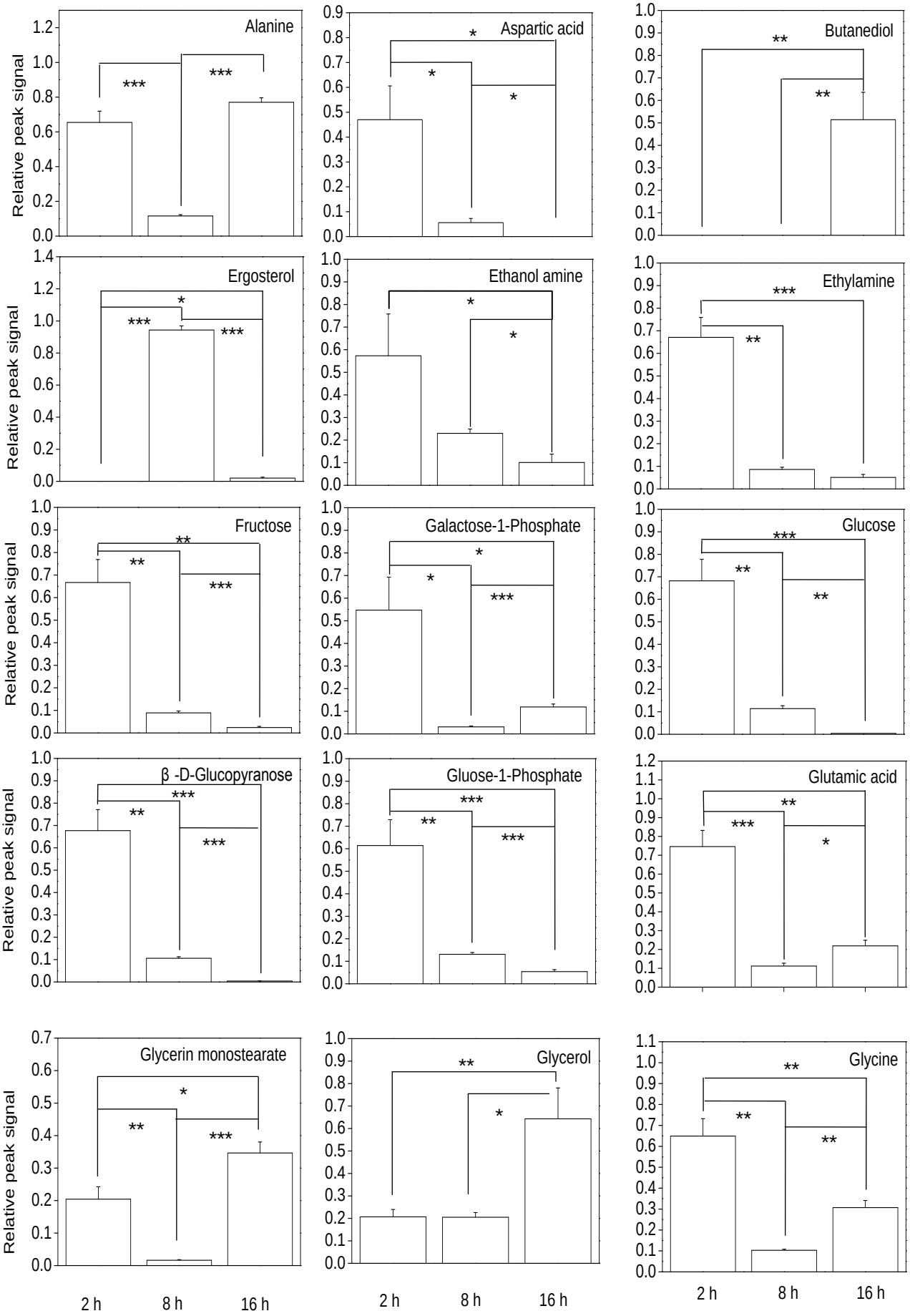
## Electronic supplementary figure captions

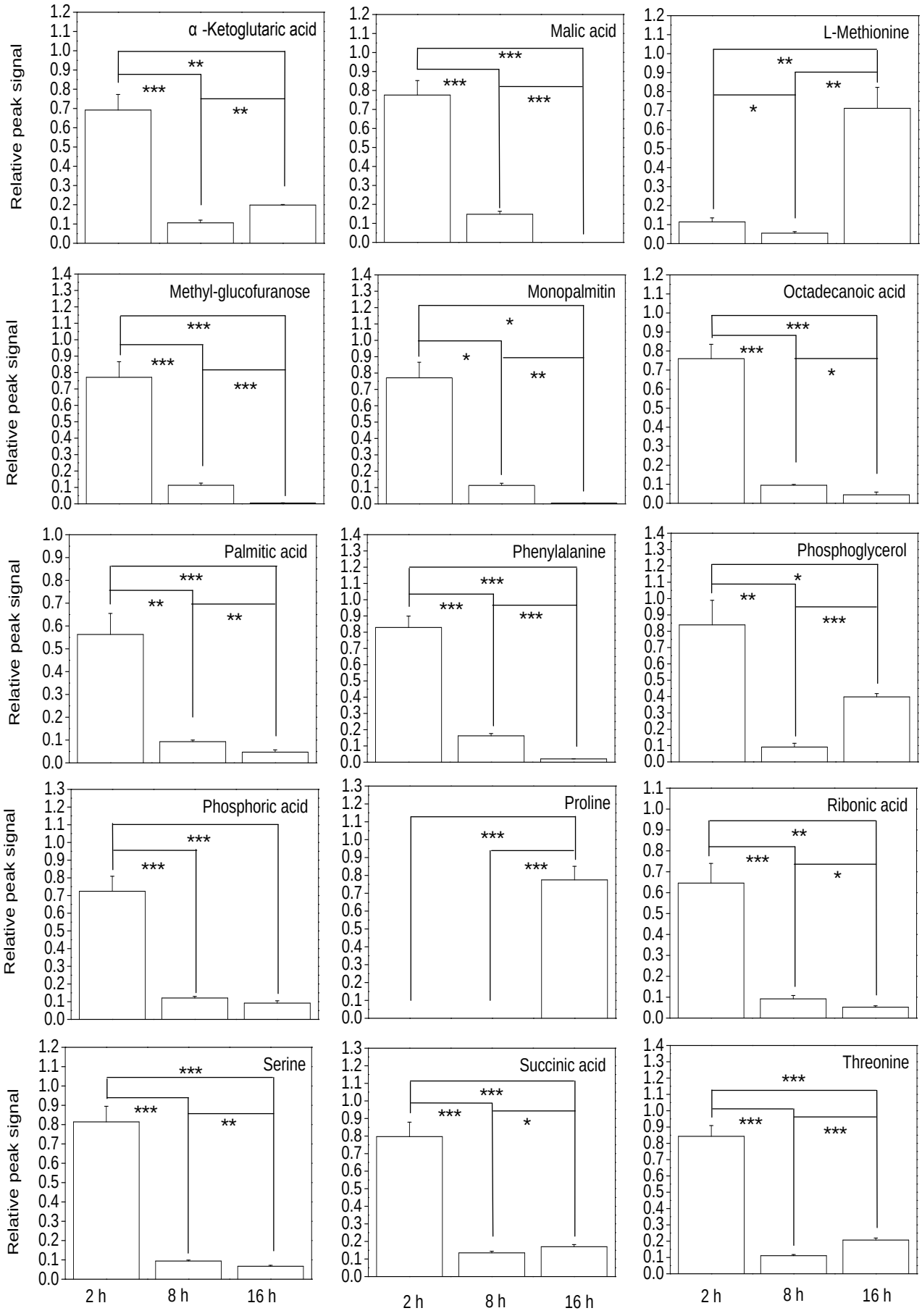
**ESI Fig. S-1** Variable importance of projection plots for the intracellular metabolites along component 1. (a) 2 h versus 8 h groups using PLS-DA model, (b) 2 h versus 16 h groups using PLS-DA model, and (c) 8 h versus 16 h groups using PLS-DA model.

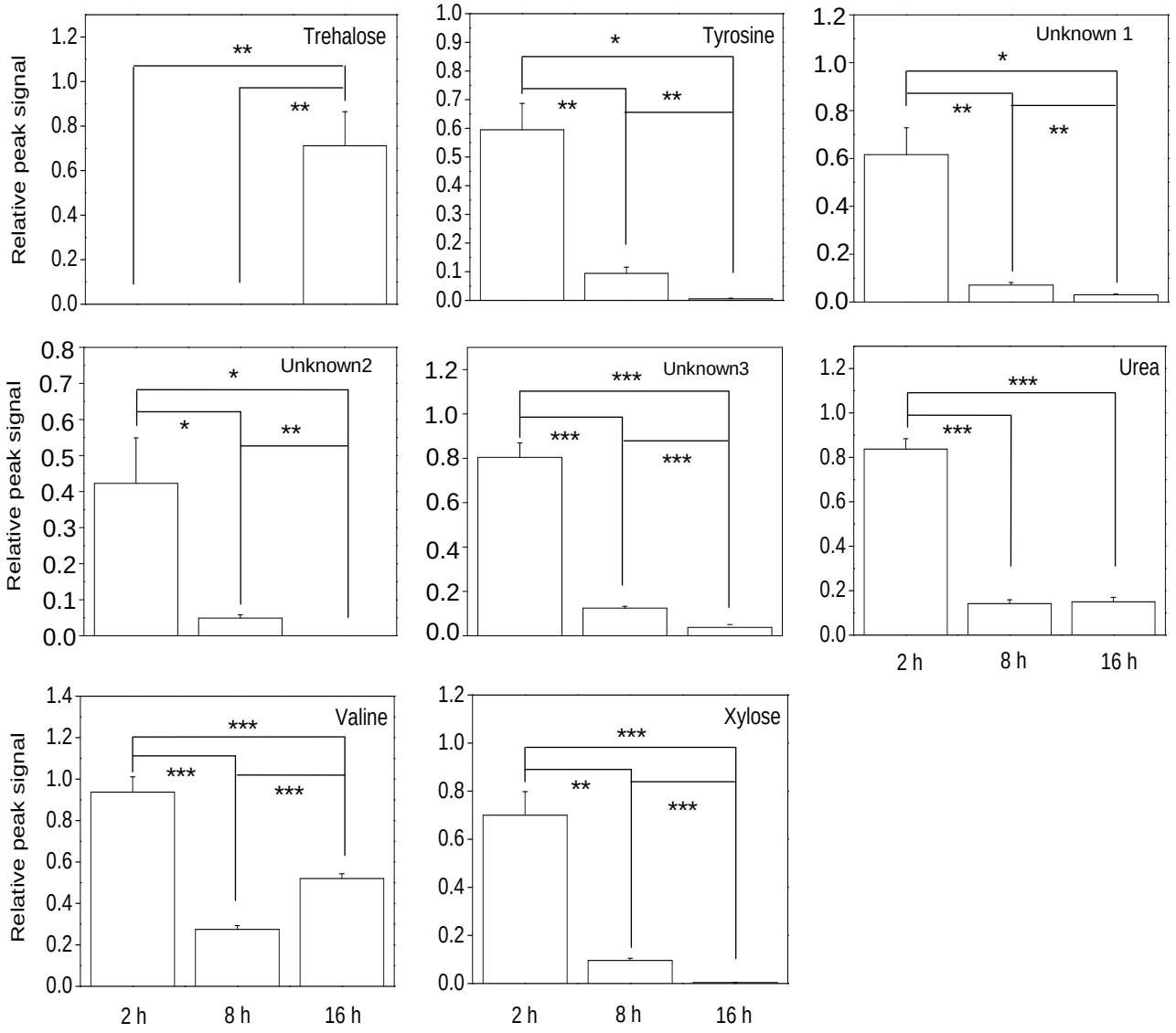
**ESI Fig. S-2** The intracellular metabolites of *Sacharomyces cerevisiae* identified by GC-MS that differ among the lag phase (i.e., 2 h), the exponential phase (i.e., 8 h) and the stationary phase (i.e., 16 h) of the batch bioethanol fermentation process. *$P$<0.05, **$P$<0.01, ***$P$<0.001.


a
VIP[2]
1.50
1.00
0.50
0.00
b
VIP[2]
2.50
2.00
1.50
1.00
0.50
0.00
c
VIP[2]
1.50
1.00
0.50
0.00

**ESI Fig. S-1**


Alanine
Aspartic acid
Butanediol
Ergosterol
Ethanol amine
Ethylamine
Fructose
Galactose-1-Phosphate
Glucose
β -D-Glucopyranose
Gluose-1-Phosphate
Glutamic acid
Glycerin monostearate
Glycerol
Glycine
Relative peak signal
2 h
8 h
16 h


α -Ketoglutaric acid
Malic acid
L-Methionine
Methyl-glucofuranose
Monopalmitin
Octadecanoic acid
Palmitic acid
Phenylalanine
Phosphoglycerol
Phosphoric acid
Proline
Ribonic acid
Serine
Succinic acid
Threonine
Relative peak signal
2 h
8 h
16 h


Trehalose
Tyrosine
Unknown 1
Unknown2
Unknown3
Urea
Valine
Xylose
Relative peak signal
2 h
8 h
16 h

**ESI Fig. S-2**