```
                                1 1
                              230 0
                            1 620 4
                            8 719 0
CBS 8244   TTGTCTTAGGACATTTTT/GTG/AGCTGGGACCGAGGACTGCGCATCTGCTAGGATGTTGGCGTAATGAC
CBS 7350           A          T GTG A
CBS 7766           C          T GCG A
LS3                C          - ACA T
CBS 7370           C          - ACA T
CBS 7377           C          - ACA T
CBS 8335           C          - ACA T
```

Figure S1. Polymorphisms in the ITS-D1D2 nucleotide sequence.

For each of the seven strains, a fragment spanning rDNA ITS-D1D2 was PCR-amplified. Their sequences were multi-aligned and restricted to a common fragment of non ambiguous 1086 nt. The sequence of the reference strain (CBS8244^T) is indicated as follow: it is in extent from nt 1 to 8 and from nt 1040 to 1086; within slashes, only sites of polymorphism are shown with their coordinates at the top, reading downward. SNP are indicated below for other strains, the hyphen representing a single nt deletion.

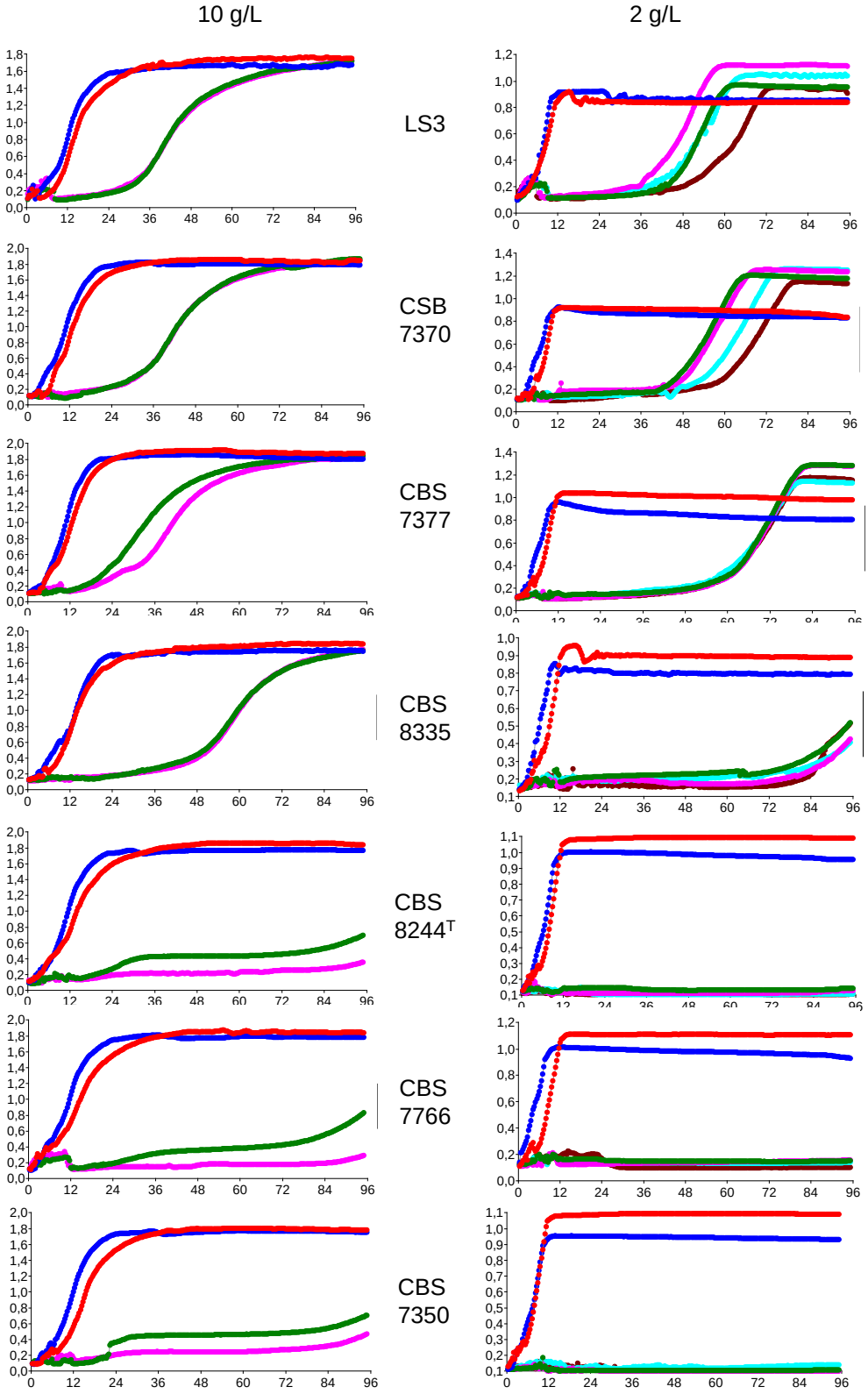

Figure S2. Growth of *B. adeninivorans* and *B. raffinosifermentans* in three different substrates.
Representative growth curves plotting OD_{600} against time (h) are shown; several curves were selected for growth in glycerol to give insights into the observed variability. Xylose (red curves), glucose (dark blue curves) and glycerol (other colors) were used at 10 g/L (left panel) or 2 g/L (right panel) to cultivate the 7 strains in 96-well microplates. Upper four strains constitute the group reassigned to *B. raffinosifermentans*. Note that max OD cannot be correctly resolved at a concentration of substrate of 10 g/L due to intrisinc limitation of micoplate reader.

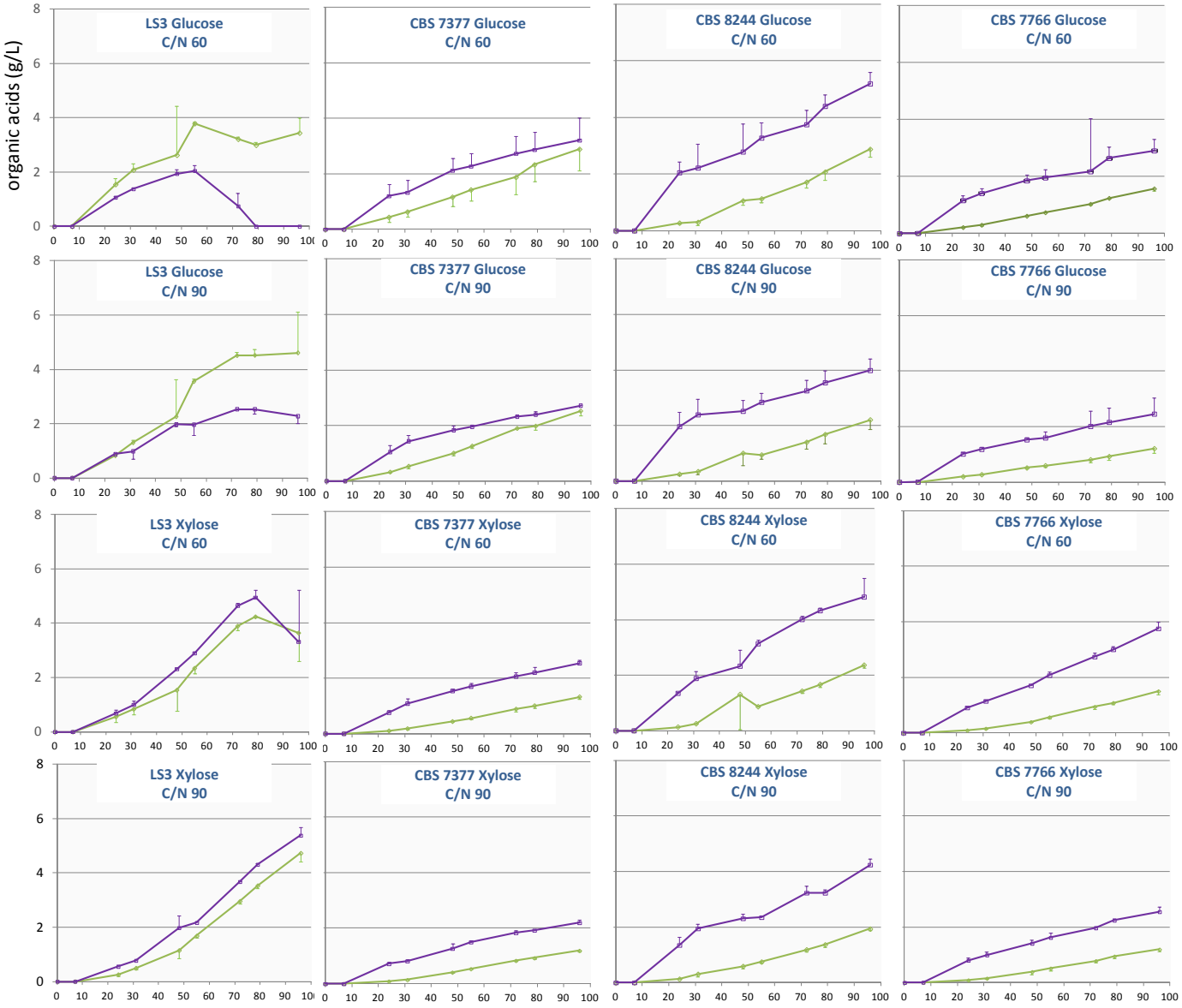

Figure S3. Organic acids excreted in lipogenic culture conditions.
The indicated strains were grown in 30 g/L glucose or xylose at two C/N ratios. The concentration of acetic acid (purple line) and citric acid (green line) in culture supernatants (average values and standard deviations, n=3) is plotted over time (h).

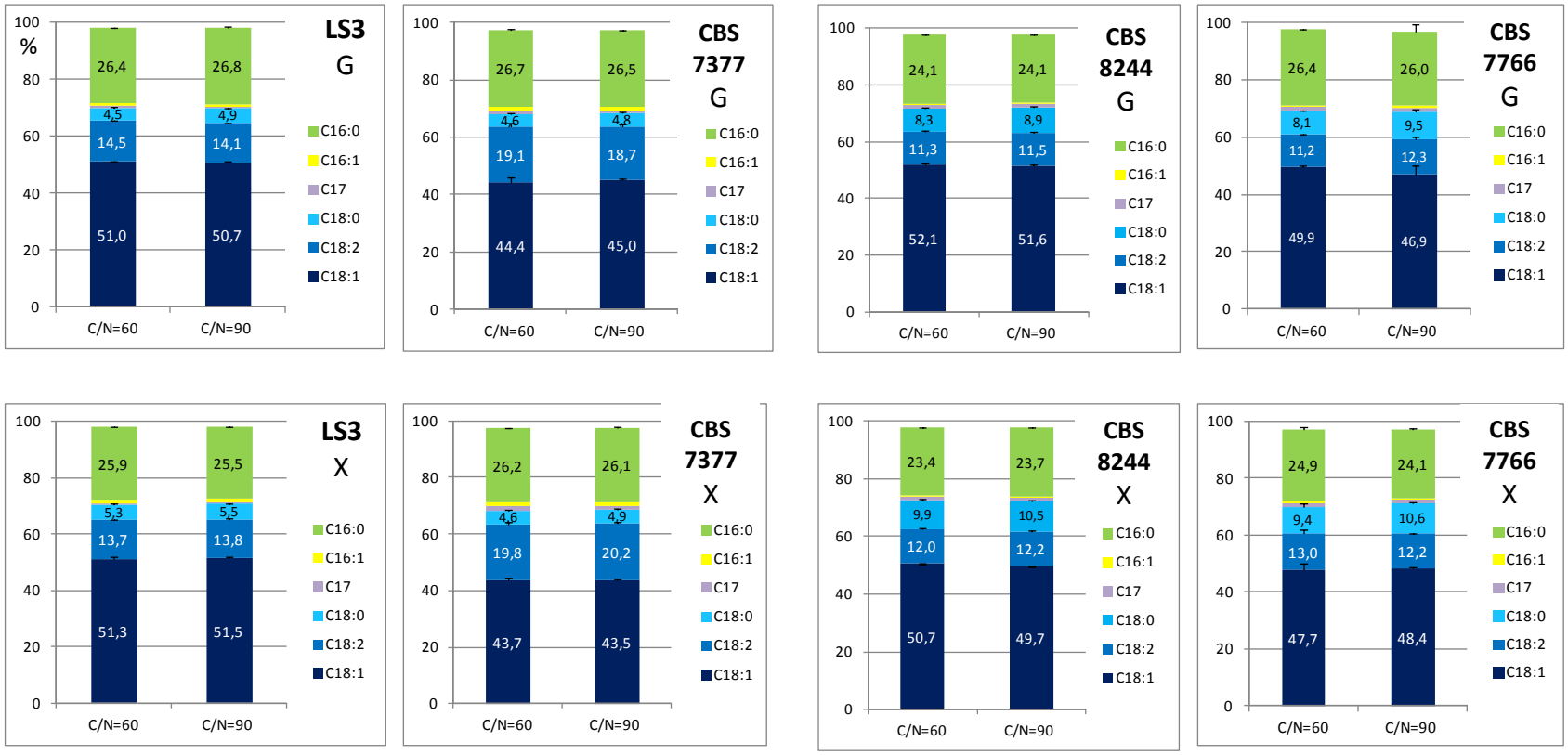

Figure S4. FA composition of strains of *B. raffinosifermentans* and *B. adeninivorans* after growth in lipogenic medium.
The indicated strains were grown for 96h in 30 g/L glucose (G) or xylose (X) at two C/N ratios. The proportion of the different FAs is given in percentage of the total FA fraction.

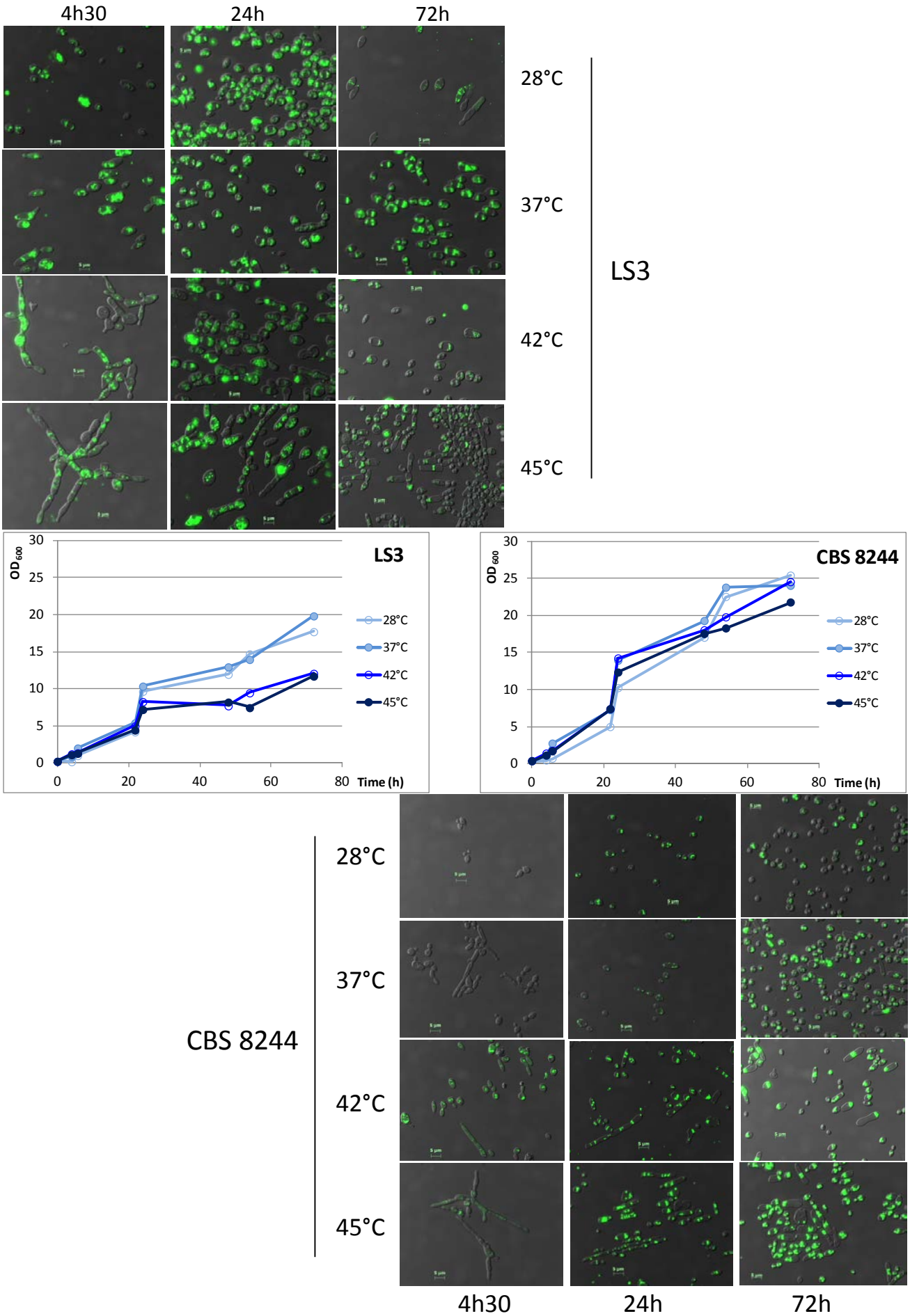

Figure S5. Growth curves and microscope images of strains LS3 and CBS 8244^T cultured in glucose lipogenic medium at various temperatures. Neutral lipids were colored with BODIPY.

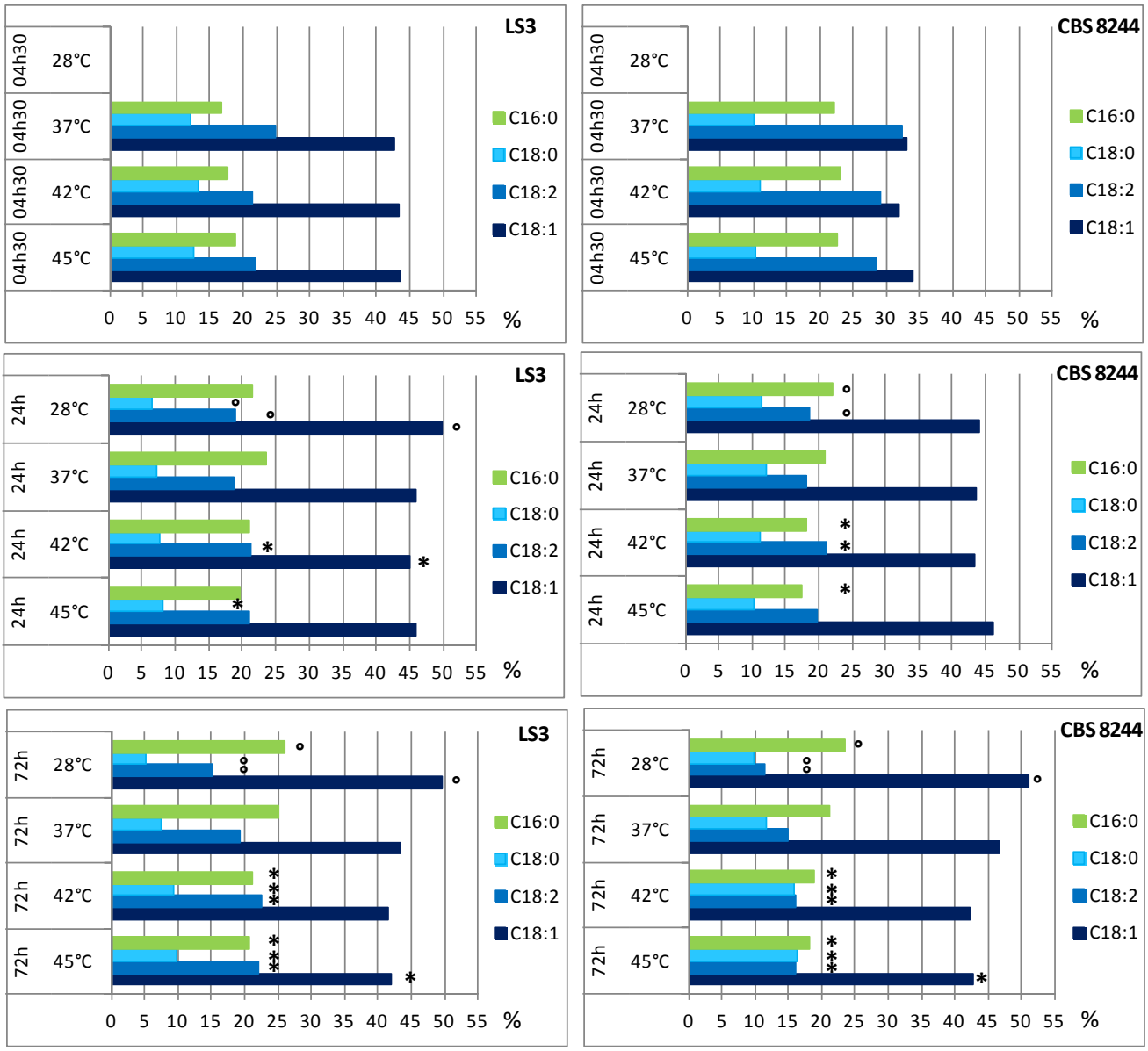

Figure S6. Relative FA composition of strains LS3 and CBS 8244^T at various times and temperatures of cultivation in glucose lipogenic medium.

Percentage of total FA fraction (average values, n ≥ 3) is represented as a color bar for each of the four main FAs. See Table S3 for complete data. (*) Indicates significative difference for each FA relative to the reference sample at 28°C (°) in a Kruskal&Wallis test (P<0.05).